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REGULATION OF HYDROPOWER PROJECTS IN ALASKA

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JURISDICTION OF THE FEDERAL ENERGY REGULATORY COMMISSION

The Federal Energy Regulatory Commission (FERC) must license any hydropower project which occupies navigable waters or public lands, unless it is grandfathered by valid permit issued on or before June 10, 1920. Federal Power Act (FPA) section 23(b), 16 U.S.C. § 817.

This jurisdiction includes a non-navigable water if the project may affect an anadromous fishery, generate energy for distribution through an interstate grid, or otherwise affect interstate commerce. See United States Department of Commerce v. Federal Energy Regulatory Commission, 36 F.3d 893 (1994), **Tab 1**.

Tab 2 lists existing and pending projects under FERC's jurisdiction in Alaska.

BASIC CONDITIONS OF LICENSES

A license must assure that a project is “...best adapted to a comprehensive plan of development...” of the affected waters. FPA section 10(a), 16 U.S.C. § 803(a), **Tab 3**.

A license must protect all beneficial uses which the Federal Power Act recognizes in the affected waters. Udall v. Federal Power Commission, 387 U.S. 428 (1967), **Tab 4**.

It must include those conditions which the State establishes to assure compliance with water quality standards in the affected waters. Clean Water Act section 401(a), 33 U.S.C. § 1341(a). See Jefferson County PUD no. 1 v. Washington Department of Ecology, 511 U.S. 700 (1994), **Tab 5**; and American Rivers v. Federal Energy Regulatory Commission, 129 F.3d 99 (1997), **Tab 6**.

If a project occupies lands or waters of a federal reservation such as a National Forest, a license must include those conditions which the administering agency determines are necessary for the protection and use of that reservation. FPA section 4(e), 16 U.S.C. § 797(e). See Escondido Mutual Water Company v. La Jolla Band of Mission Indians, 466 U.S. 765 (1984), **Tab 7**.

A license must include a facility for passage of fish, as prescribed by the U.S. Department of Interior or Commerce. 16 U.S.C. § 811. See Bangor Hydro v. Federal Energy Regulatory Commission, 78 F.3d 659 (1996), **Tab 8**.

FERC must include other conditions submitted by resource agencies for the protection of fish and wildlife, unless it finds them inconsistent with the purposes of the Federal Power Act. FPA section 10(j), 16 U.S.C. § 803(j).

Once a license has been issued, the licensee may not modify project operations or works without FERC’s prior approval. FPA section 10(b), 16 U.S.C. § 803(b). A license is for a specified term, up to 50 years, subject to renewal.

FERC may issue an exemption from licensing for a project whose capacity is 5 megawatts or less, on those conditions which resource agencies determine are necessary to prevent loss or damage to fish and wildlife resources. 16 U.S.C. § 2705, 18 C.F.R. § 4.101.

APPLICATION PROCESS FOR LICENSE

Under a traditional process, an applicant files a license application after consultation with resource agencies. Once FERC accepts the application as properly filed, interested persons may intervene as parties. FERC prepares a draft environmental document under the National Environmental Policy Act, takes comments, then takes final action on the application. See 18 C.F.R. Parts 4 and 16; **Tab 9**, pp. 3-4.

In the alternative process which FERC now encourages, an applicant seeks to enter into a settlement with resource agencies and other interested persons, before filing the application. The application is based on the settlement reached, if any. See **Tab 10**. The application may include a proposed environmental document prepared by the applicant. See **Tab 11**.

Tab 12 shows FERC's summary comparison of traditional and alternative processes.

FERC maintains a docket of all documents filed in a proceeding. The easiest way to review that docket is on the Internet at: www.ferc.fed.us. You may obtain procedural information from the project officer in the Office of Hydropower Licensing, by calling (202) 219-2700.

BASIC STRATEGIES FOR EFFECTIVE ADVOCACY

In a collaborative process, establish ground rules which are fair and likely to result in a settlement on the license conditions. **Tab 13.**

Intervene as a party, once FERC has accepted a license application for filing. Only a party has standing to file an administrative or judicial appeal of FERC's final decision. See **Tab 9**, pp. 7-10.

Advocate specific objectives for the management of natural resources affected by the project, and procedures for amending the license if the project does not achieve those objectives. **Tab 14** is one example of an adaptive management strategy which FERC incorporated into a new license.

In a relicensing proceeding, advocate restoration of those pre-project conditions which the project has degraded, and which may feasibly be restored. **Tab 15.**

Work with other agencies and interested parties with allied interests. In a contested proceeding, seek to incorporate mitigation measures which you favor into the water quality certification (**Tab 9**, pp. 28-30), FPA section 4(e) submittal for a federal reservation (**Tab 9**, pp. 17-20), or fishway prescription (**Tab 9**, pp. 22-24), since FERC must incorporate those conditions into the license without amendment.

Since a licensing decision is based on the record of the proceeding, advocate those studies, including methods and consultants, most likely to produce an adequate record regarding project impacts of interest to your agency. See **Tab 16 ; Tab 9, pp. 12-17.]**

In a contested proceeding, propose specific alternatives to the project (including operations) which the applicant has proposed. FERC has a duty to consider a reasonable range of alternatives for project works and operations. See Scenic Hudson Preservation Conference v. Federal Power Commission, 354 F.2d 608 (1965), **Tab 17; Tab 9**, pp. 14-16.

If the applicant claims, or FERC finds, that a mitigation measure is uneconomical, ask for an analysis of annual rate of return on the capital investment in the project, with and without the disputed measure. See **Tab 18.**

Attempt to enter into a settlement which resolves all disputed issues regarding project impacts, construction, and operations. A settlement may exceed the scope of the Federal Power Act, in which event FERC will incorporate into the license those conditions over which it has jurisdiction, and allow the signatories to enforce other conditions as a matter of state law. **Tab 19** is a compendium of such settlements.

Seek to establish a license condition requiring that the licensee periodically consult with your agency regarding the implementation of mitigation measures. See ***Tab 19***, Sections J and K.

Tab 1

UNITED STATES DEPARTMENT OF COMMERCE, Petitioner, v. FEDERAL ENERGY REGULATORY COMMISSION, Respondent. THE NEZ PERCE TRIBE, Petitioner, v. FEDERAL ENERGY REGULATORY COMMISSION, Respondent. NATIONAL WILDLIFE FEDERATION; IDAHO WILDLIFE FEDERATION, Petitioners, v. FEDERAL ENERGY REGULATORY COMMISSION, Respondent.

No. 93-70282, No. 93-70284, No. 93-70287

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

36 F.3d 893; 1994 U.S. App. LEXIS 27706; 39 ERC (BNA) 1726;
94 Cal. Daily Op. Service 7655; 94 Daily Journal DAR 14013

August 9, 1994, Argued, Submitted, San Francisco, California

October 5, 1994, Filed

PRIOR HISTORY: [**1] Petitions for Review of a Decision of the Federal Energy Regulatory Commission. FERC No. EL85-4 FERC, No. EL85-42-001FERC, No. 59-FERC-61,183

COUNSEL: John T. Stahr, United States Department of Justice, Environment and Natural Resources Division, Washington, D.C., for petitioner United States Department of Commerce.

Douglas Nash, The Nez Perce Tribal Executive Committee Office of Legal Counsel, Lapwai, Idaho, for petitioner Nez Perce Tribe.

Peter M.K. Frost, National Wildlife Federation, Portland, Oregon, for petitioners National Wildlife Federation and Idaho Wildlife Federation.

Samuel Soopper, Federal Energy Regulatory Commission, Washington, D.C., for respondent Federal Energy Regulatory Commission.

JUDGES: Before: William A. Norris, David R. Thompson and Stephen S. Trott, Circuit Judges. Opinion by Judge Thompson; Dissent by Judge Trott.

OPINIONBY: DAVID R. THOMPSON

OPINION: [*894] OPINION

THOMPSON, Circuit Judge:

Chinook salmon and steelhead trout are anadromous fish. n1 They are an important natural resource, exploited by commercial, sport and Indian tribal fishermen fishing in the Columbia and Salmon River Basins and in the Pacific Ocean from Oregon, California, Washington, Alaska and British Columbia.

-----Footnotes-----

n1 Anadromous fish are "aquatic, gill-breathing, vertebrate animals bearing paired fins which migrate to and spawn in fresh water, but which spend part of their life in an oceanic environment; also fish in the Great Lakes that ascend

streams to spawn." 50 C.F.R. @ 401.1(g).

-----End Footnotes-----
[**2]

Anadromous fish spawn, among other places, in tributaries of the Salmon River. One such tributary is Allison Creek, a non-navigable body of water. In 1955, Guy M. Carlson built a small hydroelectric project on Allison Creek next to his property. The project generates a modest amount of electricity which is wholly consumed on Carlson's property and used for his ranch house and outbuildings. The project's dam, a 3-foot-high structure, blocks the migration of anadromous fish, preventing them from spawning in the portion of Allison Creek above the dam.

In 1985, Carlson filed with the Federal Energy Regulatory Commission (FERC) a declaration of intention to continue operating his hydroelectric project. FERC requires such a declaration in connection with its investigation and determination whether a project requires a license under @ 23(b)(1) of the Federal Power Act (the Act), 16 U.S.C. @ 817(1). Section 23(b)(1) directs the Commission to

cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, [**3] such person . . . shall not construct, maintain, or operate such dam or other project works until it shall have applied for and shall have received a license under the provisions of this chapter.

If FERC concludes a license is required under @ 23(b), a necessary condition of the license is that the project "be best adapted to a comprehensive plan . . . for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat)" 16 U.S.C. @ 803.

After conducting an investigation, the Director of FERC's Office of Hydropower Licensing issued an order that the project did not require a license because it did not occupy public lands, did not use surplus water or water power from a federal dam, and no power generated by the project was transported across state lines or fed into an interstate power system.

The Department of Commerce, the Nez Perce Tribe, the National Wildlife Federation and the Idaho Wildlife Federation ("Petitioners") appealed the order to FERC. [*895] They argued that Carlson's project required a license because of its impact on the spawning of anadromous fish, an impact that affected [**4] "the interests of interstate or foreign commerce" within the meaning of @ 23(b)(1) of the Act. FERC rejected this argument by a 3-to-2 vote, holding that a project's effect on anadromous fish, even though it may affect interstate or foreign commerce, can never provide the basis for FERC's licensing jurisdiction. Guy M. Carlson, 62 FERC Par. 61,009 (1993). FERC also held, "Even assuming, arguendo, that FERC could assert mandatory jurisdiction based on a project's effect on anadromous fisheries, the effect of the Carlson project on the anadromous fishery is too insubstantial to constitute such an effect." *Id.* Petitioners petition for review of these determinations.

We have jurisdiction under 16 U.S.C. @ 8251(b). We grant review, vacate FERC's order, and remand for further proceedings.

Petitioners argue that FERC erroneously restricted the breadth of its licensing jurisdiction under @ 23(b)(1), because that section gives it licensing jurisdiction whenever a project covered by the Act affects interstate or foreign commerce.

FERC argues for a restrictive interpretation of @ 23(b)(1). Under its interpretation, a [**5] project affects interstate or foreign commerce only if it affects the navigable capacity of a waterway or if the project generates power for interstate transmission. We find no such limitation in the plain language of the Act.

The Supreme Court's analysis in *FPC v. Union Elec. Co.*, 381 U.S. 90, 14 L. Ed. 2d 239, 85 S. Ct. 1253 (1965), popularly known as the Taum Sauk opinion, is instructive. There the Court considered the issue whether the Federal Power Commission's (FPC) n2 jurisdiction under the Act was limited to projects that affect navigable capacity or whether FPC could also exercise its jurisdiction based on a project's interstate transmission of power. The Court held FPC could exercise its licensing jurisdiction over the Taum Sauk project based solely on the project's interstate transmission of power. In reaching this holding, the Court reasoned,

If the comprehensive development of water power, in so far as it was within the reach of the federal power to do so, was the central thrust of the Act, there is obviously little merit to the argument that @ 23(b) requires a license when the interests of water commerce [**6] are affected but dispenses with the license when other commerce interests are vitally involved. The purposes of the Act are more fully served if the Commission must, as it held in this case, consider the impact of the project on the full spectrum of commerce interests.

Id. at 101 (internal quotations and citations omitted, emphasis added). Addressing the argument that jurisdiction should be limited to those projects that would affect navigation, the Taum Sauk Court stated:

there is no evidence that the sponsors of the Act, who prevailed in securing its enactment in the broad terms they drafted, intended a construction of interstate or foreign commerce narrower than their constitutional counterparts. In the face of numerous objections to this exercise of federal authority, we find it of compelling significance that the Congress adopted comprehensive language and refrained from writing any limitation or reference to navigation into @ 23(b).

Id. at 107.

-----Footnotes-----

n2 The Federal Power Commission was the predecessor to FERC.

-----End Footnotes-----

[**7]

FERC argues this language from Taum Sauk is unnecessarily broad. It urges us to restrict the language of Taum Sauk to the precise facts of that case, and

to read its holding as limiting FERC's exercise of jurisdiction only when a project on a non-navigable waterway affects the interstate transmission of power. We decline to do so. Not only is the broad language of Taum Sauk instructive, n3 the plain language of the Act [*896] compels the conclusion that FERC has jurisdiction to license Carlson's project.

-----Footnotes-----

n3 "See *United States v. LaBinia*, 614 F.2d 1207, 1210 (9th Cir. 1980) (unless the Supreme Court expressly limits its opinion to the facts before it, it is the principle which controls and not the specific facts upon which the principle was decided)." *United States v. Underwood*, 717 F.2d 482, 486 (9th Cir. 1983).

-----End Footnotes-----

The Act grants FERC licensing jurisdiction "if upon investigation it shall find that the interests of interstate or foreign commerce would [*8] be affected by" the construction, maintenance or operation of "a dam or other project works across, along, over, or in any stream or part thereof . . . over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several states." Section 23(b)1 of the Federal Power Act, 16 U.S.C. @ 817(1). This language does not limit licensing to some specified projects affecting interstate or foreign commerce. As the Court in Taum Sauk reasoned, it is "of compelling significance that the Congress adopted comprehensive language and refrained from writing any limitation or reference to [navigation in Taum Sauk, interstate transmission of power here] into @ 23(b)." Taum Sauk, 381 U.S. at 107.

It is undisputed that the commerce powers of Congress extend to the protection of spawning of anadromous fish from the Columbia River Basin, a basin fed in part by the Allison Creek tributary. Nor is there any dispute that Carlson's dam prevents the spawning of anadromous fish in the portion of Allison Creek above the dam. Moreover, it cannot be denied that [*9] the loss of spawning habitat has depleted the stock of anadromous fish in the Columbia River Basin, and that this has had an impact on interstate and foreign commerce.

FERC argues, however, that notwithstanding any effect the Carlson project may have on interstate or foreign commerce, we should uphold FERC's interpretation of the Act because we are required to give that interpretation deference under *Chevron U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 842-845, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984). We disagree. Such deference is due only when a statute is ambiguous and when Congress has not expressed any intent on the issue before the court. *Id.* at 844-45. Here, the language setting forth the Act's jurisdictional reach is not ambiguous; and the Supreme Court has determined Congress intended in passing the Act to invoke its full Commerce Clause powers. Taum Sauk, 381 U.S. at 96, 101, 107.

Finally, FERC presents a floodgates argument. It contends if we interpret its jurisdiction [*10] under the Act to extend beyond projects that affect navigation or transmit power interstate, we will bring within its licensing requirements an enormous number of projects never intended to be subjected to its licensing jurisdiction. We reject this argument. Congress, not this court, has determined the scope of FERC's licensing jurisdiction. It is not our place to question that legislative determination. Moreover, FERC's concern is

overstated. Only those projects that have a "real and substantial" impact on interstate or foreign commerce need be licensed. *City of Centralia v. FERC*, 661 F.2d 787, 791 (9th Cir. 1981).

Here, FERC concluded that even if it could assert jurisdiction over Carlson's project, the effect of the project on the anadromous fishery was "too insubstantial" to affect interstate or foreign commerce. Petitioners challenge this conclusion.

We have carefully reviewed the record. There was substantial evidence presented to FERC to support a determination that Carlson's project has a substantial impact on anadromous fish, affecting commercial, recreational and tribal fishing interests in the Columbia River Basin and the Pacific Ocean. It [*11] appears FERC did not fully consider this evidence. Moreover, all parties agree that if we should hold, as we do, that FERC has licensing jurisdiction over Carlson's project, this case should be remanded to FERC for development of a complete record on the question whether the impact of Carlson's project is "too insubstantial" to affect commerce. See *City of Centralia*, 661 F.2d at 792-93. We will do as the parties ask.

The petitioners' petition for review is GRANTED. FERC's order determining that it lacks licensing jurisdiction over the Carlson project is VACATED. This case is REMANDED to FERC for further proceedings [*897] to determine whether the Carlson project has too insubstantial an effect on interstate or foreign commerce to require licensing under the Act.

Review GRANTED. Order VACATED. Case REMANDED.

DISSENTBY: STEPHEN S. TROTT

DISSENT: TROTT, Circuit Judge, Dissenting:

Today, we conscript an unwilling Federal Energy Regulatory Commission ("FERC") into the laudable battle to save the salmon even though the tiny private dam in question impacts neither navigability nor interstate electrical power. We do so notwithstanding FERC's reasonable declination of jurisdiction in this [*12] case based on FERC's interpretation of Section 23(b)(1) of the Federal Power Act. In so doing, we disregard the rule of law that requires us to defer to an agency's interpretation of its primary enabling statute under circumstances where (1) the intent of Congress manifestly requires interpretation, and (2) the agency's construction of the statute is reasonable. See *Transpacific Westbound Rate Agreement v. FMC*, 951 F.2d 950, 952-53 (9th Cir. 1991); see also *Mississippi Power and Light v. Moore*, 487 U.S. 354, 380-82, 101 L. Ed. 2d 322, 108 S. Ct. 2428 (1988) (Scalia, J., concurring); *Chevron U.S.A., Inc. v. Nat'l Res. Dev. Council*, 467 U.S. 837, 842-45, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984).

By giving the term "commerce" its full-blown meaning in this context, we simply permit an unforeseen cart to run away with the horse. Nowhere does Congress expressly or even impliedly instruct the Commission in the Federal Power Act to require licenses of projects based on their effect on fish. As the Commission wisely said, "in interpreting [*13] section 23(b)(1), we must apply some common sense. The phrase 'interests of interstate commerce,' outside the context of the Federal Power Act, contemplates a wide spectrum of

interests, far beyond what we believe Congress had in mind when it established the Commission as the federal entity to oversee the private and municipal development of our nation's water power potential." 62 FERC 61,017 (Jan. 29, 1993).

To deal with Guy Carlson's small dam as a "hydroelectric project" within the contemplation of the Federal Power Act is a classic exercise in form over substance. Such an indiscriminating approach evokes Emerson's observation that "foolish consistency is the hobgoblin of little minds, adored by statesmen and philosophers and divines" (although my colleagues certainly do not belong in such company). n1 Why the Federal Energy Regulatory Commission must become involved in the building of a dam that doesn't affect at all interstate electrical power or navigability completely escapes me. Such a quirky holding gives new meaning to the word "illogical," and as such, it stands as Exhibit A for the proposition that the scope of the statute requires authoritative [**14] interpretation by its implementing agency. Why? Because once you start from the undisputed proposition that this dam does not implicate interstate electrical power or navigability, then, measured by the purpose of the Federal Power Act, Guy Carlson's dam is the equivalent of a dam that generates no electricity at all. Why such a dam would require a license from the Federal Energy Regulatory Commission is problematic at best. One can only wonder whether our legitimate concern for the fish has clouded our vision.

-----Footnotes-----

n1 Emerson, R.W., "Self Reliance," Essays: First Series (1841).

-----End Footnotes-----

The proof of the pudding is, once again, in the eating. Q.E.D. Moreover, today it's fish, but what commerce interest will it be tomorrow? Recreation? Tourism?

Taum Sauk does not support the majority's blunt instrument approach to this issue. FPC v. Union Elec., 381 U.S. 90, 14 L. Ed. 2d 239, 85 S. Ct. 1253 (1965). As the Commission points out, Taum Sauk focused "solely [**15] on the principal use to be developed and regulated in the FPA: the production of hydroelectric power to meet the needs of an expanding economy - not the myriad of potential products that could possibly be harvested from our nation's waters, such as fish." 62 FERC at 61,019.

The Commission was correct when it said that "a federal agency's authority to regulate is no more intrusive on the right of states or the rights of individual citizens than what [*898] Congress has expressly authorized." Id. at 61,017. In this case, we have haphazardly extended that authority beyond its intended limits. If the fish are to be saved, the methods by which the rescue is effected must be legitimate. Here, the method blessed by the majority is not. Once again, a law enacted for one purpose is abused to pursue something for which it was never designed. Thus, I respectfully dissent.

Tab 2

ISSUED PERMITS LESS THAN 5 MW

<u>PNUMBER</u>	<u>PNAME</u>	<u>LICENSEE</u>	<u>TYPE</u>	<u>LANDS</u>	<u>CAPACITY</u>	<u>ISSUED</u>	<u>Staff</u>
11561	OLD HARBOR	ALASKA VILLAGE ELECTRIC	C	LW	330	960311	Nan Allen
11588	OTTER CREEK	ALASKA POWER & TEL CO	P	LF	4500	961119	Carl Keller
11591	SUNRISE LAKE	WRANGELL, CITY OF	M	LF	3000	970110	Nick Jayjack
11597	WHITMAN LAKE	KETCHIKAN PUBLIC UTILITY	M	LF	4500	970605	Hector Perez
11598	CARLANNA LAKE	KETCHIKAN PUBLIC UTILITY	M		800	970724	Surender Yepuri
11599	CONNELL LAKE	KETCHIKAN PUBLIC UTILITY	M	LF	1700	970725	Surender Yepuri

PENDING PERMITS

<u>PNUMBER</u>	<u>PNAME</u>	<u>LICENSEE</u>	<u>TYPE</u>	<u>LANDS</u>	<u>CAPACITY</u>	<u>FILED</u>	<u>Staff</u>
11611	TWIN BASIN	ALASKA POWER & TELEPHONE CO	P		5000	980114	Surender Yepuri
11614	ALLISON LAKE	ALLISON LAKE HYDRO	P		6000	980501	Bob Bell

PENDING LICENSES 5 MW OR MORE

<u>PNUMBER</u>	<u>PNAME</u>	<u>LICENSEE</u>	<u>TYPE</u>	<u>LANDS</u>	<u>CAPACITY</u>	<u>ISSUED</u>	<u>Staff</u>
NONE							

PENDING LICENSES 5 MW OR LESS

<u>PNUMBER</u>	<u>PNAME</u>	<u>LICENSEE</u>	<u>TYPE</u>	<u>LANDS</u>	<u>CAPACITY</u>	<u>ISSUED</u>	<u>Staff</u>
11480	UPPER REYNOLDS CREEK	HAIDA CORPORATION	C	LF	2000		Carl Keller
11508	WOLF LAKE	ALASKA POWER & TELEPHONE CO	P	LF	2500		Carl Keller

LEGEND

TYPE

C = COOPERATIVE
 I = INDUSTRIAL
 M = MUNICIPAL
 P = PRIVATE
 R = PRIVATE NON-UTILITY SELLING ENERGY TO UTILITY OR OTHERS
 F = FEDERAL

LANDS

LF = FOREST SERVICE
 LC = CORPS OF ENGINEERS
 LB = BUREAU OF LAND MANAGEMENT
 LR = BUREAU OF RECLAMATION
 LE = DEPT. OF ENERGY
 LT = TENNESSEE VALLEY AUTHORITY
 LH = NATIONAL PARK SERVICE
 LJ = INT. BOUND. AND WATER COMMISSION
 LL = BUREAU OF INDIAN AFFAIRS
 LM = U.S. MARINE CORPS
 LN = ALASKA POWER ADMINISTRATION
 LP = BUREAU OF PRISONS
 LO = DEPT. OF THE ARMY
 LS = SOIL CONSERVATION SERVICE
 LA = U. S. AIR FORCE
 LI = U. S. NAVY
 LW = FISH AND WILDLIFE SERVICE

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ISSUED LICENSES OF 5 MW OR MORE

PNUMBER	PNAME	LICENSEE	TYPE	LANDS	CAPACITY	ISSUED	Staff
1922	BEAVER FALLS	KETCHIKAN,CITY OF	M	LF	7100	941107	Anum. Purchiaroni
2170	COOPER LAKE	CHUGACH ELEC ASSN INC	C	LF,LH	15000	570527	Mo. Fayad
2230	BLUE LAKE	SITKA,CITY AND BOROUGH OF	M	LF	7540	580424	Jim Haines
2307	SALMON CREEK	ALASKA ELEC LT & PWR CO	P	LB,LF	13100	880831	Julian Flint
2742	SOLOMON GULCH(VALDEZ)	ALASKA ENERGY AUTH	M	LB	12000	780621	John Novak
2743	TERROR LAKE	ALASKA ENERGY AUTH	M	LB,LW	20000	811005	Mo. Fayad/John Novak
2818	GREEN LAKE	SITKA,CITY AND BOROUGH OF	M	LF	18540	790405	Patti Pakkala
2911	SWAN LAKE	ALASKA ENERGY AUTH	M	LF	22400	800717	Pete Yarrington
3015	TYEE LAKE	ALASKA ENERGY AUTH	M	LF	20000	810805	Jean Potvin
8221	BRADLEY LAKE	ALASKA ENERGY AUTH	M	LB	119700	851231	Pete Yarrington
11243	POWER CREEK	WHITEWATER ENGINEERING	R		5000	971224	John Novak
11393	MAHONEY LAKE	CITY OF SAXMAN	R	LF	9000	980122	Lynn Miles

ISSUED LICENSES LESS THAN 5 MW

PNUMBER	PNAME	LICENSEE	TYPE	LANDS	CAPACITY	ISSUED	Staff
201	BLIND SLOUGH	PETERSBURG,CITY OF	M	LF	2000	800604	Heather Campbell
420	KETCHIKAN LAKES	KETCHIKAN,CITY OF	M	LF	4200	820630	Chuck Hall
620	CHIGNIK ALEUTIAN	DRAGON FISHERIES	I	LB	60	790411	Brian Romanek
1051	SKAGWAY	ALASKA POWER & TEL CO	P	LF,LB	943	800430	Lynn Miles
1432	DRY SPRUCE	WARDS COVE PACKING CO	I	LB	75	900611	Heather Campbell
3017	JETTY LAKE	ARMSTRONG KETA,INC	I	LF	50	800717	Regina Saizan
8889	HUMPBACK CREEK	CORDOVA ELEC COOP INC	C	LF	1250	881021	Pete Yarrington
10198	PELICAN CREEK	PELICAN UTILITY CO	P	LF	700	880429	Regina Saizan
10440	BLACK BEAR	BBL HYDRO INC	P	LF	4500	931109	Sean Murphy
10773	BURNETT R HATCHERY	ALASKA AQUACULTURE INC	I	LF	400	900131	Anum. Purchiaroni
11077	GOAT LAKE	SOUTHERN SOUTHEAST REGION	R	LF,LH	4000	960715	Regina Saizan

ISSUED EXEMPTIONS LESS THAN 5 MW

PNUMBER	PNAME	LICENSEE	TYPE	LANDS	CAPACITY	ISSUED	Staff
8827	EKLUTNA	ANCHORAGE,CITY OF	M		750	850611	Regina Saizan
8875	ARMSTRONG KETA	ARMSTRONG KETA,INC	I		80	850924	Mike Spencer
11316	TAZIMINA RIVER	ILIAMNA-NEWHALEN-NONDALTO	C		824	950914	Allyson Lichtenfels

ISSUED PERMITS 5 MW OR MORE

PNUMBER	PNAME	LICENSEE	TYPE	LANDS	CAPACITY	ISSUED	Staff
11319	UPPER CHILKOOT	HAINES LIGHT AND POWER CO	R	LB	6200	960429	Vince Yearick
11548	SILVER LAKE	SILVER LAKE HYDRO, INC.	R		7000	951124	Mike Spencer
11556	LAKE DOROTHY	LAKE DOROTHY HYDRO INC	R	LF	26000	960105	Mike spencer

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Note 4

state statutes for a state permit, since compliance with state requirements that are in conflict with federal requirements may well block the federal license. First Iowa Hydro-Elec. Co-op. v. Federal Power Commission, 1946, 66 S.Ct. 906, 328 U.S. 152, 90 L.Ed. 1143, rehearing denied 66 S.Ct. 1336, 328 U.S. 879, 90 L.Ed. 1647. See, also, State of Iowa v. Federal Power Commission, C.A.Iowa 1950, 178 F.2d 421, certiorari denied 70 S.Ct. 1024, 339 U.S. 979, 94 L.Ed. 1383.

The securing of an Iowa state permit is not a condition precedent or an administrative procedure that must be exhausted before securing a federal license to construct a water power project on navigable waters in Iowa, but is a procedure required by the State of Iowa in dealing with its local streams and

also with the waters of the United States within that state in the absence of an assumption of jurisdiction by the United States over the navigability of its waters. First Iowa Hydro-Elec. Co-op. v. Federal Power Commission, 1946, 66 S.Ct. 906, 328 U.S. 152, 90 L.Ed. 1143, rehearing denied 66 S.Ct. 1336, 328 U.S. 879, 90 L.Ed. 1647.

Where power to withhold state permit is power to thwart federal project which is permitted under this chapter, same is prohibited whether state permit is required as condition precedent to obtaining federal license or as an independent exercise of state regulatory power. Town of Springfield, Vt. v. State of Vt. Environmental Bd., D.C.Vt.1981, 521 F.Supp. 243, affirmed 722 F.2d 728, certiorari denied 104 S.Ct. 360, 78 L.Ed.2d 322.

§ 803. Conditions of license generally

All licenses issued under this subchapter shall be on the following conditions:

(a) Modification of plans, etc., to secure adaptability of project

That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes; and if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval.

(b) Alterations in project works

That except when emergency shall require for the protection of navigation, life, health, or property, no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works constructed hereunder of an installed capacity in excess of two thousand horsepower without the prior approval of the Commission; and any emergency alteration or addition so made shall thereafter be subject to such modification and change as the Commission may direct.

(c) Maintenance and repair of project works; liability of licensee for damages

That the licensee shall maintain the project works in a condition of repair adequate for the purposes of navigation and for the efficient operation of said works in the development and transmission of power, shall make all necessary renewals and replacements, shall establish and maintain adequate depreciation reserves for such purposes, shall so maintain and operate said works as not to impair navigation, and shall conform to such rules and regulations as the Commission may from time to time prescribe for the protection of life, health, and property. Each licensee hereunder shall be

Tab 4

UDALL, SECRETARY OF THE INTERIOR v. FEDERAL POWER COMMISSION
ET AL.

No. 463

SUPREME COURT OF THE UNITED STATES

387 U.S. 428; 87 S. Ct. 1712; 1967 U.S. LEXIS 2772; 18 L.
Ed. 2d 869; 1 ERC (BNA) 1069; 1 ELR 20117

April 11, 1967, Argued

June 5, 1967, Decided *

* Together with No. 462, Washington Public Power Supply
System v. Federal Power Commission et al., also on
certiorari to the same court, argued April 11-12, 1967.

PRIOR HISTORY: [***1]

CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA
CIRCUIT.

DISPOSITION: 123 U. S. App. D. C. 209, 358 F.2d 840, vacated and remanded in
No. 462, and reversed and remanded in No. 463.

SYLLABUS: Pacific Northwest Power Co. (a joint venture of four private power companies) and Washington Public Power Supply System, allegedly a "municipality," applied to the Federal Power Commission (FPC) for mutually exclusive licenses to construct hydroelectric power projects at High Mountain Sheep, on the Snake River. On the Snake-Columbia waterway between High Mountain Sheep and the ocean eight hydroelectric dams have been built and another authorized, all federal projects. Section 7 (b) of the Federal Water Power Act of 1920 provides that whenever, in the FPC's judgment, the development of water resources for public purposes should be undertaken by the United States itself, the FPC shall not approve any application for any project affecting such development, but shall cause to be made such necessary examinations, reports, plans, and cost estimates and "shall submit its findings to Congress with such recommendations as it may find appropriate concerning such development." [***2] Before a hearing on the license applications the FPC asked for the views of the Secretary of the Interior, who urged postponement of either project until means of fish protection were studied. The hearings went forward, and after the record was closed, the Secretary wrote the FPC urging it to recommend to Congress the federal construction of the project. The FPC reopened the record to permit the parties to file supplemental briefs in response to the letter. The Examiner then recommended that Pacific Northwest receive the license. The Secretary, after asking for leave to intervene and file exceptions, filed exceptions and made oral argument. The FPC in 1964 affirmed the Examiner, stating that "the record supports no reason why federal development should be superior," and "there is no evidence in the record presented by [the Secretary] to support his position." The Secretary petitioned for a rehearing and a reopening of the record to permit him to supply the evidentiary deficiencies. A rehearing but not a reopening was granted and the FPC reaffirmed its decision. The Court of Appeals upheld the FPC's decision. Held:

1. Although the issue of federal development of water [***3] resources must, pursuant to @ 7 (b) of the Federal Power Act, be evaluated by the FPC in connection with its consideration of the issuance of any license for a hydroelectric project, the issue has not been explored in the record herein. Pp. 434-450.

(a) The applicants introduced no evidence addressed to the issue and the FPC by its rulings on the Secretary's applications to intervene and reopen precluded itself from having the informed judgment that @ 7 (b) commands. P. 434.

(b) If another dam is to be built, the question whether it should be under federal auspices looms large, in view of the number of federal projects on the Snake-Columbia waterway and the effect of the operation of a new dam on the vast river complex. Pp. 434-435.

(c) Under @ 10 (a) of the Act the FPC must protect "recreational purposes," and by @ 2 of the 1965 Anadromous Fish Act the Secretary comes before the FPC with a special mandate to appear, intervene, and introduce evidence on the proposed river development program, and to participate fully in the administrative proceedings. Pp. 436-440.

(d) The wildlife conservation aspect of the project must be explored and evaluated. Pp. 443-444.

(e) The urgency [***4] of the hydroelectric power project, discounted by the Secretary, was not fully explored, especially in view of the probable future development of other energy sources. Pp. 444-448.

(f) The determinative test is whether the project will be in the public interest, and that determination can be made only after an exploration of all relevant issues. P. 450.

2. No opinion is expressed on the contention of Washington Public Power Supply System that it is a "municipality" within the meaning of @ 7 (a) of the Federal Power Act and entitled to a statutory preference, an issue which may or may not survive the remand. Pp. 450-451.

COUNSEL: Louis F. Claiborne argued the cause for petitioner in No. 463. With him on the brief were Solicitor General Marshall, Assistant Attorney General Weisl, Richard A. Posner, Roger P. Marquis, S. Billingsley Hill, Frank J. Barry, Edward Weinberg, Harry Hogan and Ernest J. London. Northcutt Ely argued the cause and filed briefs for petitioner in No. 462.

Richard A. Solomon argued the cause for respondent Federal Power Commission in both cases. With him on the brief were Howard E. Wahrenbrock, Peter H. Schiff and Joel Yohalem. Hugh Smith argued the cause for respondents [***5] Pacific Northwest Power Co. et al. in both cases. With him on the briefs were Francis M. Shea, William H. Dempsey, Jr., Ralph J. Moore, Jr., and John R. Kramer. Robert Y. Thornton, Attorney General, and Richard W. Sabin, Dale T. Crabtree and Leon L. Hagen, Assistant Attorneys General, filed a brief for the State of Oregon, Allan G. Shepard, Attorney General of Idaho, and T. J. Jones III filed a brief for the Idaho Fish and Game Commission, C. Frank Reifsnyder filed a brief for the Idaho Wildlife Federation, and Joseph T. Mijich filed a brief for the Washington State Sportsmen's Council, Inc., et al., respondents

in both cases.

JUDGES: Warren, Black, Douglas, Clark, Harlan, Brennan, Stewart, White, Fortas

OPINIONBY: DOUGLAS

OPINION: [*430] [**1714] MR. JUSTICE DOUGLAS delivered the opinion of the Court.

The Federal Power Commission has awarded Pacific Northwest Power Company (a joint venture of four private power companies) a license to construct a hydroelectric power project at High Mountain Sheep, a site on the Snake River, a mile upstream from its confluence with the Salmon. 31 F. P. C. 247, 1051. The Court of Appeals approved the action, 123 U. S. App. D. C. 209, 358 F.2d 840; [***6] and we granted the petitions for certiorari. 385 U.S. 926, 927.

[*431] The primary question in the cases involves an interpretation of @ 7 (b) of the Federal Water Power Act of 1920, as amended by the Federal Power Act, 49 Stat. 842, 16 U. S. C. @ 800 (b), which provides:

"Whenever, in the judgment of the Commission, the development of any water resources for public purposes should be undertaken by the United States itself, the Commission shall not approve any application for any project affecting such development, but shall cause to be made such examinations, surveys, reports, plans, and estimates of the cost of the proposed development as it may find necessary, and shall submit its findings to Congress with such recommendations as it may find appropriate concerning such development."

The question turns on whether @ 7 (b) requires a showing that licensing of a private, state, or municipal agency n1 [*432] is a satisfactory alternative to federal development. We put the question that way because the present record is largely silent on the relative merits of federal and nonfederal development. What transpired is as follows:

-----Footnotes-----

n1 Section 4 of the Act provides in part:

"The Commission is hereby authorized and empowered –

"(a) To make investigations and to collect and record data concerning the utilization of the water resources of any region to be developed, the water-power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development costs, and relation to markets of power sites, and whether the power from Government dams can be advantageously used by the United States for its public purposes, and what is a fair value of such power, to the extent the Commission may deem necessary or useful for the purposes of this Act.

....

"(e) To issue licenses to citizens of the United States, or to any association of such citizens, or to any corporation organized under the laws of the United States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam, except as herein provided" 49 Stat. 839, 840, 16 U. S. C. @ 797 (a), (e).

-----End Footnotes-----
[***7]

Both Pacific Northwest and Washington Public Power Supply System, allegedly a "municipality" under @ 4 (e) and under @ 7 (a) of the Act, n2 filed applications for licenses on mutually exclusive sites; and they were consolidated for hearing. Before the hearing the Commission [**1715] solicited the views of the Secretary of the Interior. The Secretary urged postponement of the licensing of either project while means of protecting the salmon and other fisheries were studied. That was on March 15, 1961. But the hearings went forward and on June 28, 1962, after the record before the Examiner was closed, but before he rendered his decision, the Secretary wrote the Commission urging it to recommend to Congress the consideration of federal construction of High Mountain Sheep. The Commission reopened the record to allow the Secretary's letter to be incorporated and invited the parties to file supplemental briefs in response to it. On October 8, 1962, the Examiner rendered his decision, recommending that Pacific Northwest receive the license. He disposed of the [*433] issue of federal development on the ground that there "is no evidence in this record that Federal [***8] development will provide greater flood control, power benefits, fish passage, navigation or recreation; and there is substantial evidence to the contrary."

-----Footnotes-----

n2 See n. 1, supra, for @ 4 (e). Section 7 (a) of the Act provides:

"In issuing preliminary permits hereunder or licenses where no preliminary permit has been issued and in issuing licenses to new licensees under section 15 hereof the Commission shall give preference to applications therefor by States and municipalities, provided the plans for the same are deemed by the Commission equally well adapted, or shall within a reasonable time to be fixed by the Commission be made equally well adapted, to conserve and utilize in the public interest the water resources of the region" 49 Stat. 842, 16 U. S. C. @ 800 (a).

-----End Footnotes-----

The Secretary asked for leave to intervene and to file exceptions to the Examiner's decision. n3 The Commission allowed intervention "limited to filing of exceptions to the Presiding Examiner's decision and participation in such

oral argument [***9] as might subsequently be ordered."

-----Footnotes-----

n3 The Secretary argued that federal development of High Mountain Sheep is necessary because (1) hydraulic and electrical coordination with other Columbia River Basin projects, particularly the federal dams already or to be constructed on the downstream sites, could be more effectively achieved if High Mountain Sheep is a part of the federal system; (2) federal development will assure maximum use of the federal northwest transmission grid, thus contributing to maximum repayment of the federal investment in transmission, which will, in turn, redound to the benefit of the power consumers; (3) federal development would provide greater flexibility and protection in the management of fish resources; (4) flood control could better be effected by flexible federal operation; (5) storage releases for navigation requirements could be made under federal ownership and supervision with less effect on power supply; (6) federal development can better provide recreational facilities for an expanding population. The Secretary noted, however, that immediate construction of the project would produce an excess of power in the Pacific Northwest which would cause large losses to Bonneville Power Administration and severe harm to the region's economy.

-----End Footnotes-----

[***10]

The Secretary filed exceptions and participated in oral argument. The Commission on February 5, 1964, affirmed the Examiner saying that it agreed with him "that the record supports no reason why federal development should be superior," observing that "[while] we have extensive material before us on the position of the Secretary of the Interior, there is no evidence in the record presented by him to support his position." 31 F. P. C., at 275.

[*434] It went on to say that it found "nothing in this record to indicate" that the public purposes of the dam (flood control, etc.) would not be served as adequately by Pacific Northwest as they would under federal development. And it added, "We agree that the Secretary (or any single operator) normally would have a superior ability to co-ordinate the operations of HMS with the other affected projects on the river. But there is no evidence upon which we can determine the scope or the seriousness of this matter in the context of a river system which already has a number of different project operators and an existing co-ordination system, i. e., the Northwest Power Pool." *Id.*, at 276-277.

The Secretary [***11] petitioned for a rehearing, asking that the record be opened to permit him to supply the evidentiary deficiencies. A rehearing, but not a reopening of the record, was granted; and the Commission shortly reaffirmed its [*1716] original decision with modifications not material here.

The issue of federal development has never been explored in this record. The applicants introduced no evidence addressed to that question; and the Commission denied the Secretary an opportunity to do so though his application was timely. The issue was of course briefed and argued; yet no factual inquiry was undertaken. Section 7 (b) says "Whenever, in the judgment of the Commission, the development of any water resources for public purposes should be

undertaken by the United States itself," the Commission shall not approve other applications. Yet the Commission by its rulings on the applications of the Secretary to intervene and to reopen precluded it from having the informed judgment that @ 7 (b) commands.

We indicate no judgment on the merits. We do know that on the Snake-Columbia waterway between High [*435] Mountain Sheep and the ocean, eight hydroelectric dams have been built [***12] and another authorized. These are federal projects; and if another dam is to be built, the question whether it should be under federal auspices looms large. Timed releases of stored water at High Mountain Sheep may affect navigability; they may affect hydroelectric production of the downstream dams when the river level is too low for the generators to be operated at maximum capacity; they may affect irrigation; and they may protect salmon runs when the water downstream is too hot or insufficiently oxygenated. Federal versus private or municipal control may conceivably make a vast difference in the functioning of the vast river complex.

n4

-----Footnotes-----

n4 Various federal agencies have been long engaged in the development of a comprehensive plan for the improvement of the Middle Snake. As early as 1948 the Secretary of the Interior submitted a comprehensive plan for the development of water resources of the Columbia River Basin. In 1949 the Corps of Engineers submitted a comprehensive plan for the development of the Columbia River Basin. H. R. Doc. No. 531, 81st Cong., 2d Sess., Vol. 1, pp. 1-3, Vol. 4, pp. 1429, 1482, Vol. 6, p. 2509. The plan recommended, in part, federal construction of nine run-of-the-river dams downstream from High Mountain Sheep and a regulating reservoir for the nine dams at Hells Canyon on the upper Snake. The nine dams were all authorized by Congress and have been or, in one case, will be constructed as federal projects in accordance with the plan. Hells Canyon was later licensed for private development, and, according to the Secretary of the Interior, without adequate regulating facilities. The Corps of Engineers and the Secretary of the Interior then recommended that the federal regulating dam be built, after further study, at High Mountain Sheep -- the last suitable site. H. R. Doc. No. 403, 87th Cong., 2d Sess., Vol. 1, pp. iv, viii-ix, 260. Though it is not contended that congressional authorization of the nine federal dams downstream may have pre-empted the Commission's authority to license High Mountain Sheep for private development (cf. *Chapman v. Federal Power Comm'n*, 345 U.S. 153), it is argued that Congress appropriated vast sums for federal development of the Columbia River Basin's hydroelectric resources in accordance with an overall plan that contemplated that the key structure in the system would be federally operated and that the downstream dams can be efficiently operated only if High Mountain Sheep is federally operated.

-----End Footnotes-----

[***13]

[*436] Beyond that is the question whether any dam should be constructed.

As to this the Secretary in his letter to the Commission dated November 21, 1960, in pleading for a deferment of consideration of applications stated:

"In carrying out this Department's responsibility for the protection and conservation of the vital Northwest anadromous fishery resource and in light of the fact that the power to be available as a result of ratification of the proposed Columbia River treaty with Canada will provide needed time which can be devoted to further efforts [**1717] to resolve the fishery problems presently posed by these applications, we believe that it is unnecessary at this time and for some years to come to undertake any project in this area.

"You may be assured that the Fish and Wildlife Service of this Department will continue, with renewed emphasis, the engineering and research studies that must be done before we can be assured that the passage of anadromous fish can be provided for at these proposed projects."

Since the cases must be remanded to the Commission, it is appropriate to refer to that aspect of the cases.

Section 10 (a) of the Act n5 provides that [***14] "the project [*437] adopted" shall be such "as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway . . . and for other beneficial public uses, including recreational purposes." (Emphasis added.)

-----Footnotes-----

n5 "All licenses issued under this Part shall be on the following conditions:

"(a) That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes; and if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval." 49 Stat. 842, 16 U. S. C. @ 803 (a).

-----End Footnotes-----

The objective of protecting [***15] "recreational purposes" means more than that the reservoir created by the dam will be the best one possible or practical from a recreational viewpoint. There are already eight lower dams on this Columbia River system and a ninth one authorized; and if the Secretary is right in fearing that this additional dam would destroy the waterway as spawning grounds for anadromous fish (salmon and steelhead) or seriously impair that function, the project is put in an entirely different light. The importance of salmon and steelhead in our outdoor life as well as in commerce n6 is so great that there certainly comes a time when their destruction might necessitate a halt in so-called "improvement" or "development" of waterways. The destruction of anadromous [*438] fish in our western waters is so notorious n7 that we cannot believe that Congress through the present Act authorized their ultimate demise.

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n6 In 1966 the value of the Pacific salmon catch was over \$ 67,000,000 and in 1965 over \$ 65,000,000. United States Department of Interior, Fish & Wildlife Service, Fisheries of the United States, 1966, p. 2. As noted by the Commission, "the Columbia River is the greatest producer of Pacific salmon and steelhead trout in the United States." "Columbia River salmon have been important in the development of the Pacific Northwest for almost a century." "The commercial catch of Columbia River salmon is estimated to be worth \$ 12,000,000 annually and the sport fishing attributable to the Salmon River alone . . . may be worth as much as \$ 8 million a year." 31 F. P. C., at 259. [***16]

n7 See H. R. Rep. No. 1007, 89th Cong., 1st Sess., pp. 2-5; S. Rep. No. 860, 89th Cong., 1st Sess.; Anadromous Fish, Hearings before the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries, 88th Cong., 2d Sess., 11.

-----End Footnotes-----

We need not speculate as to what the 1920 purpose may have been. For the 1965 Anadromous Fish Act, 79 Stat. 1125, 16 U. S. C. @@ 757a-757f (1964 ed., Supp. II), is on this aspect of the present case in pari materia with the 1920 Act. We know from @ 1 of the 1965 Act that Congress is greatly concerned with the depletion of these fish resources "from water resources developments and other causes." See also H. R. Rep. No. 1007, 89th Cong., 1st Sess., pp. 2-5; S. Rep. No. 860, 89th Cong., 1st Sess.; Anadromous Fish, Hearings before the Subcommittee on Fisheries and Wildlife Conservation of the [**1718] House Committee on Merchant Marine and Fisheries, 89th Cong., 1st Sess., 133; Anadromous Fish, Hearings before the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries, [***17] 88th Cong., 2d Sess., 11. The rapid depletion of the Nation's anadromous fish resources led Congress to enact the Anadromous Fish Act which authorizes federal-state cooperation for the conservation, development, and enhancement of the Nation's anadromous fish resources and to prevent their depletion from various causes including water resources development. In passing the Act, Congress was well aware that the responsibility for the destruction of the anadromous fish population partially lies with the "improvement" and "development" of water resources. It directed the Secretary of the Interior "to conduct such studies and make such recommendations as the Secretary determines to be appropriate regarding the development and management of any [*439] stream or other body of water for the conservation and enhancement of anadromous fishery resources." @ 2.

Mr. Justice Holmes once wrote that "A river is more than an amenity, it is a treasure." n8 *New Jersey v. New York*, 283 U.S. 336, 342. That dictum is relevant here for the Commission under @ 10 of the 1920 Act, as amended, must take into consideration not only hydroelectric power, navigation, and flood control, [***18] but also the "recreational purposes" served by the river. And, as we have noted, the Secretary of the Interior has a mandate under the 1965 Act to study recommendations concerning water development programs for the purpose of the conservation of anadromous fish. Thus apart from @ 7 (b) of the 1920 Act, as amended, the Secretary by reason of @ 2 of the 1965 Act comes to the Federal Power Commission with a special mandate from Congress, a mandate that gives

him [*440] special standing to appear, to intervene, to introduce evidence on the proposed river development program, and to participate fully in the administrative proceedings.

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n8 Recently, Congress has expressed a renewed interest in preserving our Nation's rivers in their wild, unexploited state. On January 18, 1966, the Senate passed the National Wild Rivers bill (S. 1446, 89th Cong., 2d Sess., 112 Cong. Rec. 500 (daily ed., Jan. 18, 1966), and it was pending before the House of Representatives when the Eighty-ninth Congress adjourned. The bill has already been reintroduced in the Ninetieth Congress. S. 119, 90th Cong., 1st Sess.). If enacted, it would preserve the Salmon River, a tributary of the Snake just below High Mountain Sheep, in its natural state. The bill states:

"The Congress finds that some of the free-flowing rivers of the United States possess unique water conservation, scenic, fish, wildlife, and outdoor recreation values of present and potential benefit to the American people. The Congress also finds that our established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes. It is the policy of Congress to preserve, develop, reclaim, and make accessible for the benefit of all of the American people selected parts of the Nation's diminishing resource of free-flowing rivers." And see @@ 2 and 4 (d) of the Wilderness Act of 1964, 78 Stat. 890, 894.

-----End Footnotes-----

***19]

Fishing is obviously one recreational use of the river and it also has vast commercial implications as the legislative history of the 1965 Act indicates. The Commission, to be sure, did not wholly neglect this phase of the problem. In its report it adverted to the anadromous fish problem, stating that it was "highly controversial" and was not "clearly resolved on record." The reservoir is "the most important hazard" both to upstream migrants and downstream migrants. Upstream migrants can be handled quite effectively by fish ladders. But those traveling downstream must go through the turbines; and their mortality is high. [*1719] Moreover, Chinook salmon are "basically river fish and do not appear to adapt to the different conditions presented by a reservoir." 31 F. P. C., at 260. The ecology of a river is different from the ecology of a reservoir built behind a dam. What the full effect on salmon will be is not known. But we get a glimmering from the Commission's report. As to this the Commission said:

"A reservoir exhibits a peculiar thermal structure. During the winter it is homogeneous with regard to temperature, but as the season advances a horizontal [***20] stratification results with the colder water sinking lower. Since Salmon River water is colder than Snake River water, it is possible, if not probable, that in the Nez Perce reservoir the water from the two rivers would be found in separate layers and be drawn off at different times. Presumably the

upstream migrants reaching fish ladders might at one time be presented with water from one river and at another time water from the other river. If water quality is important in attracting the upstream migrants to their proper streams, as many experts [*441] believe, this stratification would be a source of confusion and delay. Also a source of confusion to the upstream migrants would be the predicted tendency shown by the record for water from the Salmon River arm of the Nez Perce reservoir to flow up the Snake River arm and vice versa. Again the fish are faced with a complicated problem in finding their way.

"The velocity of flow in the Nez Perce or HMS reservoir would be very low compared with the free flowing stream or even compared to the flow in the reservoir of the McNary dam on the Columbia. Since the upstream migrants follow water flow and downstream migrants are carried [***21] by current, such low velocities offer a further obstacle to the passage of anadromous fish.

"The record also shows that during the summer months the oxygen content of the water in the reservoir at the lower levels will fall to amounts which are dangerously insufficient for salmon. The decrease in oxygen content appears to be due to decomposed sinking dead organisms (plankton) from the upper layers of water. The record indicates that salmon require an oxygen content of approximately five parts per million, yet the oxygen content at the 250-350 foot level would fall in August to less than three parts per million." 31 F. P. C., at 261.

The Commission further noted that some salmon remain in the reservoir due to "loss of water velocity or accumulation of dissolved salts" and are lost "as perpetrators of the species." But it did not have statistics showing the loss of the downstream migrants as a result of passing through the turbines. We are told from studies of the Bureau of Commercial Fisheries that the greatest downstream migration occurs at night when turbine loads [*442] are lower. n9 We are told from these studies that the effect of dams on the [***22] downstream migration of salmon and steelhead may be disastrous. n10 It is reported that unless [**1720] practical alternatives are designed, such as the collection of juvenile fish above the dams and their transportation below it, we may witness an inquest on a great industry and a great "recreational" asset of the Nation.

-----Footnotes-----

n9 Long, Day-night Occurrence and Vertical Distribution of Juvenile Anadromous Fish in Turbine Intakes (U.S. Bureau of Commercial Fisheries, Fish-Passage Research Program) 12, 13, 16.

n10 From the data, it would appear that successful passage of juvenile salmonoids is highly unlikely through the impoundments that will be created in the Middle Snake River Basin. This implies that if natural runs are to be passed in this area, downstream migrants must be collected in the head of a reservoir or in streams above the reservoir and transported below.

"Passage of juveniles has not been successful. Escapement from the reservoir varied from year to year, ranging from approximately 10 to 55 percent of the calculated recruitment. The best passage occurred in 1964 in conjunction with a substantial drawdown, high inflows, and a slow spring fill-up that resulted in

large discharges (up to 50,000 c. f. s.) during smolt migration. Progeny of spring-run chinook stocks appear to fare better than those from the fall run, and limited data on steelhead suggest that this species may be having even greater difficulty than salmon in passing through the reservoir." Collins & Elling, Summary of Progress in Fish-Passage Research 1964, p. 2, in Vol. 1, Fish-Passage Research Program, Review of Progress (U.S. Bureau of Commercial Fisheries 1964).

-----End Footnotes-----
[***23]

In his letter of November 21, 1960, the Secretary of the Interior noted the adverse effects this present project would have on anadromous fish, that the facilities proposed to protect the fish were "unproved," and that "conservation in the fullest sense calls for a deferral while full advantage is taken of the opportunity presented by Canadian storage and Libby [Dam]." The Commission admitted that "high dams and reservoirs present major obstacles to anadromous fish," that it was not optimistic "as to the efficacy of fish passage facilities on high [*443] dams," and concluded with the forlorn statement that, "We can hope for the best and we will continue to insist that any licensee building a high dam at a site which presumably involves major fish runs do everything possible within the limits of reasonable expense to preserve the fish runs. But as of now we understandably must assume that the best efforts will be only partly successful and that real damage may and probably will be done to any such fish runs." 31 F. P. C., at 262.

Equally relevant is the effect of the project on wildlife. In his letter of November 21, 1960, the Secretary of the Interior noted [***24] that the areas of the proposed projects were important wildlife sanctuaries, inhabited by elk, deer, partridge, a variety of small game and used by ducks, geese, and mourning doves during migration. He concluded that "adverse effects of the proposed project [HMS] on wildlife could [not] be mitigated." Letter of November 21, 1960 (Joint App. 133), as corrected by letter of December 7, 1960 (J. A. 137). The Secretary concluded that "Several thousand acres of mule deer range would be inundated and there would be a moderate reduction in the number of deer as a result of loss of range. There would be losses of upland game, fur animals, and waterfowl. Reservoir margins would be barren and unattractive to all wildlife groups. Waterfowl use of the reservoir would be insignificant. There does not appear to be any feasible means of mitigating wildlife losses."

The Fish and Wildlife Coordination Act, 48 Stat. 401, as amended, 72 Stat. 563, 16 U. S. C. @ 661 et seq., establishes a national policy of "recognizing the vital contribution of our wildlife resources to the Nation, the increasing public interest and significance thereof due to expansion of our national economy and [***25] other factors, and to provide that wildlife conservation shall receive equal consideration and be co-ordinated with other features of water-resource development programs" Section 2 (a), 16 U. S. C. @ 662 (a), provides that an agency evaluating a [*444] license under which "the waters of any stream or other body of water are proposed . . . to be impounded" "first shall consult with the United States Fish and Wildlife Service, Department of the Interior . . . with a view to the conservation of wildlife resources by preventing loss of and damage to such resources" Certainly the wildlife conservation aspect of the project must be explored and evaluated.

These factors of the anadromous fish and of other wildlife may indeed be all-important [**1721] in light of the alternate sources of energy that are emerging.

In his letter of November 21, 1960, the Secretary noted that, due to increased power resources, the projects could be safely deferred. "These projects could extend the time still further, as could also be the case in the event nuclear power materialized at Hanford in the 1960-1970 period. This possibility, as you know, has been under intensive study by your [***26] staff for the Atomic Energy Commission"

The urgency of the hydroelectric power at High Mountain Sheep was somewhat discounted by the Secretary in his petition to intervene:

"Power needs of the Northwest do not require immediate construction of the High Mountain Sheep Project. One of the reasons which leads the Secretary to intervene now is that the Examiner's decision of October 10, 1962, was handed down just prior to Congressional action which substantially altered the federal power resource program of the Pacific Northwest. This Congressional action requires a complete re-examination and re-appraisal of the conclusions stated as the basis for the Examiner's findings.

"The action of Congress in the session just concluded has made provisions for new federal power producing facilities. Bruce Eddy Dam, with a [*445] peak capacity of 345,000 KW, was authorized and received an appropriation for the start of construction in Fiscal Year 1963. Asotin Dam, with a peak capacity of 331,000 KW, was also authorized. Little Goose Dam, with a peak capacity of 466,000 KW, which had previously been authorized, received an appropriation for the start of construction in 1963. [***27] Most important of all, generation at the Hanford Thermal Project, which would add approximately 905,000 kilowatts to the Northwest's power resources was also approved.

"There are other possibilities regarding new power sources which have reasonable prospects of realization. They include Canadian storage, realization of which is dependent upon consummation of the Canadian Treaty. Additional firm capacity which would accrue to the United States from such storage would be 1,300,000 kilowatts. In addition, the Treaty would allow the construction of Libby Dam which would initially have a capacity of 397,000 kilowatts. There is also the possibility of the availability in the United States of power from the Canadian entitlement under the Treaty of 1,300,000 kilowatts. Plans are also under way for construction of a 500,000 kilowatt steam plant by Kittitas PUD and Grant County PUD. A number of different agencies have proposed the construction of the Pacific Northwest-Southwest transmission intertie which, by electrical integration, would add an additional 400,000 kilowatts of firm capacity for the Pacific Northwest.

"The total power resource of the area is therefore predictably [***28] in excess of all foreseeable requirements thereon for the period through 1968-1969 and sufficient to meet all requirements until at least 1972-1973 and potentially for years beyond that date. The addition of High Mountain Sheep Dam will not [*446] be needed until at least 1972-1973, and construction should be planned to bring it into production at that time or later as the developing power

resource picture indicates.

"New generating facilities, which are not correlated to the power resources and power demands within the area of the marketing responsibility of BPA necessarily result in surpluses of power on the federal system which is the basic wholesale supplier of power in the area and thereby result in financial deficits on the federal marketing system. In view of the role of the Federal system as the base [**1722] supplier for the area, this threatens the stability of the area's permanent resources and hence of the area's economy. The High Mountain Sheep project at this time would have such an effect."

We are also told that hydroelectric power promises to occupy a relatively small place in the world's supply of energy. It is estimated that when the world's population [***29] reaches 7,000,000,000 — as it will in a few decades — the total energy requirement n11 will be 70,000,000,000 metric tons of coal or equivalent annually and that it will be supplied as follows:

Source	Equivalent metric tons of coal (billions)	
Solar energy (for two-thirds of space heating)		15.6
Hydroelectricity	4.2	
Wood for lumber and paper	2.7	
Wood for conversion to liquid fuels and chemicals		2.3
Liquid fuels and "petro" chemicals produced via nuclear energy		10.0
Nuclear electricity	35.2	
Total	70.0	

Brown, The Next Hundred Years (1957), p. 113.

-----Footnotes-----

n11 Projections of energy sources for the coming years have been summarized in Energy R & D and National Progress, prepared for the Interdepartmental Energy Study by the Energy Study Group, Under Direction of A. B. Cambel, at 22. The following table is taken from that source.

Percent of total energy requirements supplied by hydro, nuclear, and fossil fuels

Source and publication date	1975		1980			
	Hydro	Nuclear	Fossil	Hydro	Nuclear	Fossil
Paley (1952)	4.6	—	95.4	—	—	—
Schurr and Netschert (1960)	3.2	(1) n.1	96.8	—	—	—
Interior-McKinney (1956) n.2	2.7	2.7	94.6	—	—	—
Teitelbaum (1958)	—	—	3.0	8.7	88.3	
Lamb (1959)	—	—	2.6	4.0	93.4	
Texas Eastern Transmission Corp. (1961) n.3	—	—	2.4	1.4	96.2	
Lasky Study Group (1962) n.4	—	—	2.5	2.5	95.0	
Sporn (1959)	2.9	1.8	95.3	—	—	—
Scarl (1960) n.5	—	—	3.0	97.0		
Atomic Energy Commission (1962) n.6	—	—	3.0	3.0	94.0	
Landsberg, Fischman and						

387 U.S. 428, *, 87 S. Ct. 1712, **;
 1967 U.S. LEXIS 2772, ***, 18 L. Ed. 2d 869
 Fisher (1963) - - - 3.4 4.7 91.9

2000				
Source and publication date	Hydro	Nuclear	Fossil	
Paley (1952)	-	-	-	
Schurr and Netschert (1960)	-	-	-	
Interior-McKinney (1956) n.2	-	-	-	
Teitelbaum (1958)	-	-	-	
Lamb (1959)	-	-	-	
Texas Eastern Transmission Corp. (1961) n.3	-	-	-	
Lasky Study Group (1962) n.4	-	-	-	
Sporn (1959)	2.3	21.3	76.4	
Scarl (1960) n.5	1.5	98.5		
Atomic Energy Commission (1962) n.6	1.7	23.3	75.0	
Landsberg, Fischman and Fisher (1963)	2.1	14.0	83.9	

n1 Estimates were made in terms of conventional sources, but text indicates that 2.5 to 3.75 percent of the total might come from atomic fuels.

n2 Although this forecast goes to 1980, the values for that year are shown only in graphic form. Therefore, the 1975 values which are given in a table are used here.

n3 Calculations based on figures after adjusting hydropower to fuel input basis.

n4 Concerning nuclear power, the report adds " * * * but there should be no surprise if nuclear power should insinuate itself into the energy economy of the country at a much faster rate."

n5 Nuclear power included with coal.

n6 Nuclear use is for electricity generation.

-----End Footnotes-----

NOTE:

-----Footnotes-----

a. Actuals for 1960 according to the U.S. Bureau of Mines: Hydropower, 3.9 percent; nuclear, 0.1 percent; and fossil fuels, 96.0 percent.

b. Hydropower is on a fuel equivalent basis.

c. Week's estimates show a breakdown by fuel types but are presented in a cumulative form which makes estimation of annual values difficult.

-----End Footnotes-----

[***31]

[*447] By [**1723] 1980 nuclear energy "should represent a significant proportion of world power production." *Id.*, at 109. By the end of the century "nuclear energy may account for about one-third of our total energy consumption." *Ibid.* "By the middle of the next century it seems likely that most of our energy needs will be satisfied by nuclear energy." *Id.*, at 110.

[*448] Some of these time schedules are within the period of the 50-year licenses granted by the Commission.

Nuclear energy is coming to the Columbia River basin by 1975. For plans are afoot to build a plant on the Trogan site, 14 miles north of St. Helens. This one plant will have a capacity of 1,000,000 kws. This emphasizes the relevancy of the Secretary's reference to production and distribution of nuclear energy at the Hanford Thermal Project which he called "most important of all" and which Congress has authorized. 76 Stat. 604.

Implicit in the reasoning of the Commission and the Examiner is the assumption that this project must be built and that it must be built now. In the view of the Commission, one of the factors militating against federal development was that "the Department [***32] of Interior . . . frankly admitted it [had] no present intention of seeking authorization to commence construction or planning to construct an HMS project." 31 F. P. C., at 277. The Examiner's report stated that "[a] comprehensive plan provides for prompt and optimum multipurpose development of the water resource" and that the relative merits of the proposed projects "turn on a comparison of the costs and benefits of component developments and on which project is best adapted to attain optimum development at the earliest time with the smallest sacrifice of natural values." J. A. 394 (emphasis added). But neither the Examiner nor the Commission specifically found that deferral of the project would not be in the public interest or that immediate development would be more in the public interest than construction at some future time or no construction at all. Section 4 (c) of the Act, the section authorizing the Commission to grant licenses, provides in part:

"Whenever the contemplated improvement is, in the judgment of the Commission, desirable and justified [*449] in the public interest for the purpose of improving or developing a waterway [***33] or waterways for the use or benefit of interstate or foreign commerce, a finding to that effect shall be made by the Commission and shall become a part of the records of the Commission." 49 Stat. 840, 16 U. S. C. @ 797 (c).

And @ 10 (a) of the Act provides that:

"the project adopted . . . shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes . . ." 49 Stat. 842, 16 U. S. C. @ 803 (a).

The issues of whether deferral of construction would be more in the public interest than immediate construction and whether preservation of the reaches of the river affected would be more desirable and in the public interest than the proposed development are largely unexplored in this record. We cannot assume that the Act commands the immediate construction of as many projects as possible. The Commission did discuss the Secretary of Interior's claim that, due to alternate power sources, the region will not need [***34] the power supplied by the High Mountain Sheep dam for some time. And it concluded that "of more significance . . . than the regional power situation are the load and resources of the [Pacific Northwest Power Company] companies themselves," which could use the power in the near [**1724] future. 31 F. P. C., at 272. It added, "In summary as to the need for power, we conclude that the PNPC sponsoring companies will be able to use HMS power as soon as it is available." 31 F. P. C., at 273. On rehearing, the Commission stated that "HMS power will be needed on a regional basis by 1970-1971" 31 F. P. C. 1051, 1052.

[*450] The question whether the proponents of a project "will be able to use" the power supplied is relevant to the issue of the public interest. So too is the regional need for the additional power. But the inquiry should not stop there. A license under the Act empowers the licensee to construct, for its own use and benefit, hydroelectric projects utilizing the flow of navigable waters and thus, in effect, to appropriate water resources from the public domain. The grant of authority to the Commission to alienate [***35] federal water resources does not, of course, turn simply on whether the project will be beneficial to the licensee. Nor is the test solely whether the region will be able to use the additional power. The test is whether the project will be in the public interest. And that determination can be made only after an exploration of all issues relevant to the "public interest," including future power demand and supply, alternate sources of power, the public interest in preserving reaches of wild rivers and wilderness areas, the preservation of anadromous fish for commercial and recreational purposes, and the protection of wildlife.

The need to destroy the river as a waterway, the desirability of its demise, the choices available to satisfy future demands for energy – these are all relevant to a decision under @ 7 and @ 10 but they were largely untouched by the Commission.

On our remand there should be an exploration of these neglected phases of the cases, as well as the other points raised by the Secretary.

We express no opinion on the merits. It is not our task to determine whether any dam at all should be built or whether if one is authorized it should be private or public. [***36] If the ultimate ruling under @ 7 (b) is that the decision concerning the High Mountain Sheep site should be made by the Congress, the factors we have mentioned will be among the many considerations it doubtless will appraise. If the ultimate decision under @ 7 (b) is the [*451] other way, the Commission will not have discharged its functions under the Act unless it makes an informed judgment on these phases of the cases.

This leaves us with the questions presented by Washington Public Power Supply System in No. 462. The main points raised by it are that it is a "municipality" within the meaning of @ 7 (a) and therefore entitled to a preference over this power site, that the Commission violated that statutory preference, and that

while Pacific Northwest had a prior preliminary permit granted under @ 5 of the Act, the Commission unlawfully expanded it to include this site. We express no opinion on the merits of these contentions because they may or may not survive a remand. If in time the project, if any, becomes a federal one, Washington Public Power Supply System would be excluded along with Pacific Northwest, and the points now raised by it would become moot. If in time [***37] a new license is issued to Pacific Northwest, the points now raised by Washington Public Power Supply System can be preserved. Accordingly in No. 462 we vacate the judgment and remand the case to the Court of Appeals with instructions to remand to the Commission. In No. 463 we reverse the judgment and remand the case to the Court of Appeals with instructions to remand to the Commission. Each remand is for further proceedings consistent with this opinion.

It is so ordered.

[**1725] MR. JUSTICE FORTAS took no part in the consideration or decision of these cases.

DISSENTBY: HARLAN

DISSENT: MR. JUSTICE HARLAN, whom MR. JUSTICE STEWART joins, dissenting.

I had thought it indisputable, first, that a court may not overturn a determination made by an administrative agency upon a question committed to the agency's judgment [*452] unless the determination is "unsupported by substantial evidence," n1 and, second, that the substantiality of the evidence must be measured through, and only after, an examination of the "whole record." n2

-----Footnotes-----

n1 Administrative Procedure Act @ 10 (e), 5 U. S. C. @ 706 (2) (E) (1964 ed., Supp. II). See also *Universal Camera Corp. v. Labor Board*, 340 U.S. 474, 488; *Jaffe, Judicial Control of Administrative Action* 600 et seq. (1965). [***38]

n2 5 U. S. C. @ 706 (1964 ed., Supp. II).

-----End Footnotes-----

The Commission has determined, on the basis of 14,327 pages of testimony and exhibits, of "extensive material" n3 submitted after the close of the record by the Secretary of the Interior, n4 and of [**1726] the Commission's own "general [*453] knowledge of the Columbia River System," 31 F. P. C. 247, 277, that the application of Pacific Northwest was "best adapted to a comprehensive plan," 49 Stat. 842, 16 U. S. C. @ 803 (a), of development for this portion of the Columbia River Basin, and that, as a consequence, this site should not now be reserved for later development by the United States. n5

-----Footnotes-----

n3 31 F. P. C. 247, 275.

n4 The history of the Secretary's extraordinary series of belated and apparently indecisive interventions in these proceedings warrants a more

complete chronicle than the Court has given. On March 31, 1958, Pacific Northwest applied for a license for the High Mountain Sheep site, and on October 21, 1959, the Commission solicited the views of the Secretary of the Interior. On November 21, 1960, the Secretary replied substantively, and urged that the entire project be postponed, since the available power supply in the region was, in his view, then sufficient. The hearings nonetheless continued. On March 15, 1961, the Secretary wrote once more, first to indicate that he was withdrawing permission for Interior Department employees to testify at the hearings on questions of the alternative power sources and of the protection of the anadromous fish, and second to suggest that the hearings should be recessed or suspended until the end of 1964, more than three years later. There was, in these various communications, no intimation that federal development of the site was desirable or even appropriate. The hearings concluded on September 12, 1961.

On June 28, 1962, the Secretary suggested, for the first time, that federal development might be suitable; he did not, however, urge that either he or the Commission should immediately seek congressional approval of such a federal project, a precondition to its commencement. Nor did the Secretary intimate that the evidentiary record that had been compiled by the Commission might be incomplete, or request that it be reopened so that he might supplement it. Nonetheless, the Commission sua sponte ordered the parties to respond to the Secretary's suggestion.

On October 8, 1962, the Examiner completed his recommendations, concluding that Pacific Northwest's proposal was "best adapted" to the river's development, in part because federal development could not reasonably be immediately anticipated. The Secretary thereupon sought to intervene out of time, and to file exceptions. He did not request that the record be reopened. His motions were granted, and very extensive exceptions were filed. Oral argument of the exceptions was subsequently heard. Neither in the exceptions nor, apparently, in the oral argument did the Secretary seek to reopen the record to supplement the evidence before the Commission.

The Commission's decision, rejecting the Secretary's suggestions, was announced on February 5, 1964. The Secretary sought a rehearing on March 26, 1964, and only then did he ask that the record be reopened. He offered only the most general indications of the evidence he would introduce if his motion were granted. Not surprisingly, the Commission denied the motion, and, after consideration of various "pleadings," affirmed, with certain minor modifications, its first order. 31 F. P. C. 1051. These actions for review followed. The Secretary, apparently for the first time, announced in his petition to this Court for a writ of certiorari that he was now prepared to seek immediate congressional approval for federal construction of a dam at High Mountain Sheep. [***39]

n5 Section 7 (b) of the Federal Power Act, 49 Stat. 842, 16 U. S. C. @ 800 (b), requires the Commission to refuse any application when it concludes that the project should be undertaken by the United States.

-----End Footnotes-----

The Court of Appeals unanimously concluded that this evidentiary record establishes that "the Commission was amply justified in refusing to recommend

federal development and in issuing a license for private construction."
[*454] 123 U. S. App. D. C. 209, 217, 358 F.2d 840, 848. I agree. Doubtless much of the evidence was not, as it was submitted, labeled as pertinent to a determination of the Commission's responsibilities under @ 7 (b), but I had not before understood that evidence marshaled in support of an agency's finding must, if it is to be credited, have been tidily categorized at the hearing according to the purposes for which it might subsequently be employed.

I can only conclude that the Court, despite its self-serving disclaimer, ante, pp. 450-451, has, in its haste to give force to its own findings of fact on the breeding requirements [***40] of anadromous fish n6 and on the likelihood that solar and nuclear power will shortly be alternative sources of supply, substituted its own preferences for the discretion given by Congress to the Federal Power Commission. In particular, it must be emphasized that the Court, alone among the Secretary of the Interior, the Commission, Pacific Northwest, the Washington Public Power Supply System, and the various other intervenors, apparently supposes that no dam at all may now be [*455] needed at High Mountain Sheep. n7 Wherever the right lies on that issue, it need only be said that Congress has entrusted its resolution to the Commission's informed discretion, and that, on the basis of an ample evidentiary record, the Commission has determined that Pacific Northwest should now be licensed to construct the project.

-----Footnotes-----

n6 It must be noted that nothing in the terms, purposes, or legislative history of the Anadromous Fish Act of 1965, 79 Stat. 1125, suggests in any way that it was expected to provide the Secretary or this Court with any retroactive "mandate" to overturn the Commission's judgment. The only pertinent portions of the legislative history are plain and uncontradicted acknowledgments from the Federal Power Commission that the Act would not "have any effect" on its authority. Anadromous Fish, Hearings before the Subcommittee on Fisheries and Wildlife Conservation of the House Committee on Merchant Marine and Fisheries, 88th Cong., 2d Sess., 45; H. R. Rep. No. 1007, 89th Cong., 1st Sess., 21. Ironically, the Commission twice during the course of those hearings called attention, without any rejoinder from the Secretary, to the High Mountain Sheep project as an illustration of its continuing and earnest concern for the protection of anadromous fish. Hearings, supra, at 45; Report, supra, at 22. [***41]

n7 Contrary to his earlier position, supra, p. 452, the Secretary, as has been noted, now apparently entertains no doubt that the project should be immediately commenced.

-----End Footnotes-----

I would affirm the judgments in both cases substantially for the reasons given in Judge Miller's opinion below, as amplified by the considerations contained in this opinion.

1ST CASE of Level 1 printed in FULL format.

PUD NO. 1 OF JEFFERSON COUNTY AND CITY OF TACOMA, PETITIONERS v. WASHINGTON
DEPARTMENT OF ECOLOGY, ET AL.

No. 92-1911

SUPREME COURT OF THE UNITED STATES

511 U.S. 700; 114 S. Ct. 1900; 1994 U.S. LEXIS 4271; 128 L. Ed. 2d 716; 62 U.S.L.W. 4408; 38 ERC
(BNA) 1593; 94 Cal. Daily Op. Service 3843; 94 Daily Journal DAR 7236; 24 ELR 20945; 8 Fla. Law
W. Fed. S 172

February 23, 1994, Argued

May 31, 1994, Decided

NOTICE: [*1]

The LEXIS pagination of this document is subject to change pending release of the final published version.

PRIOR HISTORY: ON WRIT OF CERTIORARI TO THE SUPREME COURT OF WASHINGTON.

DISPOSITION: 121 Wash. 2d 179, 849 P.2d 646, affirmed.

SYLLABUS:

Section 303 of the Clean Water Act requires each State, subject to federal approval, to institute comprehensive standards establishing water quality goals for all intrastate waters, and requires that such standards "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." Under Environmental Protection Agency (EPA) regulations, the standards must also include an antidegradation policy to ensure that "existing instream water uses and the level of water quality necessary to protect [those] uses [are] maintained and protected." States are required by § 401 of the Act to provide a water quality certification before a federal license or permit can be issued for [*2] any activity that may result in a discharge into intrastate navigable waters. As relevant here, the certification must "set forth any effluent limitations and other limitations . . . necessary to assure that any applicant" will comply with various provisions of the Act and "any other appropriate" state law requirement. § 401(d). Under Washington's com-

prehensive water quality standards, characteristic uses of waters classified as Class AA include fish migration, rearing, and spawning. Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips River, a Class AA water, which would reduce the water flow in the relevant part of the River to a minimal residual flow of between 65 and 155 cubic feet per second (cfs). In order to protect the River's fishery, respondent state environmental agency issued a § 401 certification imposing, among other things, a minimum stream flow requirement of between 100 and 200 cfs. A state administrative appeals board ruled that the certification condition exceeded respondent's authority under state law, but the State Superior Court reversed. The State Supreme Court affirmed, holding that the antidegradation provisions [*3] of the State's water quality standards require the imposition of minimum stream flows, and that § 401 authorized the stream flow condition and conferred on States power to consider all state action related to water quality in imposing conditions on § 401 certificates.

Held: Washington's minimum stream flow requirement is a permissible condition of a § 401 certification. Pp. 8-21.

(a) A State may impose conditions on certifications insofar as necessary to enforce a designated use contained in the State's water quality standard. Petitioners' claim that the State may only impose water quality limitations specifically tied to a "discharge" is contradicted by §

511 U.S. 700; 114 S. Ct. 1900;
1994 U.S. LEXIS 4271, *3; 128 L. Ed. 2d 716, **

401(d)'s reference to an applicant's compliance, which allows a State to impose "other limitations" on a project. This view is consistent with EPA regulations providing that activities -- not merely discharges -- must comply with state water quality standards, a reasonable interpretation of § 401 which is entitled to deference. State standards adopted pursuant to § 303 are among the "other limitations" with which a State may ensure compliance through the § 401 certification process. Although § 303 is not specifically listed [*4] in § 401(d), the statute allows States to impose limitations to ensure compliance with § 301 of the Act, and § 301 in turn incorporates § 303 by reference. EPA's view supports this interpretation. Such limitations are also permitted by § 401(d)'s reference to "any other appropriate" state law requirement. Pp. 8-11.

(b) Washington's requirement is a limitation necessary to enforce the designated use of the River as a fish habitat. Petitioners err in asserting that § 303 requires States to protect such uses solely through implementation of specific numerical "criteria." The section's language makes it plain that water quality standards contain two components and is most naturally read to require that a project be consistent with both: the designated use and the water quality criteria. EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. Moreover, the Act permits enforcement of broad, narrative criteria based on, for example, "aesthetics." There is no anomaly in the State's reliance on both use designations and criteria to protect water quality. Rather, it is petitioners' reading that leads to an unreasonable [*5] interpretation of the Act, since specified criteria cannot reasonably be expected to anticipate all the water quality issues arising from every activity which can affect a State's hundreds of individual water bodies. Washington's requirement also is a proper application of the state and federal antidegradation regulations, as it ensures that an existing instream water use will be "maintained and protected." Pp. 11-16.

(c) Petitioners' assertion that the Act is only concerned with water quality, not quantity, makes an artificial distinction, since a sufficient lowering of quantity could destroy all of a river's designated uses, and since the Act recognizes that reduced stream flow can constitute water pollution. Moreover, §§ 101(g) and 510(2) of the Act do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. Those provisions preserve each State's authority to allocate water quantity as between users, but the § 401 certification does not purport to determine petitioners' proprietary right

to the River's water. In addition, the Court is unwilling to read implied limitations into § 401 based on petitioners' [*6] claim that a conflict exists between the condition's imposition and the Federal Energy Regulatory Commission's authority to license hydroelectric projects under the Federal Power Act, since FERC has not yet acted on petitioners' license application and since § 401's certification requirement also applies to other statutes and regulatory schemes. Pp. 16-21.

121 Wash. 2d 179, 849 P.2d 646, affirmed.

JUDGES: O'CONNOR, J., delivered the opinion of the Court, in which REHNQUIST, C. J., and BLACKMUN, STEVENS, KENNEDY, SOUTER, and GINSBURG, JJ., joined. STEVENS, J., filed a concurring opinion. THOMAS, J., filed a dissenting opinion, in which SCALIA, J., joined.

OPINIONBY: O'CONNOR

OPINION: [**723]

JUSTICE O'CONNOR delivered the opinion of the Court.

Petitioners, a city and a local utility district, want to build a hydroelectric project on the Dosewallips River in Washington State. We must decide whether respondent, the state environmental agency, properly conditioned a permit for the project on the maintenance of specific minimum stream flows to protect salmon and steelhead runs.

I

This case involves the complex statutory and regulatory scheme that governs our Nation's waters, a scheme [*7] which implicates both federal and state administrative responsibilities. The Federal Water Pollution Control Act, commonly known as the Clean Water Act, 86 Stat. 816, as amended, 33 U.S.C. § 1251 et seq., is a comprehensive water quality statute designed to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." § 1251(a). The Act also seeks to attain "water quality which provides for the protection and propagation of fish, shellfish, and wildlife." § 1251(a)(2).

To achieve these ambitious goals, the Clean Water Act establishes distinct roles for the Federal and State Governments. Under the Act, the Administrator of the Environmental Protection Agency is required, among other things, to establish and enforce technology-based limitations on individual discharges into the country's navigable waters from point sources. See §§ 1311,

511 U.S. 700; 114 S. Ct. 1900;
1994 U.S. LEXIS 4271, *7; 128 L. Ed. 2d 716, **723

1314. Section 303 of the Act also requires each State, subject to federal approval, to institute comprehensive water quality standards establishing water quality goals for all intrastate waters. §§ 1311(b)(1)(C), 1313. These state water quality standards provide "a supplementary [*8] basis . . . so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels." *EPA v. California ex rel. State Water Resources Control Bd.*, 426 U.S. 200, 205, n. 12, 48 L. Ed. 2d 578, 96 S. Ct. 2022 (1976).

A state water quality standard "shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). In setting standards, the State must comply with the following broad requirements:

"Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational [and other purposes.]" *Ibid.*

See also § 1251(a)(2).

A 1987 amendment to the Clean Water Act makes clear that § 303 also contains an "antidegradation policy" -- that is, a policy requiring that [*9] state standards be sufficient to maintain existing beneficial uses of navigable waters, preventing their further degradation. Specifically, the Act permits the revision of certain effluent limitations or water quality [**724] standards "only if such revision is subject to and consistent with the antidegradation policy established under this section." § 1313(d)(4)(B). Accordingly, EPA's regulations implementing the Act require that state water quality standards

include "a statewide antidegradation policy" to ensure that "existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." 40 CFR § 131.12 (1992). At a minimum, state water quality standards must satisfy these conditions. The Act also allows States to impose more stringent water quality controls. See 33 U.S.C. §§ 1311(b)(1)(C), 1370. See also 40 CFR 131.4(a) ("As recognized by section 510 of the Clean Water Act [33 U.S.C. § 1370], States may develop water quality standards more stringent than required by this regulation").

The State of Washington has adopted comprehensive water quality standards [*10] intended to regulate all of the State's navigable waters. See Washington Administrative Code (WAC) 173-201-010 to 173-201-120 (1990). The State created an inventory of all the State's waters, and divided the waters into five classes. 173-201-045. Each individual fresh surface water of the State is placed into one of these classes. 173-201-080. The Dosewallips River is classified AA, extraordinary. 173-201-080(32). The water quality standard for Class AA waters is set forth at 173-201-045(1). The standard identifies the designated uses of Class AA waters as well as the criteria applicable to such waters. n1

n1 WAC 173-201-045(1) provides in pertinent part:

(1) Class AA (extraordinary).

(a) General characteristic. Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

(b) Characteristic uses. Characteristic uses shall include, but not be limited to, the following:

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- (i) Water supply (domestic, industrial, agricultural).
 - (ii) Stock watering.
 - (iii) Fish and shellfish:
Salmonid migration, rearing, spawning, and harvesting.
Other fish migration, rearing, spawning, and harvesting. . . .
 - (iv) Wildlife habitat.
 - (v) Recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment).
 - (vi) Commerce and navigation.
-

(c) Water quality criteria

-
- (vi) Commerce and navigation.
 - (i) Fecal coliform organisms. (vi) Commerce and navigation.
 - (A) Freshwater - fecal coliform organisms shall not exceed a geometric mean value of 50 organisms/100 mL, with not more than 10 percent of samples exceeding 100 organisms/100mL.
 - (B) Marine water - fecal coliform organisms shall not exceed a geometric mean value of 14 organisms/100 mL, with not more than 10 percent of samples exceeding 43 organisms/100 mL.
 - (ii) Dissolved oxygen [shall exceed specific amounts].
 - (iii) Total dissolved gas shall not exceed 110 percent of saturation at any point of sample collection.
 - (vi) Temperature shall not exceed [certain levels].
 - (v) pH shall be within [a specified range].
 - (vi) Turbidity shall not exceed [specific levels].
 - (vii) Toxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use.
 - (viii) Aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste.
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[*11]

In addition to these specific standards applicable to Class AA waters, the State has adopted a statewide [**725] antidegradation policy. That policy provides:

"(a) Existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed.

"(b) No degradation will be allowed of waters lying in national parks, national recreation areas, national wildlife refuges, national scenic rivers, and other areas of national ecological importance.

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"(f) In no case, will any degradation of water quality be allowed if this degradation interferes with or becomes injurious to existing water uses and causes long-term and irreparable harm to the environment. 173-201-035(8).

As required by the Act, EPA reviewed and approved the State's water quality standards. See 33 U.S.C. § 1313(c)(3); 42 Fed. Reg. 56792 (1977). Upon ap-

proval by EPA, the state standard became "the water quality standard for the applicable waters of that State." 33 U.S.C. § 1313(c)(3).

States are responsible for enforcing [*12] water quality standards on intrastate waters. 33 U.S.C. § 1319(a). In addition to these primary enforcement responsibilities, § 401 of the Act requires States to provide a water quality certification before a federal license or permit can be issued for activities that may result in any discharge into intrastate navigable waters. 33 U.S.C. § 1341. Specifically, § 401 requires an applicant for a federal license or permit to conduct any activity "which may result in any discharge into the navigable waters" to obtain from the state a certification "that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title." 33 U.S.C. § 1341(a). Section 401(d) further provides that "any certification . . . shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant . . . will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title . . . and with any other appropriate requirement of State law set forth [*13] in such certification." 33 U.S.C. § 1341(d). The limitations included in the certification become a condition on any Federal license. Ibid. n2

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n2 Section 401 provides in relevant part:

"(a) Compliance with applicable requirements; application; procedures; license suspension

"(1) Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State . . . that any such discharge will comply with the applicable provisions of sections 1311, 1312, 1313, 1316, and 1317 of this title.

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"(d) Limitations and monitoring requirements of certification

"Any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section." 33 U.S.C. § 1341.

[*14] [**726]

II

Petitioners propose to build the Elkhorn Hydroelectric Project on the Dosewallips River. If constructed as presently planned, the facility would be located just outside the Olympic National Park on federally owned land within the Olympic National Forest. The project would divert water from a 1.2-mile reach of the River (the bypass reach), run the water through turbines to generate electricity and then return the water to the River below the bypass reach. Under the Federal Power Act (FPA), 41 Stat. 1063, as amended, 16 U.S.C. § 791 et seq., the Federal Energy Regulatory Commission has authority to license new hydroelectric facilities. As a result, the petitioners must get a FERC license to build or operate the Elkhorn Project. Because a federal license is required, and because the project may result in discharges into the Dosewallips River, petitioners are also required to obtain State certification of the project pursuant to § 401 of the Clean Water Act, 33 U.S.C. § 1341.

The water flow in the bypass reach, which is currently undiminished by appropriation, ranges seasonally between 149 and 738 cubic feet [*15] per second (cfs). The Dosewallips supports two species of salmon, Coho and Chinook, as well as Steelhead trout. As originally proposed, the project was to include a diversion dam which would completely block the river and channel approximately 75% of the River's water into a tunnel alongside the streambed. About 25% of the water would remain in the bypass reach, but would be returned to the original riverbed through sluice gates or a fish ladder. Depending on the season, this would leave a residual minimum flow of between 65 and 155 cfs in the River. Respondent undertook a study to determine the minimum stream flows necessary to protect the salmon and steelhead fisheries in the bypass reach. On June 11, 1986, respondent issued a § 401 water quality certification imposing a variety of conditions on the project, including a minimum stream-flow requirement of between 100 and 200 cfs depending on the season.

A state administrative appeals board determined that the minimum flow requirement was intended to enhance, not merely maintain, the fishery, and that the certification condition therefore exceeded respondent's authority under state law. App. to Pet. for Cert. 55a -- 57a. On appeal, [*16] the state Superior Court concluded that respondent could require compliance with the minimum flow conditions. Id., at 29a-45a. The Superior Court also found that respondent had imposed the minimum flow requirement to protect and preserve the fishery, not to improve it, and that this requirement was authorized by state law. Id., at 34a.

The Washington Supreme Court held that the antidegradation provisions of the State's water quality standards require the imposition of minimum stream flows. 121 Wash. 2d 179, 186-187, 849 P.2d 646, 650 (1993). [**727] The court also found that § 401(d), which allows States to impose conditions based upon several enumerated sections of the Clean Water Act and "any other appropriate requirement of State law," 33 U.S.C. § 1341(d), authorized the stream flow condition. Relying on this language and the broad purposes of the Clean Water Act, the court concluded that § 401(d) confers on States power to "consider all state action related to water quality in imposing conditions on section 401 certificates." 121 Wash. 2d, at 192, 849 P.2d, at 652. [*17] We granted certiorari, 510 U.S. (1993), to resolve a conflict among the state courts of last resort. See 121 Wash. 2d 179, 849 P.2d 646 (1993); *Georgia Pacific Corp. v. Dept. of Environmental Conservation*, 159 Vt. 639, 628 A.2d 944 (1992) (table); *Power Authority of New York v. Williams*, 60 N.Y.2d 315, 457 N.E.2d 726, 469 N.Y.S.2d 620 (1983). We now affirm.

III

The principal dispute in this case concerns whether the minimum stream flow requirement that the State imposed on the Elkhorn project is a permissible condition of a § 401 certification under the Clean Water Act. To resolve this dispute we must first determine the scope of the State's authority under § 401. We must then determine whether the limitation at issue here, the requirement that petitioners maintain minimum stream flows, falls within the scope of that authority.

A

There is no dispute that petitioners were required to obtain a certification from the State pursuant to § 401. Petitioners concede that, at a minimum, the project will result in two possible discharges [*18] -- the release of dredged and fill material during the construction of the project, and the discharge of water at the end of the tailrace after the water has been used to generate electricity. Brief for Petitioners 27-28. Petitioners contend, however, that the minimum stream flow requirement imposed by the State was unrelated to these specific discharges, and that as a consequence, the State lacked the authority under § 401 to condition its certification on maintenance of stream flows sufficient to protect the Dosewallips fishery.

If § 401 consisted solely of subsection (a), which refers to a state certification that a "discharge" will comply with certain provisions of the Act, petitioners' assessment of the scope of the State's certification authority would have considerable force. Section 401, however, also contains subsection (d), which expands the State's authority to impose conditions on the certification of a project. Section 401(d) provides that any certification shall set forth "any effluent limitations and other limitations . . . necessary to assure that any applicant" will comply with various provisions of the Act and appropriate state law requirements. 33 U.S.C. § 1341 [*19] (d) (emphasis added). The language of this subsection contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a "discharge." The text refers to the compliance of the applicant, not the discharge. Section 401(d) thus allows the State to impose "other limitations" on the project in general to assure compliance with various provisions of the Clean Water Act and with "any other appropriate [**728] requirement of State law." Although the dissent asserts that this interpretation of § 401(d) renders § 401(a)(1) superfluous, *infra*, at 4, we see no such anomaly. Section 401(a)(1) identifies the category of activities subject to certification -- namely those with discharges. And § 401(d) is most reasonably read as authorizing additional conditions and limitations on the activity as a whole once the

threshold condition, the existence of a discharge, is satisfied.

Our view of the statute is consistent with EPA's regulations implementing § 401. The regulations expressly interpret § 401 as requiring the State to find that "there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality [*20] standards." 40 CFR § 121.2(a)(3) (1992) (emphasis added). See also EPA, *Wetlands and 401 Certification* 23 (Apr. 1989) ("In 401(d), the Congress has given the States the authority to place any conditions on a water quality certification that are necessary to assure that the applicant will comply with effluent limitations, water quality standards, . . . and with 'any other appropriate requirement of State law.'"). EPA's conclusion that activities-not merely discharges-must comply with state water quality standards is a reasonable interpretation of § 401, and is entitled to deference. See, e.g., *Arkansas v. Oklahoma*, 503 U.S. , (1992) (slip op., at 18-19); *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984).

Although § 401(d) authorizes the State to place restrictions on the activity as a whole, that authority is not unbounded. The State can only ensure that the project complies with "any applicable effluent limitations and other limitations, under [33 U.S.C. §§ 1311, 1312]" or certain [*21] other provisions of the Act, "and with any other appropriate requirement of State law." 33 U.S.C. § 1341(d). The State asserts that the minimum stream flow requirement was imposed to ensure compliance with the state water quality standards adopted pursuant to § 303 of the Clean Water Act, 33 U.S.C. § 1313.

We agree with the State that ensuring compliance with § 303 is a proper function of the § 401 certification. Although § 303 is not one of the statutory provisions listed in § 401(d), the statute allows states to impose limitations to ensure compliance with § 301 of the Act, 33 U.S.C. § 1311. Section 301 in turn incorporates § 303 by reference. See 33 U.S.C. § 1311(b)(1)(C); see also H. R. Conf. Rep. No. 95-830, p. 96 (1977) ("Section 303 is always included by reference where section 301 is listed"). As a consequence, state water quality standards adopted pursuant to § 303 are among the "other limitations" with which a State may ensure compliance through the § 401 certification process. This interpretation is consistent with EPA's view [*22] of the statute. See 40 CFR § 121.2(a)(3) (1992); EPA, *Wetlands and 401 Certification*, *supra*. Moreover, limitations to assure compliance with state water quality standards are also permitted by § 401(d)'s reference to "any other appropriate requirement of State law." We do not speculate

on what additional state laws, if any, might be incorporated by this language. n3 [**729] But at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are "appropriate" requirements of state law. Indeed, petitioners appear to agree that the State's authority under § 401 includes limitations designed to ensure compliance with state water quality standards. Brief for Petitioners 9, 21.

n3 The dissent asserts that § 301 is concerned solely with discharges, not broader water quality standards. *Infra*, 8 n. 2. Although § 301 does make certain discharges unlawful, see 33 U.S.C. § 1311(a), it also contains a broad enabling provision which requires states to take certain actions, to wit: "In order to carry out the objective of this chapter [viz. the chemical, physical, and biological integrity of the Nation's water] there shall be achieved . . . not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards . . . established pursuant to any State law or regulations." 33 U.S.C. § 1311(b)(1)(C). This provision of § 301 expressly refers to state water quality standards, and is not limited to discharges.

[*23]

B

Having concluded that, pursuant to § 401, States may condition certification upon any limitations necessary to ensure compliance with state water quality standards or any other "appropriate requirement of State law," we consider whether the minimum flow condition is such a limitation. Under § 303, state water quality standards must "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). In imposing the minimum stream flow requirement, the State determined that construction and operation of the project as planned would be inconsistent with one of the designated uses of Class AA water, namely "salmonid [and other fish] migration, rearing, spawning, and harvesting." App. to Pet. for Cert. 83a -- 84a. The designated use of the River as a fish habitat directly reflects the Clean Water Act's goal of maintaining the "chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Indeed, the Act defines pollution as "the man-made or man induced alteration of the chemical, physical, [*24] biological, and radiological integrity of water." § 1362(19). Moreover, the Act expressly requires that, in adopting water quality standards, the State must take into consideration the use of waters for "propagation of fish and wildlife." 33 U.S.C.

§ 1313(c)(2)(A).

Petitioners assert, however, that § 303 requires the State to protect designated uses solely through implementation of specific "criteria." According to petitioners, the State may not require them to operate their dam in a manner consistent with a designated "use"; instead, say petitioners, under § 303 the State may only require that the project comply with specific numerical "criteria."

We disagree with petitioners' interpretation of the language of § 303(c)(2)(A). Under the statute, a water quality standard must "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A) (emphasis added). The text makes it plain that water quality standards contain two components. We think the language of § 303 is most naturally read to require [**730] that a project [*25] be consistent with both components, namely the designated use and the water quality criteria. Accordingly, under the literal terms of the statute, a project that does not comply with a designated use of the water does not comply with the applicable water quality standards.

Consequently, pursuant to § 401(d) the State may require that a permit applicant comply with both the designated uses and the water quality criteria of the state standards. In granting certification pursuant to § 401(d), the State "shall set forth any . . . limitations . . . necessary to assure that [the applicant] will comply with any . . . limitations under [§ 303] . . . and with any other appropriate requirement of State law." A certification requirement that an applicant operate the project consistently with state water quality standards -- i.e., consistently with the designated uses of the water body and the water quality criteria -- is both a "limitation" to assure "compliance with . . . limitations" imposed under § 303, and an "appropriate" requirement of State law.

EPA has not interpreted § 303 to require the States to protect designated uses exclusively through enforcement of numerical criteria. [*26] In its regulations governing state water quality standards, EPA defines criteria as "elements of State water quality standards expressed as constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use." § 40 CFR 131.3(b) (1992)(emphasis added). The regulations further provide that "when criteria are met, water quality will generally protect the designated use." *Ibid.* (emphasis added). Thus, the EPA regulations implicitly recognize that in some circumstances, criteria alone are insufficient to protect a designated use.

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Petitioners also appear to argue that use requirements are too open-ended, and that the Act only contemplates enforcement of the more specific and objective "criteria." But this argument is belied by the open-ended nature of the criteria themselves. As the Solicitor General points out, even "criteria" are often expressed in broad, narrative terms, such as "'there shall be no discharge of toxic pollutants in toxic amounts.'" Brief for United States 18. See *American Paper Institute, Inc. v. EPA*, 302 U.S. App. D.C. 80, 996 F.2d 346, 349 (CADDC 1993). [*27] In fact, under the Clean Water Act, only one class of criteria, those governing "toxic pollutants listed pursuant to section 1317(a)(1)" need be rendered in numerical form. See 33 U.S.C. § 1313(c)(2)(B); 40 CFR § 131.11(b)(2) (1992).

Washington's Class AA water quality standards are typical in that they contain several open-ended criteria which, like the use designation of the River as a fishery, must be translated into specific limitations for individual projects. For example, the standards state that "toxic, radioactive, or deleterious material concentrations shall be less than those which may affect public health, the natural aquatic environment, or the desirability of the water for any use." WAC 173-201-045(c)(vii). Similarly, the state standards specify that "aesthetic values shall not be impaired by the presence of materials or their effects, excluding those of natural origin, which offend the senses of sight, smell, touch, or taste." 173-201-045(c)(viii). We think petitioners' [**731] attempt to distinguish between uses and criteria loses much of its force in light of the fact that the Act permits enforcement of broad, narrative criteria based on, [*28] for example, "aesthetics."

Petitioners further argue that enforcement of water quality standards through use designations renders the water quality criteria component of the standards irrelevant. We see no anomaly, however, in the State's reliance on both use designations and criteria to protect water quality. The specific numerical limitations embodied in the criteria are a convenient enforcement mechanism for identifying minimum water conditions which will generally achieve the requisite water quality. And, in most circumstances, satisfying the criteria will, as EPA recognizes, be sufficient to maintain the designated use. See 40 CFR § 131.3(b) (1992). Water quality standards, however, apply to an entire class of water, a class which contains numerous individual water bodies. For example, in the State of Washington, the Class AA water quality standard applies to 81 specified fresh surface waters, as well as to all "surface waters lying within the mountainous regions of the state assigned to national parks, national forests, and/or wilderness areas," all "lakes and their feeder streams within the state,"

and all "unclassified surface waters that are tributaries to Class AA waters." [*29] WAC 173-201-070. While enforcement of criteria will in general protect the uses of these diverse waters, a complementary requirement that activities also comport with designated uses enables the States to ensure that each activity -- even if not foreseen by the criteria -- will be consistent with the specific uses and attributes of a particular body of water.

Under petitioners' interpretation of the statute, however, if a particular criterion, such as turbidity, were missing from the list contained in an individual state water quality standard, or even if an existing turbidity criterion were insufficient to protect a particular species of fish in a particular river, the State would nonetheless be forced to allow activities inconsistent with the existing or designated uses. We think petitioners' reading leads to an unreasonable interpretation of the Act. The criteria components of state water quality standards attempt to identify, for all the water bodies in a given class, water quality requirements generally sufficient to protect designated uses. These criteria, however, cannot reasonably be expected to anticipate all the water quality issues arising from every activity which can [*30] affect the State's hundreds of individual water bodies. Requiring the States to enforce only the criteria component of their water quality standards would in essence require the States to study to a level of great specificity each individual surface water to ensure that the criteria applicable to that water are sufficiently detailed and individualized to fully protect the water's designated uses. Given that there is no textual support for imposing this requirement, we are loath to attribute to Congress an intent to impose this heavy regulatory burden on the States.

The State also justified its minimum stream flow as necessary to implement the "antidegradation policy" of § 303, 33 U.S.C. § 1313(d)(4)(B). When the Clean Water Act was enacted in 1972, the water quality standards of [**732] all 50 States had antidegradation provisions. These provisions were required by federal law. See U.S. Dept. of Interior, Federal Water Pollution Control Administration, Compendium of Department of Interior Statements on Non-degradation of Interstate Waters 1-2 (Aug. 1968); see also Hines, A Decade of Nondegradation Policy in Congress and the Courts: The Erratic Pursuit of [*31] Clean Air and Clean Water, 62 Iowa L. Rev. 643, 658-660 (1977). By providing in 1972 that existing state water quality standards would remain in force until revised, the Clean Water Act ensured that the States would continue their antidegradation programs. See 33 U.S.C. § 1313(a). EPA has consistently required that revised state standards incorporate an antidegradation policy. And, in 1987, Congress explicitly

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recognized the existence of an "antidegradation policy established under [§ 303]." § 1313(d)(4)(B).

EPA has promulgated regulations implementing § 303's antidegradation policy, a phrase that is not defined elsewhere in the Act. These regulations require States to "develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy." 40 CFR § 131.12 (1992). These "implementation methods shall, at a minimum, be consistent with the . . . existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." *Ibid.* EPA has explained that under its anti-degradation regulation, "no activity is allowable . . . which [*32] could partially or completely eliminate any existing use." EPA, Questions and Answers re: Antidegradation 3 (1985). Thus, States must implement their antidegradation policy in a manner "consistent" with existing uses of the stream. The State of Washington's antidegradation policy in turn provides that "existing beneficial uses shall be maintained and protected and no further degradation which would interfere with or become injurious to existing beneficial uses will be allowed." WAC 173-201-035(8)(a). The State concluded that the reduced streamflows would have just the effect prohibited by this policy. The Solicitor General, representing EPA, asserts, Brief for United States 18-21, and we agree, that the State's minimum stream flow condition is a proper application of the state and federal antidegradation regulations, as it ensures that an "existing instream water use" will be "maintained and protected." 40 CFR § 131.12(a)(1) (1992).

Petitioners also assert more generally that the Clean Water Act is only concerned with water "quality," and does not allow the regulation of water "quantity." This is an artificial distinction. In many cases, water quantity is closely related to water [*33] quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation or, as here, as a fishery. In any event, there is recognition in the Clean Water Act itself that reduced stream flow, i.e., diminishment of water quantity, can constitute water pollution. First, the Act's definition of pollution as "the man-made or man induced alteration of the chemical, physical, biological, and radiological integrity of water" encompasses the effects of reduced water quantity. 33 U.S.C. § 1362(19). This broad conception of pollution -- one which [**733] expressly evinces Congress' concern with the physical and biological integrity of water -- refutes petitioners' assertion that the Act draws a sharp distinction between the regulation of water "quantity" and water "quality." Moreover, § 304 of the Act expressly recognizes that water "pollution" may result from "changes in the move-

ment, flow, or circulation of any navigable waters . . . including changes caused by the construction of dams." 33 U.S.C. § 1314(f). This concern with the flowage [*34] effects of dams and other diversions is also embodied in the EPA regulations, which expressly require existing dams to be operated to attain designated uses. 40 CFR § 131.10(g)(4).

Petitioners assert that two other provisions of the Clean Water Act, §§ 101(g) and 510(2), 33 U.S.C. §§ 1251(g) and 1370(2), exclude the regulation of water quantity from the coverage of the Act. Section 101(g) provides "that the authority of each State to allocate quantities of water within its jurisdiction shall not be superseded, abrogated or otherwise impaired by this chapter." 33 U.S.C. § 1251(g). Similarly, § 510(2) provides that nothing in the Act shall "be construed as impairing or in any manner affecting any right or jurisdiction of the States with respect to the waters . . . of such States." 33 U.S.C. § 1370. In petitioners' view, these provisions exclude "water quantity issues from direct regulation under the federally controlled water quality standards authorized in § 303." Brief for Petitioners 39 (emphasis omitted).

This language gives the States authority to allocate water rights; [*35] we therefore find it peculiar that petitioners argue that it prevents the State from regulating stream flow. In any event, we read these provisions more narrowly than petitioners. Sections 101(g) and 510(2) preserve the authority of each State to allocate water quantity as between users; they do not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. In *California v. FERC*, 495 U.S. 490, 498, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990), construing an analogous provision of the Federal Power Act, n4 we explained that "minimum stream flow requirements neither reflect nor establish 'proprietary rights' to water. Cf. *First Iowa Hydro-Electric Cooperative v. FPC*, 328 U.S. 152, 176, and n. 20, 90 L. Ed. 1143, 66 S. Ct. 906 (1946). Moreover, the certification itself does not purport to determine petitioners' proprietary right to the water of the Dosewallips. In fact, the certification expressly states that a "State Water Right Permit (Chapters 90.03.250 RCW and 508-12 WAC) must be [*36] obtained prior to commencing construction of the project." App. to Pet. for Cert. 83a. The certification merely determines the nature of the use to which that proprietary right may be put under the Clean Water Act, if and when it is obtained from the State. Our view is reinforced by the legislative history of the 1977 [**734] amendment to the Clean Water Act adding § 101(g). See 3 Legislative History of the Clean Water Act of 1977 (Committee Print compiled for the Committee on Environment and Public

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Works by the Library of Congress), Ser. No. 95-14, p. 532 (1978) ("The requirements [of the Act] may incidentally affect individual water rights. . . . It is not the purpose of this amendment to prohibit those incidental effects. It is the purpose of this amendment to insure that State allocation systems are not subverted, and that effects on individual rights, if any, are prompted by legitimate and necessary water quality considerations").

n4 The relevant text of the Federal Power Act provides: "That nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein." 41 Stat. 1077, 16 U.S.C. § 821.

[*37]

IV

Petitioners contend that we should limit the State's authority to impose minimum flow requirements because FERC has comprehensive authority to license hydroelectric projects pursuant to the FPA, 16 U.S.C. § 791a et seq. In petitioners' view, the minimum flow requirement imposed here interferes with FERC's authority under the FPA.

The FPA empowers FERC to issue licenses for projects "necessary or convenient . . . for the development, transmission, and utilization of power across, along, from, or in any of the streams . . . over which Congress has jurisdiction." § 797(e). The FPA also requires FERC to consider a project's effect on fish and wildlife. §§ 797(e), 803(a)(1). In *California v. FERC*, *supra*, we held that the California Water Resources Control Board, acting pursuant to state law, could not impose a minimum stream flow which conflicted with minimum stream flows contained in a FERC license. We concluded that the FPA did not "save" to the States this authority. *Id.*, at 498.

No such conflict with any FERC licensing [*38] activity is presented here. FERC has not yet acted on petitioners' license application, and it is possible that FERC will eventually deny petitioners' application altogether. Alternatively, it is quite possible, given that FERC is required to give equal consideration to the protection of fish habitat when deciding whether to issue a license, that any FERC license would contain the same conditions as the State § 401 certification. Indeed, at oral argument the Solicitor General stated that both EPA and FERC were represented in this proceeding, and that

the Government has no objection to the stream flow condition contained in the § 401 certification. Tr. of Oral Arg. 43-44.

Finally, the requirement for a state certification applies not only to applications for licenses from FERC, but to all federal licenses and permits for activities which may result in a discharge into the Nation's navigable waters. For example, a permit from the Army Corps of Engineers is required for the installation of any structure in the navigable waters which may interfere with navigation, including piers, docks, and ramps. Rivers and Harbors Appropriation Act of 1899, 30 Stat. 1151, § 10, 33 U.S.C. § 403. [*39] Similarly, a permit must be obtained from the Army Corps of Engineers for the discharge of dredged or fill material, and from the Secretary of the Interior or Agriculture for the construction of reservoirs, canals and other water storage systems on federal land. See 33 U.S.C. §§ 1344(a), (e); 43 U.S.C. § 1761 (1988 ed. and Supp. IV). [**735] We assume that a § 401 certification would also be required for some licenses obtained pursuant to these statutes. Because § 401's certification requirement applies to other statutes and regulatory schemes, and because any conflict with FERC's authority under the FPA is hypothetical, we are unwilling to read implied limitations into § 401. If FERC issues a license containing a stream flow condition with which petitioners disagree, they may pursue judicial remedies at that time. Cf. *Escondido Mut. Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 778, n. 20, 80 L. Ed. 2d 753, 104 S. Ct. 2105 (1984).

In summary, we hold that the State may include minimum stream flow requirements in a certification issued pursuant [*40] to § 401 of the Clean Water Act insofar as necessary to enforce a designated use contained in a state water quality standard. The judgment of the Supreme Court of Washington, accordingly, is affirmed.

So ordered.

CONCURBY: STEVENS

CONCUR: JUSTICE STEVENS, concurring.

While I agree fully with the thorough analysis in the Court's opinion, I add this comment for emphasis. For judges who find it unnecessary to go behind the statutory text to discern the intent of Congress, this is (or should be) an easy case. Not a single sentence, phrase, or word in the Clean Water Act purports to place any constraint on a State's power to regulate the quality of its own waters more stringently than federal law might require. In fact, the Act explicitly recognizes States' ability to impose stricter standards. See, e.g., § 301(b)(1)(C), 33 U.S.C. § 1311(b)(1)(C).

DISSENTBY: THOMAS

DISSENT: JUSTICE THOMAS, with whom JUSTICE SCALIA joins, dissenting.

The Court today holds that a State, pursuant to § 401 of the Clean Water Act, may condition the certification necessary to obtain a federal license for a proposed hydroelectric project upon the maintenance of a minimum flow rate in the river to be utilized [*41] by the project. In my view, the Court makes three fundamental errors. First, it adopts an interpretation that fails adequately to harmonize the subsections of § 401. Second, it places no meaningful limitation on a State's authority under § 401 to impose conditions on certification. Third, it gives little or no consideration to the fact that its interpretation of § 401 will significantly disrupt the carefully crafted federal-state balance embodied in the Federal Power Act. Accordingly, I dissent.

I

A

Section 401(a)(1) of the Federal Water Pollution Control Act, otherwise known as the Clean Water Act (CWA or Act), 33 U.S.C. § 1251 et seq., provides that "any applicant for a Federal license or permit to conduct any activity . . . , which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates . . . that any such [**736] discharge will comply with . . . applicable provisions of [the CWA]." 33 U.S.C. § 1341(a)(1). The terms of § 401(a)(1) make clear that the purpose of the certification process is to ensure [*42] that discharges from a project will meet the requirements of the CWA. Indeed, a State's authority under § 401(a)(1) is limited to certifying that "any discharge" that "may result" from "any activity," such as petitioners' proposed hydroelectric project, will "comply" with the enumerated provisions of the CWA; if the discharge will fail to comply, the State may "deny" the certification. *Ibid.* In addition, under § 401(d), a State may place conditions on a § 401 certification, including "effluent limitations and other limitations, and monitoring requirements," that may be necessary to ensure compliance with various provisions of the CWA and with "any other appropriate requirement of State law." § 1341(d).

The minimum stream flow condition imposed by respondents in this case has no relation to any possible "discharge" that might "result" from petitioners' proposed project. The term "discharge" is not defined in the CWA, but its plain and ordinary meaning suggests "a flowing or issuing out," or "something that is emitted."

Webster's Ninth New Collegiate Dictionary 360 (1991). Cf. 33 U.S.C. § 1362(16) ("The term 'discharge' when used without qualification [*43] includes a discharge of a pollutant, and a discharge of pollutants"). A minimum stream flow requirement, by contrast, is a limitation on the amount of water the project can take in or divert from the river. See *ante*, at 7. That is, a minimum stream flow requirement is a limitation on intake -- the opposite of discharge. Imposition of such a requirement would thus appear to be beyond a State's authority as it is defined by § 401(a)(1).

The Court remarks that this reading of § 401(a)(1) would have "considerable force," *ante*, at 9, were it not for what the Court understands to be the expansive terms of § 401(d). That subsection provides that

"any certification provided under this section shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law [*44] set forth in such certification, and shall become a condition on any Federal license or permit subject to the provisions of this section." 33 U.S.C. § 1341(d) (emphasis added).

According to the Court, the fact that § 401(d) refers to an "applicant," rather than a "discharge," complying with various provisions of the Act "contradicts petitioners' claim that the State may only impose water quality limitations specifically tied to a 'discharge.'" *Ante*, at 9. In the Court's view, § 401(d)'s reference to an applicant's compliance "expands" a State's authority beyond the limits set out in § 401(a)(1), *ante*, at 9, [**737] thereby permitting the State in its certification process to scrutinize the applicant's proposed "activity as a whole," not just the discharges that may result from the activity. *Ante*, at 10. The Court concludes that this broader authority allows a State to impose conditions on a § 401 certification that are unrelated to discharges. *Ante*, at 9-10.

While the Court's interpretation seems plausible at first glance, it ultimately must fail. If, as the Court asserts, § 401(d) permits States to impose conditions unrelated to discharges [*45] in § 401 certifications, Congress' careful focus on discharges in § 401(a)(1) -- the provision that describes the scope and function of the certification process -- was wasted effort. The power to set conditions that are unrelated to dis-

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charges is, of course, nothing but a conditional power to deny certification for reasons unrelated to discharges. Permitting States to impose conditions unrelated to discharges, then, effectively eliminates the constraints of § 401(a)(1).

Subsections 401(a)(1) and (d) can easily be reconciled to avoid this problem. To ascertain the nature of the conditions permissible under § 401(d), § 401 must be read as a whole. See *United Savings Assn. of Texas v. Timbers of Inwood Forest Associates, Ltd.*, 484 U.S. 365, 371, 98 L. Ed. 2d 740, 108 S. Ct. 626 (1988) (statutory interpretation is a "holistic endeavor"). As noted above, § 401(a)(1) limits a State's authority in the certification process to addressing concerns related to discharges and to ensuring that any discharge resulting from a project will comply with specified provisions of the Act. It is reasonable to infer that the conditions a [*46] State is permitted to impose on certification must relate to the very purpose the certification process is designed to serve. Thus, while § 401(d) permits a State to place conditions on a certification to ensure compliance of the "applicant," those conditions must still be related to discharges. In my view, this interpretation best harmonizes the subsections of § 401. Indeed, any broader interpretation of § 401(d) would permit that subsection to swallow § 401(a)(1).

The text of § 401(d) similarly suggests that the conditions it authorizes must be related to discharges. The Court attaches critical weight to the fact that § 401(d) speaks of the compliance of an "applicant," but that reference, in and of itself, says little about the nature of the conditions that may be imposed under § 401(d). Rather, because § 401(d) conditions can be imposed only to ensure compliance with specified provisions of law -- that is, with "applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standards of performance under section 1316 of this title, . . . prohibitions, effluent standards, or pretreatment standards under section 1317 of this title, [or] . . . any [*47] other appropriate requirements of State law" -- one should logically turn to those provisions for guidance in determining the nature, scope, and purpose of § 401(d) conditions. Each of the four identified CWA provisions describes discharge-related limitations. See § 1311 (making it unlawful to discharge any pollutant except in compliance with enumerated provisions of the Act); § 1312 (establishing effluent limitations on point source discharges); [**738] § 1316 (setting national standards of performance for the control of discharges); and § 1317 (setting pretreatment effluent standards and prohibiting the discharge of certain effluents except in compliance with standards).

The final term on the list -- "appropriate requirements of State law" -- appears to be more general in scope. Because this reference follows a list of more limited provisions that specifically address discharges, however, the principle ejusdem generis would suggest that the general reference to "appropriate" requirements of state law is most reasonably construed to extend only to provisions that, like the other provisions in the list, impose discharge-related restrictions. Cf. *Cleveland v. United States*, 329 U.S. 14, 18, 91 L. Ed. 12, 67 S. Ct. 13 (1946) [*48] ("Under the ejusdem generis rule of construction the general words are confined to the class and may not be used to enlarge it"); *Arcadia v. Ohio Power Co.*, 498 U.S. 73, 84, 112 L. Ed. 2d 374, 111 S. Ct. 415 (1990). In sum, the text and structure of § 401 indicate that a State may impose under § 401(d) only those conditions that are related to discharges.

B

The Court adopts its expansive reading of § 401(d) based at least in part upon deference to the "conclusion" of the Environmental Protection Agency (EPA) that § 401(d) is not limited to requirements relating to discharges. Ante, at 10. The agency regulation to which the Court defers is 40 CFR § 121.2(a)(3) (1993), which provides that the certification shall contain "[a] statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards." Ante, at 10. According to the Court, "EPA's conclusion that activities -- not merely discharges -- must comply with state water quality standards . . . is entitled to deference" under *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984). [*49] Ante, at 10.

As a preliminary matter, the Court appears to resort to deference under *Chevron* without establishing through an initial examination of the statute that the text of the section is ambiguous. See *Chevron, supra*, at 842-843. More importantly, the Court invokes *Chevron* deference to support its interpretation even though the Government does not seek deference for the EPA's regulation in this case. n1 That the Government itself has not contended that an agency interpretation exists reconciling the scope of the conditioning authority under § 401(d) with the terms of § 401(a)(1) should suggest to the Court that there is no "agency construction" directly addressing the question. *Chevron, supra*, at 842.

n1 The Government, appearing as amicus curiae "supporting affirmance," instead approaches the question presented by assuming, arguendo, that petitioners' construction of § 401 is correct: "Even

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if a condition imposed under Section 401(d) were valid only if it assured that a 'discharge' will comply with the State's water quality standards, the [minimum flow condition set by respondents] satisfies that test." Brief for United States as Amicus Curiae 11.

[*50]

In fact, the regulation to which the [**739] Court defers is hardly a definitive construction of the scope of § 401(d). On the contrary, the EPA's position on the question whether conditions under § 401(d) must be related to discharges is far from clear. Indeed, the only EPA regulation that specifically addresses the "conditions" that may appear in § 401 certifications speaks exclusively in terms of limiting discharges. According to the EPA, a § 401 certification shall contain "[a] statement of any conditions which the certifying agency deems necessary or desirable with respect to the discharge of the activity." 40 CFR § 121.2(a)(4) (1993) (emphases added). In my view, § 121.2(a)(4) should, at the very least, give the Court pause before it resorts to Chevron deference in this case.

II

The Washington Supreme Court held that the State's water quality standards, promulgated pursuant to § 303 of the Act, 33 U.S.C. § 1313, were "appropriate" requirements of state law under § 401(d), and sustained the stream flow condition imposed by respondents as necessary to ensure compliance with a "use" of the river as specified in those standards. As an alternative [*51] to their argument that § 401(d) conditions must be discharge-related, petitioners assert that the state court erred when it sustained the stream flow condition under the "use" component of the State's water quality standards without reference to the corresponding "water quality criteria" contained in those standards. As explained above, petitioners' argument with regard to the scope of a State's authority to impose conditions under § 401(d) is correct. I also find petitioners' alternative argument persuasive. Not only does the Court err in rejecting that § 303 argument, in the process of doing so it essentially removes all limitations on a State's conditioning authority under § 401.

The Court states that, "at a minimum, limitations imposed pursuant to state water quality standards adopted pursuant to § 303 are 'appropriate' requirements of state law" under § 401(d). Ante, at 11. n2 A water quality standard promulgated pursuant to § 303 must "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." 33 U.S.C. § 1313(c)(2)(A). The Court asserts that this language "is [*52] most naturally read to

require that a project be consistent with both components, namely the designated use and the water quality criteria." Ante, at 13. In the Court's view, then, the "use" of a body of water is independently enforceable through § 401(d) without reference to the corresponding criteria. Ante, at 13-14.

n2 In the Court's view, § 303 water quality standards come into play under § 401(d) either as "appropriate" requirements of state law, or through § 301 of the Act, which, according to the Court, "incorporates § 303 by reference." Ante, at 11 (citations omitted). The Court notes that through § 303, "the statute allows states to impose limitations to ensure compliance with § 301 of the Act." Ante, at 11. Yet § 301 makes unlawful only "the [unauthorized] discharge of any pollutant by any person." 33 U.S.C. § 1311(a) (emphasis added); see also supra, at 5. Thus, the Court's reliance on § 301 as a source of authority to impose conditions unrelated to discharges is misplaced.

[*53] [**740]

The Court's reading strikes me as contrary to common sense. It is difficult to see how compliance with a "use" of a body of water could be enforced without reference to the corresponding criteria. In this case, for example, the applicable "use" is contained in the following regulation: "Characteristic uses shall include, but not be limited to . . . salmonid migration, rearing, spawning, and harvesting." Wash. Admin. Code (WAC) 173-201-045(1)(b)(iii) (1990). The corresponding criteria, by contrast, include measurable factors such as quantities of fecal coliform organisms and dissolved gases in the water. WAC 173-201-045(1)(c)(i) and (ii). n3 Although the Act does not further address (at least not expressly) the link between "uses" and "criteria," the regulations promulgated under § 303 make clear that a "use" is an aspirational goal to be attained through compliance with corresponding "criteria." Those regulations suggest that "uses" are to be "achieved and protected," and that "water quality criteria" are to be adopted to "protect the designated uses." 40 CFR §§ 131.10(a), 131.11(a)(1) (1993).

n3 Respondents concede that petitioners' project "will likely not violate any of Washington's water quality criteria." Brief for Respondents 24.

[*54]

The problematic consequences of decoupling "uses" and "criteria" become clear once the Court's interpre-

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tation of § 303 is read in the context of § 401. In the Court's view, a State may condition the § 401 certification "upon any limitations necessary to ensure compliance" with the "uses of the water body." Ante, at 12, 13 (emphasis added). Under the Court's interpretation, then, state environmental agencies may pursue, through § 401, their water goals in any way they choose; the conditions imposed on certifications need not relate to discharges, nor to water quality criteria, nor to any objective or quantifiable standard, so long as they tend to make the water more suitable for the uses the State has chosen. In short, once a State is allowed to impose conditions on § 401 certifications to protect "uses" in the abstract, § 401(d) is limitless.

To illustrate, while respondents in this case focused only on the "use" of the Dosewallips River as a fish habitat, this particular river has a number of other "characteristic uses," including "recreation (primary contact recreation, sport fishing, boating, and aesthetic enjoyment)." WAC 173-201-045(1)(b)(v). Under the Court's interpretation, [*55] respondents could have imposed any number of conditions related to recreation, including conditions that have little relation to water quality. In *Town of Summersville*, 60 FERC P61,291, p. 61,990 (1992), for instance, the state agency required the applicant to "construct . . . access roads and paths, low water stepping stone bridges, . . . a boat launching facility . . . , and a residence and storage building." These conditions presumably would be sustained under the approach the Court adopts today. n4 In the end, it is difficult to conceive of a condition that would fall outside a [*741] State's § 401(d) authority under the Court's approach.

n4 Indeed, as the § 401 certification stated in this case, the flow levels imposed by respondents are "in excess of those required to maintain water quality in the bypass region," App. to Pet. for Cert. 83a, and therefore conditions not related to water quality must, in the Court's view, be permitted.

III

The Court's interpretation of § 401 significantly [*56] disrupts the careful balance between state and federal interests that Congress struck in the Federal Power Act (FPA), 16 U.S.C. § 791 et seq. Section 4(e) of the FPA authorizes the Federal Energy Regulatory Commission (FERC or Commission) to issue licenses for projects "necessary or convenient . . . for the development, transmission, and utilization of power across, along, from, or in any of the streams . . . over which Congress

has jurisdiction." 16 U.S.C. § 797(e). In the licensing process, FERC must balance a number of considerations: "In addition to the power and development purposes for which licenses are issued, [FERC] shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality." Ibid. Section 10(a) empowers FERC to impose on a license such conditions, including minimum stream flow requirements, as it deems best suited for power development and other public [*57] uses of the waters. See 16 U.S.C. § 803(a); *California v. FERC*, 495 U.S. 490, 494-495, 506, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990).

In *California v. FERC*, the Court emphasized FERC's exclusive authority to set the stream flow levels to be maintained by federally licensed hydroelectric projects. California, in order "to protect [a] stream's fish," had imposed flow rates on a federally licensed project that were significantly higher than the flow rates established by FERC. *Id.*, at 493. In concluding that California lacked authority to impose such flow rates, we stated:

"As Congress directed in FPA § 10(a), FERC set the conditions of the [project] license, including the minimum stream flow, after considering which requirements would best protect wildlife and ensure that the project would be economically feasible, and thus further power development. Allowing California to impose significantly higher minimum stream flow requirements would disturb and conflict with the balance embodied in that considered federal [*58] agency determination. FERC has indicated that the California requirements interfere with its comprehensive planning authority, and we agree that allowing California to impose the challenged requirements would be contrary to congressional intent regarding the Commission's licensing authority and would constitute a veto of the project that was approved and licensed by FERC." *Id.*, at 506-507 (citations and internal quotation marks omitted).

California v. FERC reaffirmed our decision in *First Iowa Hydro-Electric Cooperative v. FPC*, 328 U.S. 152, 164, 90 L. Ed. 1143, 66 S. Ct. 906 (1946), in which we warned against "vesting in [state authorities] a veto power" over federal hydroelectric projects. Such authority, we concluded, could "destroy the effectiveness" of the FPA and "subordinate to the control of the State the 'comprehensive' [*742] planning" with which the administering federal agency (at that time the Federal Power Commission) was charged. Ibid.

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Today, the Court gives the States precisely the veto power over hydroelectric projects that we determined [*59] in *California v. FERC* and *First Iowa* they did not possess. As the language of § 401(d) expressly states, any condition placed in a § 401 certification, including, in the Court's view, a stream flow requirement, "shall become a condition on any Federal license or permit." 33 U.S.C. § 1341(d) (emphasis added). Any condition imposed by a State under § 401(d) thus becomes a "term . . . of the license as a matter of law," *Department of Interior v. FERC*, 293 U.S. App. D.C. 182, 952 F.2d 538, 548 (CA DC 1992) (citation and internal quotation marks omitted), regardless of whether FERC favors the limitation. Because of § 401(d)'s mandatory language, federal courts have uniformly held that FERC has no power to alter or review § 401 conditions, and that the proper forum for review of those conditions is state court. n5 Section 401(d) conditions imposed by States are therefore binding on FERC. Under the Court's interpretation, then, it appears that the mistake of the State in *California v. FERC* was not that it had trespassed into territory exclusively reserved to FERC; rather, it simply had [*60] not hit upon the proper device -- that is, the § 401 certification -- through which to achieve its objectives.

n5 See, e.g., *Keating v. FERC*, 288 U.S. App. D.C. 344, 927 F.2d 616, 622 (CA DC 1991) (federal review inappropriate because a decision to grant or deny § 401 certification "presumably turns on questions of substantive state environmental law -- an area that Congress expressly intended to reserve to the states and concerning which federal agencies have little competence"); *Department of Interior v. FERC*, 952 F.2d, at 548; *United States v. Marathon Development Corp.*, 867 F.2d 96, 102 (CA1 1989); *Proffitt v. Rohm & Haas*, 850 F.2d 1007, 1009 (CA3 1988). FERC has taken a similar position. See *Town of Summersville*, 60 FERC P61,291, p. 61,990 (1992) ("Since pursuant to Section 401(d) . . . all of the conditions in the water quality certification must become conditions in the license, review of the appropriateness of the conditions is within the purview of state courts and not the Commission. The only alternatives available to the Commission are either to issue a license with the conditions included or to deny" the application altogether); accord *Central Maine Power Co.*, 52 FERC P61,033, pp. 61,172-61,173 (1990).

[*61]

Although the Court notes in passing that "the limitations included in the certification become a condition on

any Federal license," ante, at 6, it does not acknowledge or discuss the shift of power from FERC to the States that is accomplished by its decision. Indeed, the Court merely notes that "any conflict with FERC's authority under the FPA" in this case is "hypothetical" at this stage, ante, at 21, because "FERC has not yet acted on petitioners' license application." Ante, at 20-21. We are assured that "it is quite possible . . . that any FERC license would contain the same conditions as the State § 401 certification." Ante, at 21.

The Court's observations simply miss the point. Even if FERC might have no objection to the stream flow condition established by respondents in this case, such a happy coincidence will likely prove to be the exception, rather than the rule. In issuing licenses, FERC must balance the Nation's power needs together with the need for energy conservation, [*743] irrigation, flood control, fish and wildlife protection, and recreation. 16 U.S.C. § 797(e). State environmental agencies, by contrast, need only [*62] consider parochial environmental interests. Cf., e.g., Wash. Rev. Code § 90.54.010(2) (1992) (goal of State's water policy is to "insure that waters of the state are protected and fully utilized for the greatest benefit to the people of the state of Washington"). As a result, it is likely that conflicts will arise between a FERC-established stream flow level and a state-imposed level.

Moreover, the Court ignores the fact that its decision nullifies the congressionally mandated process for resolving such state-federal disputes when they develop. Section 10(j)(1) of the FPA, 16 U.S.C. § 803(j)(1), which was added as part of the Electric Consumers Protection Act of 1986 (ECPA), 100 Stat. 1244, provides that every FERC license must include conditions to "protect, mitigate damage to, and enhance" fish and wildlife, including "related spawning grounds and habitat," and that such conditions "shall be based on recommendations" received from various agencies, including state fish and wildlife agencies. If FERC believes that a recommendation from a state agency is inconsistent with the FPA -- that is, inconsistent with what FERC views as the proper balance [*63] between the Nation's power needs and environmental concerns -- it must "attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities" of the state agency. § 803(j)(2). If, after such an attempt, FERC "does not adopt in whole or in part a recommendation of any [state] agency," it must publish its reasons for rejecting that recommendation. *Ibid.* After today's decision, these procedures are a dead letter with regard to stream flow levels, because a State's "recommendation" concerning stream flow "shall" be included in the license when it is imposed as a condition under §

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401(d).

More fundamentally, the 1986 amendments to the FPA simply make no sense in the stream flow context if, in fact, the States already possessed the authority to establish minimum stream flow levels under § 401(d) of the CWA, which was enacted years before those amendments. Through the ECPA, Congress strengthened the role of the States in establishing FERC conditions, but it did not make that authority paramount. Indeed, although Congress could have vested in the States the final authority to set stream flow conditions, it instead left that authority [*64] with FERC. See *California v. FERC*, 495 U.S., at 499. As the Ninth Circuit observed in the course of rejecting California's effort to give California v. FERC a narrow reading, "there would be no point in Congress requiring [FERC] to consider the state agency recommendations on environmental matters and make its own decisions about which to accept, if the state agencies had the power to impose the requirements themselves."

Sayles Hydro Associates v. Maughan, 985 F.2d 451, 456 (1993).

Given the connection between § 401 and federal hydroelectric licensing, it is remarkable that the Court does not at least attempt to fit its interpretation of § 401 into the larger statutory framework governing the licensing process. At the very least, the significant impact the [**744] Court's ruling is likely to have on that process should compel the Court to undertake a closer examination of § 401 to ensure that the result it reaches was mandated by Congress.

IV

Because the Court today fundamentally alters the federal-state balance Congress carefully crafted in the FPA, and because such a result is neither [*65] mandated nor supported by the text of § 401, I respectfully dissent.

1ST CASE of Level 1 printed in FULL format.

AMERICAN RIVERS, INC., and the STATE OF VERMONT,
Petitioners, v. FEDERAL ENERGY REGULATORY COMMISSION,
Respondent, GREEN MOUNTAIN POWER and TROUT UNLIMITED,
Intervenors.

Docket Nos. 96-4110(L), 96-4112(CON), 96-4116(CON),
96-4118(CON)

UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

129 F.3d 99; 1997 U.S. App. LEXIS 30372; 45 ERC (BNA) 1563;
28 ELR 20258

January 30, 1997, Argued
November 5, 1997, Decided

SUBSEQUENT HISTORY: [**1] As Corrected November 26, 1997.

PRIOR HISTORY: Petitioners seek review of orders of the Federal Energy Regulatory Commission issuing hydropower licenses to several projects. In issuing the licenses, the Commission refused to incorporate several conditions imposed by Vermont pursuant to its authority under @ 401 of the Clean Water Act ("CWA"), 33 U.S.C. @ 1341, to certify that federally regulated projects that result in discharges into state waters comply with state and federal water quality standards (and other appropriate state laws). According to the Commission, the rejected conditions were beyond the scope of the State's authority under @ 401. The petition is granted and the orders are vacated and remanded.

DISPOSITION: Granted the petition for review, vacated the orders of the Commission, and remanded for proceedings consistent with this opinion.

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JUDGES: Before: WALKER, JACOBS, and PARKER, Circuit Judges.

OPINIONBY: WALKER

OPINION:

[*101] WALKER, Circuit Judge:

Petitioners, the State of Vermont and American Rivers, Inc., seek review of several orders issued by the Federal Energy Regulatory Commission ("FERC" or "Commission") licensing six hydropower projects located on rivers within the State of Vermont. The dispute surrounds (1) the authority of the State under @ 401 of the Clean Water Act [*102] ("CWA"), 33 U.S.C. @ 1341, to certify -- prior to the issuance of a federal license -- that such projects will comply with federal and [**8] state water quality standards and (2) the appropriate route for review of a state's certification decisions. The Commission argues that, when it determines that a state has exceeded the scope of its authority under @ 401 in imposing certain pre-license conditions, it may refuse to include the ultra vires conditions in its license as it did in each of the proceedings at issue. Petitioners contend that the Commission is bound by the language of @ 401 to incorporate all state-imposed certification conditions into hydropower licenses and that the legality of such conditions can only be challenged by the licensee in a court of appropriate jurisdiction. We agree with petitioners and, thus, grant the petition for review, vacate the Commission's orders, and remand.

I. BACKGROUND

A. The Licensing Proceedings and the Statutory Scheme

The principal order under review in this proceeding arises from the efforts of the Tunbridge Mill Corporation ("Tunbridge") to obtain a license from FERC for the operation of a small hydroelectric facility on the First Branch of the White River in Orange County, Vermont, restoring an historic mill site in Tunbridge Village. Pursuant to @ 401(a)(1) [**9] of the CWA, 33 U.S.C. @ 1341(a)(1), an applicant for a federal license for any activity that may result in a discharge into the navigable waters of the United States must apply for a certification from the state in which the discharge originates (or will originate) that the licensed activity will comply with state and federal water quality standards. See *P.U.D. No. 1 of Jefferson County v. Washington Dep't of Ecology*, 511 U.S. 700, 114 S. Ct. 1900, 1907, 128 L. Ed. 2d 716 (1994). Such certifications, in accordance with @ 401(d), 33 U.S.C. @ 1341(d), shall

set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations and other limitations, under section 1311 or 1312 of this title, standard of performance under section 1316 of this title, or prohibition, effluent standard, or pretreatment standard under section 1317 of this title, and with any other appropriate requirement of State law set forth in such certification

The CWA further provides that the state certification "shall become a condition on any Federal license or permit subject to [**10] the provisions of this section." *Id.*

On October 15, 1990, Tunbridge petitioned the responsible state agency, Vermont's Agency of Natural Resources ("VANR"), for certification of the project. See 10 Vt. Stat. Ann. @ 1004; Vt. Water Pollution Control Reg. @ 13.10. After several discussions, Tunbridge and VANR agreed on the conditions to be embodied by the certification. The VANR issued a draft certification on September 18, 1991, for public notice and comment in compliance with @ 401(a)(1), 33 U.S.C. @ 1341(a)(1), and Vermont law. A week later, on September 25, 1991, the certification was issued. No one challenged the ruling through the state's process of administrative and judicial review, and thus the certification became final fifteen days later. See 10 Vt. Stat. Ann. @ 1024(a).

As issued, the certification contained eighteen conditions (designated by letters "A" through "R"), three of which, P, J, and L, are relevant for our purposes. Condition P reserves the right in Vermont to amend (or "reopen") the certification when appropriate. n1 Condition J requires Tunbridge to submit to the state for review and approval any plans for significant changes [**11] to the project. n2 Finally, condition L requires Tunbridge to seek clearance from the state before commencing [*103] construction so that the state may ensure that plans are in place to control erosion and manage water flows. n3

-----Footnotes-----

n1 Condition P reads, in full: "The Department is reserving the right to add and alter terms and conditions as appropriate to carry out its responsibilities during the life of the project with respect to water quality."

n2 Condition J reads, in full: "Any significant changes to the project, including project operation, must be submitted to the Department for prior review and written approval."

n3 Condition L reads, in full:

No construction may commence until after the Department has issued written approval under Conditions B, C, D, and J and until Fish and Wildlife has issued written approval under Condition E. Operation changes made after project completion are subject to Condition I and must be approved prior to effecting the change.

Conditions B and C address minimum water flow and plans for monitoring water flow; condition D addresses erosion control; condition E addresses plans for a downstream fish passage; and condition I addresses procedures for desilting the dam's impoundment area.

-----End Footnotes-----
[**12]

Certificate in hand, Tunbridge sought a license from FERC, which is vested with authority under @ 4(e) of the Federal Power Act ("FPA"), 16 U.S.C. @ 797(e), to issue licenses for "the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction" FERC may issue such licenses "whenever the contemplated improvement is, in the judgment of the Commission, desirable and justified in the public interest," id., and "best adapted to a comprehensive plan . . . for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife . . . , and for other beneficial public uses," 16 U.S.C. @ 803 (a)(1).

On July 15, 1994, FERC entered its Order Issuing License in which the Commission granted Tunbridge a 40-year license "to construct, operate, and maintain the Tunbridge Mill Project." However, reversing the Commission's longstanding policy that review of the appropriateness of @ 401 conditions is solely within the purview of state courts, see, e.g., *Town of Summersville*, 60 Fed. Energy Reg. Comm'n Rep. [**13] (CCH) P 61,291, at 61,990 (1992), *Carex Hydro*, 52 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,216 at 61,769 (1990), *Central Maine Power Co.*, 52 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,033 at 61,172 (1990), FERC found that conditions P, J, and L were beyond the scope of Vermont's authority under the CWA. Accordingly, FERC refused to incorporate them into the Tunbridge license.

The State of Vermont and American Rivers filed motions to intervene and petitions for rehearing in mid-August 1994, challenging the authority of FERC to review and reject state-imposed @ 401 conditions. n4 By order of May 17, 1996, the Commission granted the motions to intervene and denied the motions for rehearing, elaborating on the rationale for its decision to reject the conditions. Vermont and American Rivers now seek review in this court of the Commission's determination in appeals numbered 96-4110 and 96-4112.

-----Footnotes-----

n4 Any review of a FERC order before a court of appeals must be preceded by a rehearing petition before the agency. See 16 U.S.C. @ 825l(a) ("No proceeding to review any order of the Commission shall be brought by any person unless such person shall have made application to the Commission for a rehearing

thereon.").

-----End Footnotes-----
[**14]

During the period Tunbridge was seeking certification and licensure, on November 13, 1992, intervenor, Green Mountain Power Corporation ("GMP"), sought Vermont's certification of its Essex No. 19 project, a 7.2-megawatt facility on the Winooski River, a tributary of Lake Champlain, located in the townships of Essex Junction and Williston, Vermont. VANR issued a draft certification for notice and comment on September 3, 1993. After holding a hearing and obtaining written comments, VANR issued a final @ 401 certificate on November 8, 1993, which was later amended on January 1, 1995. GMP did not seek review of the certification decision, and the decision became final on January 15, 1995.

As issued, the @ 401 certificate contained twenty conditions (denominated letters "A" through "T"), several of which, B, E, H, K, M, N, S, and T, are relevant to this case. In condition T, Vermont reserves the right to reopen the certification when appropriate, in language somewhat different from the reopener condition included in the Tunbridge certification. n5 Condition S requires GMP, in [*104] language comparable to that in the pre-approval condition in the Tunbridge certificate, to submit to the state [**15] for review and approval any significant changes to the project. n6 Similarly, condition M (relating to maintenance of the project) n7 requires GMP to submit for review and approval all proposals for maintenance of the project affecting the river. Condition K (relating to construction of a fish passage) n8 and condition N (relating to the construction of canoe portage facilities) n9 contained specific construction deadlines. Finally, in condition E (relating to peak water flow) n10 and condition H (relating to minimum water levels), n11 Vermont reserves the authority to alter the conditions at some later time. n12

-----Footnotes-----

n5 Condition T reads, in full: "The Department may request, at any time, that FERC reopen the license to consider modifications to the license necessary to assure compliance with Vermont Water Quality Standards."

n6 Condition S reads, in full: "Any change to the project that would have a significant or material effect on the findings, conclusions, or conditions of this certification, including project operation, must be submitted to the Department for prior review and written approval." [**16]

n7 Condition M provides, in full: "Any proposals for project maintenance or repair work involving the river, including desilting of the dam impoundment, impoundment drawdowns to facilitate repair/maintenance work, and tailrace dredging, shall be filed with the Department for prior review and approval."

n8 Condition K provides, in pertinent part:

The applicant shall submit a plan for downstream fish passage to the Department of Fish and Wildlife for review. Downstream passage shall be provided 24 hours per day, April 1 - June 15 and September 15 - December 15 and shall be functional at all operating impoundment levels, with the period subject to adjustment based on knowledge gained about migration periods for migratory salmonoids. Downstream fish passage facilities shall be installed so as to be

operational in the spring of 1996. . . .

n9 Condition N requires, in relevant part, that "the applicant . . . provide a canoe portage on the right (north) side of the impoundment and river at Essex No. 19 Dam by May 1, 1995."

n10 Condition E, as amended, permits exceptions to peak flow limits in certain circumstances, including times of local power emergencies, and after having "provided notice and an opportunity for hearing, the Secretary of the Agency may modify the exceptions as appropriate." [**17]

n11 Condition H, as amended, allows GMP to let the water level in the impoundment area to recede beneath a minimum level in certain emergency conditions and provides, as well, that "this exception may be modified by the Secretary of the Agency . . . as appropriate after consultation with GMP and an opportunity for hearing."

n12 Although condition B (relating to minimum water flow) differs from condition E and condition H in that it does not contain explicit exceptions to ordained water or flow levels, the report accompanying the certification indicates that the GMP has discretion to alter the levels. At the same time, however, the report states that Vermont may restrict such discretion at some later date. To the extent that the report may be considered to permit the state to alter the terms of the condition at some later date, FERC rejected the reservation of authority by the state.

-----End Footnotes-----

On December 26, 1991, while awaiting state certification, GMP applied for a license from FERC to operate the Essex No. 19 hydroelectric project. On March 30, 1995, the Commission, by "Order Issuing New License," [**18] granted GMP a 30-year license. Relying largely on its reasoning in *Tunbridge Mill*, 68 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,078 (1994), the Commission found that several conditions -- conditions T and S and aspects of conditions B, E, H, K, M, and N, discussed earlier -- were beyond the scope of Vermont's authority under the CWA. See *Green Mountain Power Corp.*, 70 Fed. Energy Reg. Comm'n Rep. (CCH) P 62,205 at 64,435-38 (1995). Accordingly, FERC refused to incorporate the suspect provisions into the license. The State of Vermont, already having intervened in the proceeding, petitioned for rehearing on April 27, 1995, again challenging the authority of FERC to review and reject state-imposed @ 401 conditions. By order of June 3, 1996, the Commission denied the state's motion for rehearing, elaborating on the rationale for its decision to reject the conditions. *Green Mountain Power Corp.*, 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,250 (1996). Vermont seeks review of the Commission's determination in appeal number 96-4116.

Finally, during a similar time frame, the Central Vermont Public Service Corp. ("CVPS"), also sought certification in connection with their [**19] efforts to relicense four small hydroelectric facilities on the Passumpsic River near the town of St. Johnsbury, Vermont: the 0.7 megawatt Passumpsic Hydroelectric Project; the 0.25 megawatt Pierce [*105] Mills Hydroelectric Project; the 0.35 megawatt Arnold Falls Hydroelectric Project; and the 0.7 megawatt Gage Hydroelectric Project. On June 21, 1993, CVPS sought certification from VANR for each of the four projects individually. Draft certifications

were issued on March 2, 1994, for review and comment, and VANR issued the final @ 401 certificates on June 16, 1994. n13

-----Footnotes-----

n13 CVPS did not seek review of the certificates; however, on July 1, 1994, a local environmental group did so, and the appeal is currently pending before the Vermont Water Resources Board. The certifications are stayed pending appeal. See 10 Vt. Stat. Ann. @ 1024(a). Because we find that the Commission is without the authority to review and reject state-imposed @ 401 conditions, we need not address whether these licenses were ripe for consideration by FERC. Moreover, because no party has raised the issue before this court, we do not address the question whether the Commission properly issued the licenses in light of the pendency of the appeals. See 33 U.S.C. @ 1341(a)(1).

-----End Footnotes-----

[**20]

The certifications for the four projects contained between sixteen and nineteen conditions. As with the other certifications at issue in this case, VANR imposed conditions with which FERC took exception. Although FERC granted 40-year licenses for each of CVPS's projects by orders issued December 8, 1994, the Commission rejected three conditions and a portion of a fourth contained in each of the four licenses, relying on the rationale of Tunbridge Mill, 68 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,078 (1994). See Central Vermont Pub. Serv. Corp., 69 Fed. Energy Reg. Comm'n Rep. (CCH) PP 62,197; 62,198; 62,199; 62,200 (1994), reh'g denied, 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,263 (1996). One such condition required CVPS to seek approval from the state for any proposal for maintenance or repair of the project involving the river. n14 Another required CVPS to seek approval from the state for any proposed changes in the operation of the project. n15 A third reserved to the state the right to request FERC to reopen the license to consider any modification necessary for compliance with state water quality standards. n16 Finally, the Commission rejected a portion of a condition [**21] that required CVPS to construct facilities for upstream fish passage within two years of being ordered to do so by the state. n17

-----Footnotes-----

n14 The language of this condition reads, in full: "Any proposals for project maintenance or repair work involving the river, including desilting of the dam impoundment, impoundment drawdowns to facilitate repair/maintenance work, and tailrace dredging, shall be filed with the Department for prior review and approval." Condition L in the Passumpsic certificate, condition J in the Pierce Mills and Arnold Falls certificates, and condition M in the Gage certificate.

n15 This condition reads, in full: "Any change to the project that would have a significant or material effect on the findings, conclusions, or conditions of this certification, including project operation, must be submitted to the Department for prior review and written approval." Condition O in the Passumpsic, Pierce Mills and Arnold Falls certificates and condition R in the Gage certificate.

n16 The condition reads, in full: "The Department may request, at any time, that FERC reopen the license to consider modifications to the license necessary to assure compliance with Vermont Water Quality Standards." Condition P in the Passumpsic, Pierce Mills and Arnold Falls certificates and condition S in the Gage certificate. [**22]

n17 The condition reads, in relevant part:

Within two years of a written request by the Agency, the applicant shall provide for upstream fish passage, subject to plan approval by the Department of Fish and Wildlife. The U.S. Fish and Wildlife Service and the Department of Fish and Wildlife shall be consulted during plan development. . . .

Condition G in the Passumpsic, Pierce Mills and Arnold Falls certificates and condition J in the Gage certificate.

-----End Footnotes-----

Already having intervened in the licensing proceedings, the State of Vermont moved for rehearing, again contesting the authority of FERC to reject states' @ 401 conditions. By order of June 4, 1996, the Commission denied Vermont's motion for rehearing. See Central Vermont Pub. Serv. Corp., 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,263 (1996). The state seeks review of the Commission's determination in appeal number 96-4118.

B. The Commission's Decisions

Prior to Tunbridge Mill, 68 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,078 (1994), FERC had held that it was required by @ 401 to include in its licenses all conditions [**23] imposed by a state in its certifications notwithstanding the Commission's view that the [*106] conditions were beyond a state's authority under @ 401. See, e.g., Town of Summersville, 60 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,291 at 61,990 (1992); Carex Hydro, 52 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,216 at 61,769 (1990); Central Maine Power Co., 52 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,033 at 61,172 (1990). For example, in Town of Summersville, FERC stated:

We believe that these conditions are beyond the scope of Section 401, and that states should not use their water quality certification authority to impose conditions that are unrelated to water quality. However, since pursuant to Section 401(d) of the Clean Water Act all of the conditions in the water quality certification must become conditions in the license, review of the appropriateness of the conditions is within the purview of state courts and not the Commission. The only alternatives available to the Commission are either to issue a license with the conditions included or to deny [the] application, and we do not believe it is in the public interest to deny the application.

60 Fed. [**24] Energy Reg. Comm'n Rep. (CCH) P 61,291 at 61,990. The Environmental Protection Agency ("EPA"), the Federal agency vested with the authority to administer and implement the CWA, continues to share this view. See 33 U.S.C. @ 1251(d), see also 40 C.F.R. pt. @ 130. Pursuant to its authority to issue discharge permits under the National Pollutant Discharge Elimination System ("NPDES"), the EPA promulgated 40 C.F.R. @ 124.55(e) which provides that "review and appeals of limitations and conditions attributable to State

certification shall be made through the applicable procedures of the State . . .
" 40 C.F.R. @ 124.55(e); see also *Roosevelt Campobello Int'l Park Comm'n v. United States Env'tl. Protection Agency*, 684 F.2d 1041, 1055-56 (1st Cir. 1982).

In *Tunbridge Mill*, however, the Commission reversed field, finding that "to the extent that states include conditions that are unrelated to water quality, these conditions are beyond the scope of Section 401 and are thus unlawful." 68 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,078 at 61,387. The Commission continued, "We conclude that we have the authority to determine that such conditions do not become terms and conditions [**25] of the licenses we issue." *Id.* The Commission reasoned, in part: "We believe that, in light of Congress' determination that the Commission should have the paramount role in hydropower licensing process, whether certain state conditions are outside the scope of Section 401(d) is a federal question to be answered by the Commission." *Id.* In its decision denying petitioners' motion for rehearing, the Commission elaborated on its prior ruling. See *Tunbridge Mill*, 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,175 (1996).

In the other licensing decisions, the Commission relied on its reasoning in *Tunbridge Mill* in finding that "states may, under Section 401(d) of the CWA, impose conditions related solely to water quality." *Green Mountain Power Corp.*, 70 Fed. Energy Reg. Comm'n Rep. (CCH) P 62,205 at 64,435 (1995), reh'g denied, 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,250 (1996); *Central Vermont Pub. Serv. Corp.*, 69 Fed. Energy Reg. Comm'n Rep. (CCH) PP 62,197; 62,198; 62,199; 62,200 (1994), reh'g denied, 75 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,263 (1996). Petitioners contest the Commission's expansion of its authority.

II. DISCUSSION

The principal [**26] dispute between petitioners and the Commission in this case surrounds the relative scope of authority of the states and the Commission under the CWA and the FPA. Petitioners' contention is straightforward, resting on statutory language. In their view, the plain language of @ 401(d) indicates that FERC has no authority to review and reject the substance of a state certification or the conditions contained therein and must incorporate into its licenses the conditions as they appear in state certifications. FERC disagrees, arguing that the language of @ 401(d) is not as clear as petitioners would have it. Rather, FERC contends, it is bound to accede only to those conditions that are within a state's authority under @ 401, that is, conditions that are reasonably [*107] related to water quality and that otherwise conform to the dictates of @ 401. See *Tunbridge Mill*, 68 Fed. Energy Reg. Comm'n Rep. (CCH) P 61,078 at 61,387. The Commission also argues that without the authority to reject state-imposed @ 401 conditions its Congressionally mandated role under the FPA of ensuring comprehensive planning and development of hydropower would be undermined.

A. The Clean Water Act

Before [**27] considering the Commission's contentions regarding the CWA, we note that FERC's interpretation of @ 401, or any other provision of the CWA, receives no judicial deference under the doctrine of *Chevron USA, Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 81 L. Ed. 2d 694, 104 S. Ct. 2778 (1984), because the Commission is not Congressionally authorized to administer the CWA. See 33 U.S.C. @ 1251(d) ("Except as otherwise expressly

provided in this chapter, the Administrator of the Environmental Protection Agency . . . shall administer this chapter."); see also *West v. Bowen*, 879 F.2d 1122, 1137 (3d Cir. 1989) (holding that "no deference is owed an agency's interpretation of another agency's statute"); *Oregon Natural Desert Assoc. v. Thomas*, 940 F. Supp. 1534, 1540 (D. Or. 1996) (holding that United States Forest Service's interpretation of @ 401 of the CWA is not entitled to deference because Congress delegated administration of the CWA to the EPA alone). Thus, we review de novo the Commission's construction of the CWA.

We begin, as we must, with the statute itself. In this case, the statutory language is clear. Section 401(a), which is directed both to prospective licensees and to the [**28] federal licensing agency (in this case, the Commission), provides, in relevant part:

Any applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate No license or permit shall be granted until the certification required by this section has been obtained or has been waived No license or permit shall be granted if certification has been denied by the State

33 U.S.C. @ 1341(a). More important, @ 401(d), reads, in pertinent part:

Any certification provided under this section . . . shall become a condition on any Federal license or permit subject to the provisions of this section.

33 U.S.C. @ 1341(d) (emphasis added). This language is unequivocal, leaving little room for FERC to argue that it has authority to reject state conditions it finds to be ultra vires. Rather, in this case, to the extent that the Commission contends that Congress intended to vest it with authority to reject "unlawful" state conditions, the Commission [**29] faces a difficult task since it is generally assumed -- absent a clearly expressed legislative intention to the contrary -- "that Congress expresses its purposes through the ordinary meaning of the words it uses" *Escondido Mut. Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 772, 80 L. Ed. 2d 753, 104 S. Ct. 2105 (1984).

The Commission argues that, notwithstanding the mandatory language of the provision, @ 401(d) itself restricts the substantive authority of states to impose conditions: "Section 401 authorizes states to impose only conditions that relate to water quality." *Tunbridge Mill*, 68 Fed. Energy Reg. Comm'n (CCH) P 61,078 at 61,387. This is plainly true. Section 401(d), reasonably read in light of its purpose, restricts conditions that states can impose to those affecting water quality in one manner or another. See *P.U.D. No. 1 of Jefferson County*, 114 S. Ct. at 1909 (holding that a state's authority to impose conditions under @ 401(d) "is not unbounded"). However, this is not tantamount to a delegation to FERC of the authority to decide which conditions are within the confines of @ 401(d) and which are not. And this is the crux of the dispute in this case.

In addition to [**30] @ 401(d), the Commission relies on several other provisions of the CWA in arguing that it has the authority to review and reject state-imposed conditions that are deemed by the Commission to exceed a [*108] state's power under @ 401 of the CWA. In particular, the Commission

invokes @ 401(a)(3) and @ 401(a)(5) of the CWA.

Section 401(a)(3) establishes a presumption that a state's @ 401 certification obtained in order to procure a federal construction permit -- for instance, a dredge-and-fill permit issued by the Army Corps of Engineers pursuant to @ 404 of the CWA, 33 U.S.C. @ 1344(a) -- will fulfill the requirements for a subsequent federal permit governing the operation of the facility constructed pursuant to that certification. The presumption, however, may be overcome if certain conditions arise and the state then takes the procedural steps set forth by @ 401(a)(3). n18 However, even assuming the applicability of @ 401(a)(3) to the facts of this case (a matter that is far from certain n19), the Commission has not established that it has been vested by Congress with the authority to determine whether state-imposed conditions are consistent with this provision. Nor has the Commission [**31] done so with respect to @ 401(a)(5) of the CWA, 33 U.S.C. @ 1341(a)(5), n20 which provides the licensing agency (in this case FERC) with authority to enforce the terms of a license -- which pursuant to @ 401(d) include a state's @ 401 certification conditions -- once such a federal license has issued. Thus, the Commission's arguments relying on these provisions suffer from the same infirmity as does its argument relying on @ 401(d). The Commission assumes the very question to be decided: whether FERC -- and not a court of appropriate jurisdiction on appeal by an applicant -- has the authority to review the legality of state-imposed @ 401 conditions in the first instance.

-----Footnotes-----

n18 In particular, @ 401(a)(3) provides that the state, upon proper notice from the licensing agency (in this case FERC), must inform the licensing agency, within 60 days of such notice, that because of some change in circumstance since the initial certification was granted, state officials believe that there are no longer reasonable assurances that the licensee will continue to abide by the applicable standards. See *Keating v. Federal Energy Regulatory Comm'n*, 288 U.S. App. D.C. 344, 927 F.2d 616, 621-22 (D.C. Cir. 1991) (summarizing section 401(a)(3)). The changes of circumstance recognized as relevant under 401(a)(3) are those relating to (1) the construction or operation of the facility, (2) the characteristics of the waters into which the discharge is made, (3) the applicable water quality criteria, and (4) the applicable effluent limitations or other requirements. [**32]

n19 Contrary to the Commission's contention, see Brief of the Fed. Energy Regulatory Comm'n at 11 (stating that @ 401(a)(3) "imposes specific limits on the ability of states to alter their certifications once they have been incorporated into a federal license"), @ 401(a)(3) governs a rather narrow class of cases of which this one is not a member: cases in which a license applicant has already obtained a state certification -- and a federal license incorporating that certification -- in connection with the construction of a facility and then seeks a federal operating license. This case, on the other hand, presents the more general question whether a state has the authority to amend or revoke a @ 401 certification underlying a federal operating license.

n20 Section 401(a)(5) of the CWA, 33 U.S.C. @ 1341(a)(5), provides that any Federal license or permit with respect to which a certification has been obtained . . . may be suspended or revoked by the Federal agency issuing such

license or permit upon the entering of a judgment under this chapter that such facility or activity has been operated in violation of the applicable provisions of section 1311, 1312, 1313, 1316, or 1317 of this title.

33 U.S.C. @ 1341(a)(5).

-----End Footnotes-----
[**33]

Beyond the statutory language of @ 401, the Commission relies primarily on the decision of the Court of Appeals for the District of Columbia Circuit in *Keating v. Federal Energy Regulatory Comm'n*, 288 U.S. App. D.C. 344, 927 F.2d 616 (D.C. Cir. 1991). In FERC's view, the Keating court flatly rejected petitioner's argument based on the plain meaning of @ 401(d) and vested the Commission with the authority to review and reject conditions that violate the terms of @ 401. The Commission, however, reads Keating too broadly.

In Keating an individual obtained a permit from the Army Corps of Engineers to build a dam. Because the project's construction would result in a discharge into navigable waters within the State of California, Keating sought and received from California a @ 401 certification permitting construction to go forward. 927 F.2d at 619. Following the construction of a dam -- but prior to its licensure for operation -- the state purported to withdraw its certification without paying heed to the requirements of @ 401(a)(3), and FERC withheld its license to operate the completed facility on this basis. The prospective licensee sought review.

[*109] The D.C. Circuit found that a federal [**34] agency, when issuing a license covered by @ 401 of the CWA, must ascertain whether a valid state certification exists, and as a necessary part of that determination, the Commission must determine, among other things, whether a state had properly revoked its prior certification pursuant to its authority under @ 401(a)(3). In this instance, the court found that California -- having already issued a certification in connection with the construction of the dam -- could revoke or alter the certification only as provided by @ 401(a)(3). Because California did not comply with the terms of @ 401(a)(3), the court found that a valid certification existed and the Commission had no choice but to recognize it. *Id.* at 623-24.

Keating addresses the narrow question of the Commission's authority to determine whether a valid @ 401 certificate exists prior to issuing its license. 927 F.2d at 625 (the Commission is authorized to "decide whether the state's assertion of revocation satisfies section 401(a)(3)'s predicate requirements -- i.e., whether it is timely and motivated by some change in circumstances after the certification was issued"); see also 33 U.S.C. @ 401(a)(1) ("No license [**35] or permit shall be granted if certification has been denied by the State . . ."). Nothing in Keating supports a broad authority on the part of the Commission to review a state's designation of certain conditions in the state's @ 401 certification. See *Keating*, 927 F.2d at 622-23; see also *United States Dep't of the Interior v. Federal Energy Regulatory Comm'n*, 293 U.S. App. D.C. 182, 952 F.2d 538, 548 (D.C. Cir. 1992) ("FERC may not alter or reject conditions imposed by the states through section 401 certificates") (citing *Keating*, 927 F.2d at 622-23); Lisa M. Bogardus, *State Certification of Hydroelectric Facilities Under Section 401 of the Clean Water Act*, 12 Va.

Env'tl. L.J. 43, 95 (1992) (summarizing Keating, in part, to hold that "neither a federal agency nor a federal court may review the appropriateness of conditions attached to the certificate or review the grant or denial of a certificate").

Escondido Mut. Water Co. v. La Jolla Band of Mission Indians, 466 U.S. 765, 80 L. Ed. 2d 753, 104 S. Ct. 2105 (1984) -- a case which the Commission goes to great lengths to distinguish -- is more on point. In Escondido, the Supreme Court was called upon to consider a strikingly analogous factual and legal scenario. [**36] At issue was a pre-license certification scheme within the FPA itself, permitting (in this instance) the Secretary of the Interior to impose requirements on licenses issued "within" any Native American "reservation." In particular, this certification scheme, @ 4(e) of the FPA, 16 U.S.C. @ 797(e), provides that licenses issued under this provision "shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation." 16 U.S.C. @ 797(e) (emphasis added). n21 FERC, however, refused to accept the Secretary's conditions, and an aggrieved party sought review. In construing @ 4(e), the Supreme Court focused closely on the provision's plain language, remarking that "the mandatory nature of the language chosen by Congress appears to require that the [**110] Commission include the Secretary's conditions in the license even if it disagrees with them." Escondido, 466 U.S. at 772. Consistent with this view, the Court gave effect to the plain language of @ 4(e), 16 U.S.C. @ 797(e), finding no "clear expressions of legislative intent to the contrary." [**37] Id.

-----Footnotes-----

n21 Section 4(e) of the FPA, 16 U.S.C. @ 797(e), provides, in part:

The Commission is authorized and empowered -- (e) To issue licenses . . . to any corporation organized under the laws of the United States or any State thereof . . . for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient . . . for the development, transmission, and utilization of power across, along, from or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam, except as herein provided: Provided, That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservation

-----End Footnotes-----

[**38]

Although Escondido arose in a different context, it is instructive in this case for several reasons. In both contexts, FERC is required in clear statutory language to incorporate conditions imposed by an independent governmental agency with special expertise, in Escondido, the Department of the Interior, 16

U.S.C. @ 797(e), and in this instance, the states, see 33 U.S.C. @ 1251(b) ("It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution . . ."); see also *United States v. Puerto Rico*, 721 F.2d 832, 838 (1st Cir. 1983) ("states are the prime bulwark in the effort to abate water pollution"). In both cases, the Commission attempted to ignore this command and substitute its own judgment for that of the certifying agency. In both cases, the real issue in dispute is not whether there are limits on the certifying agency's authority to impose conditions on federal licenses, but "whether the Commission is empowered to decide when the . . . conditions exceed the permissible limits." *Escondido*, 466 U.S. at 777. In neither case do the underlying statutes or their [**39] schemes for administrative and judicial review suggest that Congress wanted the Commission to second-guess the imposition of conditions.

Finally, and most persuasively, in both cases the Commission argued that without the authority to review conditions imposed by the certifying agency its ability to carry out its statutory mission would be compromised. In *Escondido*, notwithstanding this contention, the Supreme Court found that absent a challenge by the applicant-licensee, the Interior Secretary's conditions must either be incorporated in full into any license that it issues or the Commission must deny the license altogether. 466 U.S. at 778 n.20. In reaching this conclusion, the Court expressly addressed difficulties inherent in such a statutory scheme, difficulties the Commission decries in this case:

We note that in the unlikely event that none of the parties to the licensing proceeding seeks review, the conditions will go into effect notwithstanding the Commission's objection to them since the Commission is not authorized to seek review of its own decisions. The possibility that this might occur does not, however, dissuade us from interpreting the statute in accordance [**40] with its plain meaning. Congress apparently decided that if no party was interested in the differences between the Commission and the Secretary, the dispute would best be resolved in a nonjudicial forum.

Id.

The Commission's efforts to distinguish *Escondido* are unavailing. FERC's principal contention relies on a portion of *Escondido* that has no bearing on this case. The Supreme Court -- in addition to concluding that the Commission has no authority to reject conditions imposed by the Secretary under @ 4(e) of the FPA, 16 U.S.C. @ 797(e)-also held that the Commission was not required to incorporate into its license several of the Secretary's conditions which applied to Native American reservations on which none of the licensed facilities were located. According to the Court, such conditions would violate @ 4(e)'s requirement that FERC licenses issued to projects "within any [federal] reservation" shall contain conditions for the "adequate protection and utilization of such reservation." *Id.* at 780-81 (citing 16 U.S.C. @ 797(e)) (emphasis added).

This rather unremarkable holding does not support the Commission's contention that it may review and [**41] reject any state-imposed condition that it finds to be violative of @ 401. We agree with petitioners that the limitation in the scope of the authority of the Commission, affirmed in *Escondido*, is analogous to the inherent limitation on the authority of the Commission in

cases such as this. While the Commission may determine whether the proper state has issued the certification or whether a state has issued a certification within the prescribed period, the Commission [*111] does not possess a roving mandate to decide that substantive aspects of state-imposed conditions are inconsistent with the terms of @ 401.

B. The Federal Power Act

Independent of FERC's concerns that Vermont's @ 401 conditions violate the terms of the CWA, the Commission contends that the @ 401 conditions run afoul of the FPA. The Commission primarily fears that "to accept the conditions proposed would give the state the kind of governance and enforcement authority that is critical and exclusive to the Commission's responsibility to administer a license under the Federal Power Act, a power the Courts have repeatedly concluded belongs exclusively to the Commission." Brief of the Fed. Energy Regulatory [**42] Comm'n at 16. In particular, FERC argues (1) that the conditions that impose deadlines on construction conflict with @ 13 of the FPA, 16 U.S.C. @ 806, which places construction deadlines largely within the discretion of the Commission and generally contemplates that construction will be commenced within two years of the date of the license, see *First Iowa Hydro-Elec. Coop. v. Federal Power Comm'n*, 328 U.S. 152, 168 n.13, 90 L. Ed. 1143, 66 S. Ct. 906 (1946); (2) that the reopener conditions and pre-approval conditions violate @ 6 of the FPA, 16 U.S.C. @ 799, which provides that a license, once issued, "may be revoked only for the reasons and in the manner prescribed under the provisions of this chapter, and may be altered or surrendered only upon mutual agreement between the licensee and the Commission," as well as other provisions of the FPA, see 16 U.S.C. @@ 803(b), 820, 823b; and, (3) more generally, that the conditions "eviscerate[] the carefully balanced approach" to environmental concerns expressed in the Electric Consumers Protection Act ("ECPA"), Pub.L. No. 99-495, 100 Stat. 1243 (1986), amending the FPA, see, e.g., 16 U.S.C. @@ 797(e), 803(a), 803(j).

We have no quarrel with the Commission's [**43] assertion that the FPA represents a congressional intention to establish "a broad federal role in the development and licensing of hydroelectric power." *California v. Federal Energy Regulatory Comm'n*, 495 U.S. 490, 496, 109 L. Ed. 2d 474, 110 S. Ct. 2024 (1990). Nor do we dispute that the FPA has a wide preemptive reach. *Id.* The CWA, however, has diminished this preemptive reach by expressly requiring the Commission to incorporate into its licenses state-imposed water-quality conditions. See 33 U.S.C. @ 1341(a)(1). Although we are sympathetic to the Commission's suggestion that without the authority to reject states' conditions that are beyond the scope of @ 401, the preemptive reach of the FPA may be narrowed at the will of the states, see, e.g., Brief of Amici Curiae Edison Elec. Inst. at 14, the Commission's concerns are overblown.

The Commission fails to acknowledge appropriately its ability to protect its mandate from incursion by exercising the authority to refuse to issue a hydropower license altogether if the Commission concludes that a license, as conditioned, sufficiently impairs its authority under the FPA. See, e.g., *Escondido*, 466 U.S. at 778 n.20. If the Commission is [**44] concerned that the conditions imposed by a state "intrude[]" upon the Commission's exclusive authority under the FPA, "Brief of the Fed. Energy Regulatory Comm'n at 44, nothing in the CWA prevents it from protecting its field of authority by simply refusing to issue the license as so conditioned.

The Commission, however, has chosen to forgo this route, arguing that refusing to issue a license is not a "practical option" in relicensing cases, such as CVPS. Id. at 20 n.10. Although we understand that refusing to relicense a hydroelectric project would result in the disassembly of the project, presenting "serious practical and economic problems" and affecting all manner of local interests, id., the Commission's dissatisfaction with the remedy of license denial is not reason enough to turn a blind eye to FERC's assumption of authority to review and reject a state's @ 401 conditions. Rather, the Commission must establish that the authority it proposes is rooted in a Congressional mandate. And this they have failed to do.

Finally, with respect to the ECPA amendments to the FPA, the Commission is mistaken. Under these provisions, the Commission [*112] must "give equal consideration [**45] to . . . the protection, mitigation of damage to, and enhancement of, fish and wildlife . . . and the preservation of other aspects of environmental quality," 16 U.S.C. @ 797(e), and must impose conditions, based on recommendations of relevant federal agencies and affected states, to "protect, mitigate damages to, and enhance, fish and wildlife . . . affected by the development, operation, and management of the project . . .," 16 U.S.C. @ 803(j)(1). See *United States Dep't of Interior v. Federal Energy Regulatory Comm'n*, 293 U.S. App. D.C. 182, 952 F.2d 538, 543 (D.C. Cir. 1992) (describing environmental aspects of the ECPA amendments). The Commission argues that absent the authority to reject state-imposed conditions beyond the scope of @ 401 of the CWA, the carefully balanced approach of the ECPA amendments, in general, and @ 10(j), 16 U.S.C. @ 803(j), in particular, would be "eviscerated . . . through the simple expedient of [states'] labeling . . . recommendations 'conditions' to the Section 401 certification." Brief of the Fed. Energy Regulatory Comm'n at 39. In short, the Commission is concerned that it would be "held hostage" to every state imposed condition, compromising its role under [**46] the ECPA amendments of reconciling competing interests. Id. Such a result, the Commission contends, is impermissible under @ 511(a) of the CWA, 33 U.S.C. @ 1371(a), which provides, in part, that the Act "shall not be construed as . . . limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this chapter"

The Commission's claim that the CWA -- as we construe it -- and the ECPA amendments are incompatible must be rejected. The Commission's concern that states will hold the Commission hostage through the @ 401 process is misplaced because states' authority under @ 401 is circumscribed in notable respects. First, applicants for state certification may challenge in courts of appropriate jurisdiction any state-imposed condition that exceeds a state's authority under @ 401. In so doing, licensees will surely protect themselves against state-imposed ultra vires conditions. Second, even assuming that certification applicants will not always challenge ultra vires state conditions, the Commission may protect its mandate by refusing to issue a license which, as conditioned, conflicts with [**47] the FPA. In so doing, the Commission will not only protect its mandate but also signal to states and licensees the limits of its tolerance. Third, and most important, to the extent that the existence of states' authority to impose @ 401 conditions may otherwise conflict with the ECPA amendments, the ECPA is inconsistent with the terms of the CWA, thus, making inapplicable @ 511(a) of the CWA. See 33 U.S.C. 1371(a) (the Act "shall not be construed as . . . limiting the authority or functions of any officer or agency of the United States under any other law or regulation not inconsistent with this chapter . . .").

III. CONCLUSION

We have considered the Commission's remaining arguments and find them to be without merit. For the foregoing reasons, we grant the petition for review, vacate the orders of the Commission, and remand for proceedings consistent with this opinion.

466 U.S. 765 printed in FULL format.

ESCONDIDO MUTUAL WATER CO. ET AL. v. LA JOLLA BAND OF MISSION INDIANS ET AL.

No. 82-2056

SUPREME COURT OF THE UNITED STATES

466 U.S. 765; 104 S. Ct. 2105; 1984 U.S. LEXIS 2097; 80 L. Ed. 2d 753; 52 U.S.L.W. 4588; 14 ELR 20592

March 26, 1984, Argued

May 15, 1984, Decided

SUBSEQUENT HISTORY: [***1]

Petition For Rehearing Denied June 25, 1984.

PRIOR HISTORY: CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT.

DISPOSITION: 692 F.2d 1223 and 701 F.2d 826, affirmed in part, reversed in part, and remanded.

SYLLABUS: Section 4(e) of the Federal Power Act (FPA) authorizes the Federal Energy Regulatory Commission (Commission) to issue licenses for the construction, operation, and maintenance of hydroelectric project works located on the public lands and reservations of the United States, including lands held in trust for Indians. The section contains a proviso that such licenses shall be issued "within any reservation" only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired, and "shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations." Section 8 of the Mission Indian Relief Act of 1891 (MIRA), pursuant to which six reservations were established for respondent Indian Bands (respondents), provides that any [***2] United States citizen, firm, or corporation may contract with the Bands for the right to construct a flume, ditch, canal, pipe, or other appliances for the conveyance of water over, across, or through their reservations, which contract shall not be valid unless approved by the Secretary of the Interior (Secretary) under such conditions as he may see fit to impose. When the original license covering hydroelectric facilities located on or near the six

reservations, including a canal that crosses respondent La Jolla, Rincon, and San Pasqual Bands' reservations, was about to expire, petitioner Escondido Mutual Water Co. (Mutual) and petitioner city of Escondido filed an application with the Commission for a new license. Thereafter the Secretary requested that the Commission recommend federal takeover of the project, and respondents applied for a nonpower license. After hearings on the competing applications, an Administrative Law Judge concluded that the project was not subject to the Commission's licensing jurisdiction. The Commission reversed and granted a license to Mutual, Escondido, and petitioner Vista Irrigation District, which had been using the canal in question. The Court [***3] of Appeals in turn reversed the Commission, holding, contrary to the Commission, (1) that § 4(e) of the FPA required the Commission to accept without modification any license conditions recommended by the Secretary; (2) that the Commission was required to satisfy its § 4(e) obligations with respect to all six of the reservations and not just the three through which the canal passes; and (3) that § 8 of the MIRA required the licensees to obtain right-of-way permits from respondent La Jolla, Rincon, and San Pasqual Bands before using the license facilities located on their reservations.

Held:

1. The plain command of § 4(e) of the FPA requires the Commission to accept without modification conditions that the Secretary deems necessary for the adequate protection and utilization of the reservations. Nothing in the legislative history or statutory scheme is inconsistent with this plain command. Pp. 772-779.

2. But the Commission must make its "no inconsistency or interference" findings and include the Secretary's conditions in the license only with respect

to projects located "within" the geographical boundaries of a federal reservation. It is clear that Congress concluded that [***4] reservations were not entitled to the protection of § 4(e)'s proviso unless some of the licensed works were actually within the reservation. Thus, the Court of Appeals erred in holding that the Commission's § 4(e) obligation to accept the Secretary's conditions and to make such findings applied to the three reservations on which no licensed facilities were located. Pp. 780-784.

3. Section 8 of the MIRA does not require licensees to obtain respondents' consent before they operate licensed facilities located on reservation lands. While § 8 gave respondents authority to determine whether to grant rights-of-way for water projects, that authority did not include the power to override Congress' subsequent decision in enacting the FPA that all lands, including tribal land, could, upon compliance with the FPA, be utilized to facilitate licensed hydroelectric projects. Pp. 784-787.

COUNSEL: Paul D. Engstrand argued the cause for petitioners. With him on the brief were Donald R. Lincoln, Leroy A. Wright, John R. Schell, Kent H. Foster, and C. Emerson Duncan II.

Jerome M. Feit argued the cause for respondent Federal Energy Regulatory Commission urging reversal. With him on the briefs were Stephen [***5] R. Melton, Arlene Pianko Groner, and Kristina Nygaard.

Elliott Schulder argued the cause for respondent Secretary of the Interior. With him on the brief were Solicitor General Lee, Assistant Attorney General Habicht, Deputy Solicitor General Claiborne, Dirk D. Snel, and James C. Kilbourne. Robert S. Pelcyger argued the cause for respondents La Jolla Band of Mission Indians et al. With him on the brief were Scott B. McElroy, Jeanne S. Whiteing, and Arthur J. Gajarsa.

*

* Briefs of amici curiae urging reversal were filed for the American Public Power Association et al. by Robert L. McCarty, George H. Williams, Jr., Donald H. Hamburg, Christopher D. Williams, Frances E. Francis, and Robert C. McDiarmid; for the Edison Electric Institute by William J. Madden, Jr., Frederick T. Searls, Peter B. Kelsey, and William L. Fang; and for the Joint Board of Control of the Flathead, Mission and Jocko Valley Irrigation Districts of the Flathead Irrigation Project, Montana, by Frank J. Martin, Jr., and John D. Sharer.

Patrick A. Parenteau filed a brief for the National Wildlife Federation et al. as amici curiae.

JUDGES: WHITE, J., delivered the opinion for a unanimous Court.

OPINIONBY: WHITE

OPINION: [*767] [***6] [**2107] JUSTICE WHITE delivered the opinion of the Court.

Section 4(e) of the Federal Power Act (FPA), 41 Stat. 1066, as amended, 16 U. S. C. § 797(e), authorizes the Federal Energy Regulatory Commission (Commission) n1 to issue licenses for the construction, operation and maintenance of hydroelectric project works located on the public lands and reservations of the United States, including lands held in trust for Indians. The conditions upon which such licenses may issue are contained in § 4(e) and other provisions of the FPA. The present case involves a dispute among the Commission, the Secretary of the Interior (Secretary), and several Bands of the Mission Indians over the role each is to play in determining what conditions an applicant must meet in order to obtain a license to utilize hydroelectric [**2108] facilities located on or near six Mission Indian Reservations.

n1 The term "Commission" refers to the Federal Power Commission prior to October 1, 1977, and to the Federal Energy Regulatory Commission thereafter. See 42 U. S. C. §§ 7172(a), 7295(b).

[***7]

I

The San Luis Rey River originates near the Palomar Mountains in northern San Diego County, Cal. In its natural condition, it flows through the reservations of the La [*768] Jolla, Rincon, and Pala Bands of Mission Indians. The reservations of the Pauma, Yuima, n2 and three-quarters of the reservation of the San Pasqual Bands of Mission Indians are within the river's watershed. These six Indian reservations were permanently established pursuant to the Mission Indian Relief Act of 1891 (MIRA), ch. 65, 26 Stat. 712.

n2 The Yuima tracts of land are under the jurisdiction of the Pauma Band. Thus, while there are six Mission Indian Reservations involved in the present dispute, only five Indian Bands are represented.

Since 1895, petitioner Escondido Mutual Water Co. (Mutual) and its predecessor in interest have diverted water out of the San Luis Rey River for municipal uses in and around the cities of Vista and Escondido. The point of diversion is located within the La Jolla Reservation,

upstream from [***8] the other reservations. Mutual conveys the water from the diversion point to Lake Wohlford, an artificial storage facility, by means of the Escondido canal, which crosses parts of the La Jolla, Rincon, and San Pasqual Reservations. n3

n3 Various agreements, dating back to 1894, among the Secretary, the Bands whose land the canal traverses, and Mutual and its predecessor purportedly grant Mutual rights-of-way for the canal in exchange for supplying certain amounts of water to the Bands. The validity of these agreements is the subject of separate, pending litigation instituted by the Bands in 1969. *Rincon Band of Mission Indians v. Escondido Mutual Water Co.*, Nos. 69-217S, 72-276-S, and 72-271-S (SD Cal.).

In addition, the Bands have sued the United States pursuant to the Indian Claims Commission Act, ch. 959, 60 Stat. 1049, 25 U. S. C. § 70 et seq. (1976 ed.), for failure to protect their water rights. *Long v. United States*, No. 80-A1 (Cl. Ct.). That proceeding is also pending.

In 1915, Mutual [***9] constructed the Bear Valley powerhouse downstream from Lake Wohlford. Neither Lake Wohlford nor the Bear Valley plant is located on a reservation. In 1916, Mutual completed construction of the Rincon powerhouse, which is located on the Rincon Reservation. Both of these powerhouses generate electricity by utilizing waters diverted from the river through the canal.

Following the enactment of the Federal Water Power Act of 1920, ch. 285, 41 Stat. 1063 (codified as Part I of the FPA, [*769] 16 U. S. C. § 791a et seq.), Mutual applied to the Commission for a license covering its two hydroelectric facilities. In 1924, the Commission issued a 50-year license covering the Escondido diversion dam and canal, Lake Wohlford, and the Rincon and Bear Valley powerhouses.

The present dispute began when the 1924 license was about to expire. In 1971, Mutual and the city of Escondido filed an application with the Commission for a new license. In 1972, the Secretary requested that the Commission recommend federal takeover of the project after the original license expired. n4 Later that year, the La Jolla, Rincon, and San Pasqual Bands, acting pursuant to § 15(b) of the [***10] FPA, n5 applied for a nonpower license under the supervision of Interior, to take effect when the original license expired. The Pauma and Pala Bands eventually joined in this application.

n4 Section 14(b), 16 U. S. C. § 807(b), of the FPA authorizes the Commission to recommend to Congress that the Federal Government take over a project following expiration of the license. If Congress enacts legislation to that effect, the project is operated by the Government upon payment to the original licensee of its net investment in the project and certain severance damages.

n5 Section 15(b), 16 U. S. C. § 808(b), authorizes the Commission to grant a license for use of a project as a "nonpower" facility if it finds the project no longer is adapted to power production. In that event, the new licensee must make the same payments to the original licensee that are required of the United States pursuant to § 14(b). See n. 4, supra.

[**2109] After lengthy hearings on the competing applications, n6 an Administrative Law [***11] Judge concluded that the project was not subject to the Commission's licensing jurisdiction because [*770] the power aspects of the project were insignificant in comparison to the project's primary purpose -- conveying water for domestic and irrigation consumption. 6 *FERC para. 63,008* (1977). n7 The Commission, however, reversed that decision and granted a new 30-year license to Mutual, Escondido, and the Vista Irrigation District, which had been using the canal for some time to convey water pumped from Lake Henshaw, a lake located some nine miles above Mutual's diversion dam. 6 *FERC para. 61,189* (1979).

n6 Earlier, the Secretary and the La Jolla, Rincon, and San Pasqual Bands filed complaints with the Commission, alleging that Mutual violated the provisions of the 1924 license by permitting the Vista Irrigation District to use the project facilities and by using the canal to divert water pumped from a lake created by Vista nine miles above Mutual's diversion dam. They sought, among other things, an increase in the annual charges paid to the Bands under the license. These complaints were considered in conjunction with the competing applications, and the Commission awarded readjusted annual charges to the three Bands. The Commission's resolution of that issue is not before us.

[***12]

n7 The Bear Valley powerhouse has a generating capacity of only 520 kilowatts. The Rincon powerhouse is capable of producing only 240 kilowatts. The Administrative Law Judge noted that "[the] horsepower generated by the entire project is not even the equivalent to that produced by a half

dozen modern automobiles." 6 FERC, at 65,093.

In its licensing decision, the Commission made three rulings that are the focal point of this case. First, the Commission ruled that § 4(e) of the FPA did not require it to accept without modification conditions which the Secretary deemed necessary for the adequate protection and utilization of the reservations. n8 Accordingly, despite the Secretary's insistence, the Commission refused to prohibit the licensees from interfering with the Bands' use of a specified quantity of water, id., at 61,415, and n. 146, or to require that water pumped from a particular groundwater basin n9 not be transported through the licensed facilities without the written consent of the five Bands, id., at 61,145, and n. 147. Other conditions proposed by [***13] the Secretary were similarly rejected or modified. See id., at 61,414-61,417. Second, [*771] although it imposed some conditions on the licensees in order to "preclude any possible interference or inconsistency of the power license . . . with the purpose for which the La Jolla, Rincon, and San Pasqual reservations were created," n10 id., at 61,424-61,425, the Commission refused to impose similar conditions for the benefit of the Pala, Pauma, and Yuima Reservations, ruling that its § 4(e) obligation in that respect applies only to reservations that are physically occupied by project facilities. Finally, the Commission rejected the arguments of the Bands and the Secretary that a variety of statutes, including § 8 of the MIRA, required the licensees to obtain the "consent" of the Bands before the license could issue.

n8 The Commission concluded that § 4(e) required it "to give great weight to the judgments and proposals of the Secretaries of the Interior and Agriculture" but that under § 10(a) it retained ultimate authority for determining "the extent to which such conditions will in fact be included in particular licenses." 6 FERC, at 61,414.

[***14]

n9 Groundwater is water beneath the surface of the earth. The condition suggested by the Secretary applied to water which Vista pumped from the Warner groundwater basin underlying Lake Henshaw and its headwaters in order to augment the natural flows into the lake.

n10 For example, the Commission required the licensees to permit the three Bands to use certain quantities of water under certain circumstances. See id., at 61,424-61,432.

On appeal, the Court of Appeals for the Ninth Circuit reversed each of these three rulings. Escondido Mutual Water Co. v. FERC, 692 F.2d 1223, amended, 701 F.2d 826 (1983). The court held that § 4(e) requires the Commission to accept without modification any license conditions recommended by the Secretary, subject to subsequent judicial review of the propriety of the conditions, that the Commission is required [**2110] to satisfy its § 4(e) obligations with respect to all six of the reservations affected by the project and not just the three through which the canal passes, and that § 8 of the MIRA [***15] requires the licensees to obtain right-of-way permits from the La Jolla, Rincon, and San Pasqual Bands before using the licensed facilities located on the reservations. n11 [*772] Mutual, Escondido, and Vista filed the present petition for certiorari, which we granted, 464 U.S. 913 (1983), challenging all three of the Court of Appeals' rulings. n12 We address each in turn.

n11 Judge Anderson dissented from the order entered on petition for rehearing, 701 F.2d, at 827-831, concluding that neither § 8 of the MIRA nor § 16 of the Indian Reorganization Act, 25 U. S. C. § 476, requires that tribal consent be obtained before the Bands' lands can be used for a hydroelectric project licensed under the FPA. He also concluded that the Secretary's § 4(e) conditions have to be included in the license only to the extent they are reasonable and that the reasonableness determination is to be made initially by the Commission.

n12 The Court of Appeals affirmed the Commission's conclusion that it had jurisdiction over the project, and the parties have not sought review of that ruling.

[***16]

II

Section 4(e) provides that licenses issued under that section "shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations." 16 U. S. C. § 797(e). The mandatory nature of the language chosen by Congress appears to require that the Commission include the Secretary's conditions in the license even if it disagrees with them. Nonetheless, petitioners n13 argue that an examination of the statutory scheme and legislative history of the Act shows that Congress could not have meant what it said. We disagree.

466 U.S. 765, *772; 104 S. Ct. 2105, **2110;
1984 U.S. LEXIS 2097, ***16; 80 L. Ed. 2d 753

n13 The Commission did not petition for review of the Court of Appeals' decision but filed a brief and appeared at oral argument urging reversal. Since the Commission's arguments largely parallel those presented by Mutual, Escondido, and Vista, our use of the term petitioners includes the Commission.

We first note the difficult nature of the task facing petitioners. [***17] Since it should be generally assumed that Congress expresses its purposes through the ordinary meaning of the words it uses, we have often stated that "[absent] a clearly expressed legislative intention to the contrary, [statutory] language must ordinarily be regarded as conclusive." *North Dakota v. United States*, 460 U.S. 300, 312 (1983) (quoting *Consumer Product Safety Comm'n v. GTE Sylvania, Inc.*, 447 U.S. 102, 108 (1980)). Congress' apparent desire that the Secretary's conditions "shall" be included in the license must therefore be given effect unless there are clear expressions of legislative intent to the contrary.

[*773] Petitioners initially focus on the purpose of the legislation that became the relevant portion of the FPA. In 1920, Congress passed the Federal Water Power Act in order to eliminate the inefficiency and confusion caused by the "piecemeal, restrictive, negative approach" to licensing prevailing under prior law. *First Iowa Hydro-Electric Cooperative v. FPC*, 328 U.S. 152, 180 (1946). See H. R. Rep. No. 61, 66th Cong., 1st Sess., 4-5 (1919). Prior to passage of the Act, [***18] the Secretaries of the Interior, War, and Agriculture each had authority to issue licenses for hydroelectric projects on lands under his respective jurisdiction. The Act centralized that authority by creating a Commission, consisting of the three Secretaries, n14 vested with exclusive authority to issue licenses. Petitioners contend that Congress could not have intended to empower the Secretary to require that conditions be included in the license over the objection of the Commission because that [**2111] would frustrate the purpose of centralizing licensing procedures.

n14 In 1930, the Commission was reorganized as a five-person body, independent from the Secretaries. Act of June 23, 1930, ch. 572, 46 Stat. 797.

Congress was no doubt interested in centralizing federal licensing authority into one agency, but it is clear that it did not intend to relieve the Secretaries of all responsibility for ensuring that reservations under their respective supervision were adequately protected. In a memorandum [***19] explaining the administration

bill, the relevant portion of which was enacted without substantive change, n15 O. C. Merrill, one of the chief draftsmen of the Act and later the first Commission Secretary, explained that creation of the Commission "will [*774] not interfere with the special responsibilities which the several Departments have over the National Forests, public lands and navigable rivers." Memorandum on Water Power Legislation from O. C. Merrill, Chief Engineer, Forest Service, dated October 31, 1917, App. 371. With regard to what became § 4(e), he wrote:

"4. Licenses for power sites within the National Forests to be subject to such provisions for the protection of the Forests as the Secretary of Agriculture may deem necessary. Similarly, for parks and other reservations under the control of the Departments of the Interior and of War. Plans of structures involving navigable streams to be subject to the approval of the Secretary of War.

"This provision is for the purpose of preserving the administrative responsibility of each of the three Departments over lands and other matters within their exclusive jurisdiction." *Id.*, at 373-374.

n15 Between 1914 and 1917, four bills dealing with the licensing of hydroelectric projects were introduced into Congress, none successfully. In 1918, a bill prepared by the Secretaries of War, the Interior, and Agriculture, at the direction of President Wilson, was introduced. H. R. 8716, 65th Cong., 2d Sess. (1918). It contained the language of the § 4(e) proviso basically as it is now framed. Because of the press of World War I and other concerns, the legislation was not enacted until 1920. See J. Kerwin, *Federal Water-Power Legislation* 217-263 (1926).

[***20]

Similarly, during hearings on the bill, Secretary of Agriculture Houston explained that the Grand Canyon did not need to be exempted from the licensing provisions, stating:

"I can see no special reason why the matter might not be handled safely under the provisions of the proposed measure, which requires that developments on Government reservations may not proceed except with the approval of the three heads of departments -- the commission -- with such safeguards as the head of the department immediately charged with the reservation may deem wise."

Water Power: Hearings before the House Committee on Water Power, 65th Cong., 2d Sess., 677 (1918) (emphasis added).

The Members of Congress understood that under the Act the Secretary of the Interior had authority with respect to licenses issued on Indian reservations over and above that [*775] possessed by the other Commission members. Senator Walsh of Montana, a supporter of the Act, explained:

"[When] an application is made for a license to construct a dam within an Indian reservation, the matter goes before the commission, which consists of the Secretary of War, the Secretary of the Interior, and the Secretary [***21] of Agriculture. They all agree that it is in the public interest that the license should be granted, or a majority of them so agree. Furthermore, the head of the department must agree; that is to say, the Secretary of the Interior in the case of an Indian reservation must agree that the license shall be issued." 59 Cong. Rec. 1564 (1920) (emphasis added).

It is thus clear enough that while Congress intended that the Commission would have exclusive authority to issue all licenses, it wanted the individual Secretaries to continue to play the major role in determining what conditions would be included in the license in order to protect the resources under their respective jurisdictions. The legislative history concerning § 4(e) plainly supports the conclusion that Congress meant what it said when it stated that the [**2112] license "shall . . . contain such conditions as the Secretary . . . shall deem necessary for the adequate protection and utilization of such reservations." n16

n16 Petitioners note that in 1930, when the structure of the Commission was changed, see n. 14, *supra*, James Lawson, then Acting Chief Counsel of the Commission, stated that under the structure then in existence, "[the] Commission now has power to override the head of a department as to the consistency of a license with the purpose of any reservation." Investigation of Federal Regulation of Power: Hearings pursuant to S. Res. 80 and S. 3619 before the Senate Committee on Interstate Commerce, 71st Cong., 2d Sess., 358 (1930). This snippet of post-enactment history does not help petitioners' cause at all. All parties agree that the Commission has the authority to make a finding that "the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired." 16

U. S. C. § 797(e) (emphasis added). This is separate from the Secretary's authority to condition the license for the adequate protection and utilization of the reservation. Lawson's statement was clearly concerned with the former. Indeed, a contemporaneous memorandum by the Commission's legal staff (of which Lawson was the head), stated that the Secretary of the Interior had authority under what is now § 4(e) "to prescribe conditions to be inserted in the license for the protection and utilization of the reservation." Brief for Secretary of the Interior 33, quoting Memorandum of Sept. 20, 1929, p. 23. It may well be that in a particular case the conditions suggested by the Secretary will unduly undermine the Commission's licensing judgment. However, as noted *infra*, at 777, and n. 19, that is a determination the court of appeals is to make.

Similarly misplaced is petitioners' reliance on the fact that once the bill was passed, President Wilson, at the request of the Secretary, withheld his signature until Congress agreed that it would pass legislation in its next session removing national parks and monuments from the scope of the Act. Contrary to petitioners' assertion, this does not show that the Secretary knew that § 4(e) did not grant him enough authority to protect these lands, which were within his "conditioning" jurisdiction. Rather, the Secretary objected to the inclusion of national parks and monuments in the legislation because he believed that Congress, not the Commission, should decide on a case-by-case basis whether any hydroelectric development should occur in these areas. H. R. Rep. No. 1299, 66th Cong., 3d Sess., 2 (1921).

[***22]

[*776] Petitioners next argue that a literal reading of the conditioning proviso of § 4(e) cannot be squared with other portions of the statutory scheme. In particular, they note that the same proviso that grants the Secretary the authority to qualify the license with the conditions he deems necessary also provides that the Commission must determine that "the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired." 16 U. S. C. § 797(e). Requiring the Commission to include the Secretary's conditions in the license over its objection, petitioners maintain, is inconsistent with granting the Commission the power to determine that no interference or inconsistency will result from issuance of the license because it will allow the Secretary to "veto" the decision reached by the Commission. Congress could not have intended to "paralyze with one hand what it sought to promote with the other," *American Paper Institute, Inc. v. American*

466 U.S. 765, *776; 104 S. Ct. 2105, **2112;
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[*777] *Electric Power Service Corp.*, 461 U.S. 402, 421 (1983) (quoting *Clark v. Uebersee Finanz-Korporation, A.G.*, 332 U.S. 480, 489 (1947)), [***23] petitioners contend.

This argument is unpersuasive because it assumes the very question to be decided. All parties agree that there are limits on the types of conditions that the Secretary can require to be included in the license: n17 the Secretary has no power to veto the Commission's decision to issue a license and hence the conditions he insists upon must be reasonably related to the protection of the reservation and its people. n18 The real question is whether the Commission is empowered to decide when the Secretary's [**2113] conditions exceed the permissible limits. Petitioners' argument assumes that the Commission has the authority to make that decision. However, the statutory language and legislative history conclusively indicate that it does not; the Commission "shall" include in the license the conditions the Secretary deems necessary. It is then up to the courts of appeals to determine whether the conditions are valid. n19

n17 Even the Secretary concedes that the conditions must be "reasonable and supported by evidence in the record." Brief for Secretary of the Interior 37. See also Tr. of Oral Arg. 20.

[***24]

n18 By its terms, § 4(e) requires that the conditions must be "necessary for the adequate protection and utilization of such reservations." At oral argument, the Secretary agreed that the conditions should ultimately be sustained only if they "are reasonably related to the purpose of ensuring that the purposes of the reservation are adequately protected, and that the reservation is adequately utilized." *Id.*, at 22.

n19 Section 313(b) of the FPA provides that the Commission's orders, including licenses, can be reviewed "in the United States court of appeals for any circuit wherein the licensee . . . is located or has its principal place of business, or in the United States Court of Appeals for the District of Columbia." 16 U.S.C. § 825l(b).

Petitioners contend that such a scheme of review is inconsistent with traditional principles of judicial review of administrative action. If the Commission is required to include the conditions in the license even though it does not agree with them, petitioners argue, the courts of appeals will not be [*778] in a position to grant [***25] deference to the Commission's findings and conclusions because those findings and conclusions will not be in-

cluded in the license. However, that is apparently exactly what Congress intended. If the Secretary concludes that the conditions are necessary to protect the reservation, the Commission is required to adopt them as its own, and the court is obligated to sustain them if they are reasonably related to that goal, otherwise consistent with the FPA, and supported by substantial evidence. n20 The fact that in reality it is the Secretary's, and not the Commission's, judgment to which the court is giving deference is not surprising since the statute directs the Secretary, and not the Commission, to decide what conditions are necessary for the adequate protection of the reservation. n21 There is nothing in the statute [*779] or the review scheme to indicate that Congress wanted the Commission to second-guess the Secretary on this matter. n22

n20 Of course, the Commission is not required to argue in support of the conditions if it objects to them. Indeed, it is free to express its disagreement with them, not only in connection with the issuance of the license but also on review. Similarly, the Commission can refuse to issue a license if it concludes that, as conditioned, the license should not issue. In either event, the license applicant can seek review of the conditions in the court of appeals, but the court is to sustain the conditions if they are consistent with law and supported by the evidence presented to the Commission, either by the Secretary or other interested parties. 16 U.S.C. § 825l(b).

We note that in the unlikely event that none of the parties to the licensing proceeding seeks review, the conditions will go into effect notwithstanding the Commission's objection to them since the Commission is not authorized to seek review of its own decisions. The possibility that this might occur does not, however, dissuade us from interpreting the statute in accordance with its plain meaning. Congress apparently decided that if no party was interested in the differences between the Commission and the Secretary, the dispute would best be resolved in a nonjudicial forum.

[***26]

n21 Petitioners also contend that the Secretary's authority to impose conditions on the license is inconsistent with the Commission's authority and responsibility under § 10(a) to determine that "the project adopted . . . will be best adapted to a comprehensive plan . . . for the improvement and utilization of water-power development, and for other beneficial public uses." 16 U.S.C. § 803(a). Our discussion of the alleged conflict

between the Commission's authority to make its "no interference or inconsistency" determination and the Secretary's conditioning authority applies with equal force to this contention. The ultimate decision whether to issue the license belongs to the Commission, but the Secretary's proposed conditions must be included if the license issues. Any conflict between the Commission and the Secretary with respect to whether the conditions are consistent with the statute must be resolved initially by the courts of appeals, not the Commission.

Petitioners' assertion that the conditions proposed by the Secretary in this case were outside the Commission's authority to adopt goes to the validity of the conditions, an issue not before this Court. It may well be that the conditions imposed by the Secretary are inconsistent with the provisions of the FPA and that they are therefore invalid (something we do not decide), but that issue is not for the Commission to decide in the first instance but is reserved for the court of appeals at the instance of the licensees and with the participation of the Commission if it is inclined to present its views.

[***27]

n22 Petitioners also contend that the Commission's longstanding interpretation of § 4(e) is entitled to deference, citing language from its early decisions. *E. g., Pigeon River Lumber Co., 1 F. P. C. 206, 209 (1935); Southern California Edison Co., 8 F. P. C. 364, 386 (1949)*. Petitioners concede, however, that the Commission never actually rejected any of the Secretary's conditions until 1975. *Pacific Gas & Electric Co., 53 F. P. C. 523, 526 (1975)*. Even then, the issue was not squarely presented because there was some question whether § 4(e) even applied in that proceeding. *Ibid.* It is therefore far from clear that the Commission's interpretation is a longstanding one. More importantly, an agency's interpretation, even if well established, cannot be sustained if, as in this case, it conflicts with the clear language and legislative history of the statute.

[**2114] In short, nothing in the legislative history or statutory scheme is inconsistent with the plain command of the statute that licenses issued within a reservation [***28] by the Commission pursuant to § 4(e) "shall be subject to and contain such conditions as the Secretary . . . shall deem necessary for the adequate protection and utilization of such reservations." Since the Commission failed to comply with this statutory command when it issued the license in this case, the Court of Appeals correctly reversed its decision in this respect. n23

n23 Mutual, Escondido, and Vista assert that § 4(e) is not at issue in this case because this is a relicensing procedure governed by § 15(a). The Commission was of a different view and dealt with the case as an original licensing procedure since the new license included facilities not covered by the 1924 license and since the project being relicensed was "so materially different from the [project] . . . which was initially licensed in 1924 that little more than the project number remains the same." 6 *FERC para. 61,189, p. 61,411 (1979)*. The licensees did not object to this conclusion in their petition for rehearing to the Commission, and they may not challenge it now. 16 *U. S. C. § 825l(b)*. Accordingly, we have no reason to decide whether § 4(e) applies to relicensing proceedings.

[***29]

[*780] III

The Court of Appeals also concluded that the Commission's § 4(e) obligations to accept the Secretary's proposed conditions and to make findings as to whether the license is consistent with the reservation's purpose applied to the Pala, Yuima, and Pauma Reservations even though no licensed facilities were located on these reservations. Petitioners contend that this conclusion is erroneous. We agree.

Again, the statutory language is informative and largely dispositive. Section 4(e) authorizes the Commission:

"To issue licenses . . . for the purpose of constructing . . . dams . . . or other project works . . . upon any part of the public lands and reservations of the United States . . . Provided, That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations. . . ."

If a project [***30] is licensed "within" any reservation, the Commission must make a "no interference or inconsistency" finding with respect to "such" reservation, and the Secretary may impose conditions for the protection of "such" reservation. Nothing in the section requires the Commission to [*781] make findings

about, or the Secretary to impose conditions to protect, any reservation other than the one within which project works are located. The section imposes no obligation on the Commission or power on the Secretary with respect to reservations that may somehow be affected by, but will contain no part of, the licensed project works.

The Court of Appeals, however, purported to discover an ambiguity in the term "within." Positing that the term "reservations" includes not only tribal lands but also tribal water rights, the Court of Appeals reasoned that since a project could not be "within" a water right, the term must have a meaning other than its literal one. This effort to circumvent the plain meaning of the statute by creating an ambiguity where none exists is unpersuasive.

There is no doubt that "reservations" include "interests in lands owned by the [**2115] United States" [***31] n24 and that for many purposes water rights are considered to be interests in lands. See 1 R. Clark, *Waters and Water Rights* § 53.1 p. 345 (1967). But it does not follow that Congress intended the "reservations" spoken of in § 4(e) to include water rights. n25 The section deals with project works to be located "upon" and "within" a reservation. As the Court of Appeals itself indicated, the section does tend to "paint a geographical picture in the mind of the reader," 692 F.2d, at 1236, and we find the [*782] Court of Appeals' and respondents' construction of the section to be quite untenable. Congress intended the obligation of the Commission and the conditioning power of the Secretary to apply only with respect to the specific reservation upon which any project works were to be located and not to other reservations that might be affected by the project.

n24 Section 3(2) of the FPA provides:

"['Reservations'] means national forests, tribal lands embraced within Indian reservations, military reservations, and other lands and interests in lands owned by the United States, and withdrawn, reserved, or withheld from private appropriation and disposal under the public land laws. . . ." 16 U. S. C. § 796(2).

[***32]

n25 Indeed, in another provision of the Act, Congress provided that the term "project" includes "all water-rights . . . lands, or interests in lands the use and occupancy of which are necessary or appropriate in the maintenance" of a "unit of improvement or development." 16 U. S. C. § 796(11). Had Congress thought that water rights were always covered by the term "interests in land," it would not have felt it necessary to refer to water rights.

The Court of Appeals sought to bolster its conclusion by noting that a literal reading of the term "within" would leave a gap in the protection afforded the Bands by the FPA because "a project may turn a potentially useful reservation into a barren waste without ever crossing it in the geographical sense -- e. g., by diverting the waters which would otherwise flow through or percolate under it." Ibid. This is an unlikely event, for in this respect the Bands are adequately protected by other provisions of the statutory scheme. First, the Bands cannot be deprived of any water to which they have a legal right. The Commission is expressly forbidden to [***33] adjudicate water rights, 16 U. S. C. § 821, and the license applicant must submit satisfactory evidence that he has obtained sufficient water rights to operate the project authorized in the license, 16 U. S. C. § 802(b). Second, if the Bands are using water, the rights to which are owned by the license applicant, the Commission is empowered to require that the license applicant continue to let the Bands use this water as a condition of the license if the Commission determines that the Bands' use of the water constitutes an overriding beneficial public use. 16 U. S. C. § 803(a). See *California v. FPC*, 345 F.2d 917, 923-924 (CA9), cert. denied, 382 U.S. 941 (1965). The Bands' interest in the continued use of the water will accordingly be adequately protected without requiring the Commission to comply with § 4(e) every time one of the reservations might be affected by a proposed project.

Respondents additionally contend that under other provisions of the FPA the § 4(e) proviso at issue applies any time a reservation is "affected" by a licensed project even if none of [*783] the licensed facilities is actually located on the reservation. [***34] They rely in particular on § 23(b), which provides that project works can be constructed without a license on nonnavigable waters over which Congress has jurisdiction under its Commerce Clause powers only if, among other things, n26 "no public lands or reservations are affected." 16 U. S. C. § 817. Respondents argue that it would make no sense to conclude that Congress intended to require the Commission to exercise its licensing jurisdiction when a reservation is "affected" by such a project if it did not also intend to afford those [**2116] reservations all of the protections outlined in § 4(e). However, that is exactly the conclusion that the language of § 4(e) compels, and, contrary to respondents' argument, there is nothing illogical about such a scheme.

n26 The statute authorizes the construction of project works without a license on nonnavigable waters over which Congress has Commerce Clause ju-

risdiction if the Commission finds that "the interests of interstate or foreign commerce would [not] be affected by such proposed construction . . . and if no public lands or reservations are affected." 16 U. S. C. § 817.

[***35]

Under § 4(e), the Commission is authorized to license projects in two general types of situations -- when the project is located on waters (navigable or nonnavigable) over which Congress has jurisdiction under the Commerce Clause and when the project is located upon any public lands or reservations. It is clear that the Commission's obligations to make a "no inconsistency or no interference" determination and to include the Secretary's conditions in the license apply only in the latter situation -- when the license is issued "within any reservation." The fact that a person is required to obtain a license in the former situation any time a project on nonnavigable waters affects a reservation indicates only that Congress concluded that in such circumstances the possible disruptive effects of such a project were so great that the Commission should regulate the project through its licensing powers. That is not, as respondents seem to imply, a meaningless gesture if all of the provisions of § 4(e) do not apply.

[*784] Even if the Commission is not required to comply with all of the requirements of § 4(e) when it issues such a license, it is still required to shape the [***36] license so that the project is best adapted, among other things, for the improvement and utilization of water-power development and for "other beneficial public uses, including recreational purposes." 16 U. S. C. § 803(a). In complying with that duty, the Commission is clearly entitled to consider how the project will affect any federal reservations and to require the licensee to structure the project so as to avoid any undue injury to those reservations. See *Udall v. FPC*, 387 U.S. 428, 450 (1967). As noted supra, at 782, the Commission can even require that, as a condition of the license, the licensee surrender some of its water rights in order to protect such reservations if the Commission determines that such action would be in the public interest. However, it is clear that Congress concluded that reservations were not entitled to the added protection provided by the proviso of § 4(e) unless some of the licensed works were actually within the reservation.

The scheme crafted by Congress in this respect is sufficiently clear to require us to hold that the Commission must make its "no inconsistency or interference" determination and include the Secretary's [***37] conditions in the license only with respect to projects located

"within" the geographical boundaries of a federal reservation.

IV

The final issue presented for review is whether § 8 of the MIRA requires licensees to obtain the consent of the Bands before they operate licensed facilities located on reservation lands. Section 8 provides in relevant part:

"Subsequent to the issuance of any tribal patent, n27 or of any individual trust patent . . . , any citizen of the United States, firm, or corporation may contract with the tribe, [*785] band, or individual for whose use and benefit any lands are held in trust by the United States, for the right to construct a flume, ditch, canal, pipe, or other appliances for the conveyance of water over, across, or through such lands, which contract shall not be valid unless approved by the Secretary of the Interior under such conditions as he may see fit to impose." 26 Stat. 714.

The Court of Appeals concluded that this provision, which by its terms authorizes private parties to enter into a contract with the Bands, precludes the Commission from licensing those parts of the project that occupy reservation land without the consent [***38] of the Indians. When the legislative [**2117] histories of § 8 and of the FPA are considered, however, the Court of Appeals' interpretation cannot stand.

n27 Trust patents were issued on September 13, 1892, for the La Jolla and Rincon Reservations, and on July 10, 1910, for the San Pasqual Reservation.

Section 8 appeared in the MIRA just prior to its passage. Several irrigation companies were seeking rights-of-way across the reservations. The Secretary had concluded that irrigation ditches and flumes would benefit both the settlers and the Indians. H. R. Rep. No. 3282, 50th Cong., 1st Sess., 3-4 (1888). Two Attorneys General, however, had ruled that only Congress could authorize the alienation of Indian lands. Lemhi Indian Reservation, 18 Op. Atty. Gen. 563 (1887); Dam at Lake Winnibigoshish, 16 Op. Atty. Gen. 552 (1880). In light of these opinions, the Secretary prepared an amendment to the bill, authorizing the Bands to contract for the sale of rights-of-way, subject [***39] to Interior's approval. H. R. Rep. No. 3282, supra, at 2. Section 8 was therefore designed to authorize the Indians and the Secretary to grant rights-of-way to third parties; it was not intended to act as a limit on the sovereign

authority of the Federal Government to acquire or grant rights-of-way over public lands and reservations.

In essence, § 8 increased the Bands' authority over its land so that they had almost the same rights as other private landowners. n28 The Bands were authorized to negotiate with any [*786] private party wishing to acquire rights-of-way and to enter into any agreement with those parties, something they were previously unable to do. And, until some overriding authority was invoked, the Bands, like private landowners, had complete discretion whether to grant rights-of-way for hydroelectric project facilities. However, there is no indication that once Congress exercised its sovereign authority to use the land for such purposes the Bands were to have more power to stop such action than would a private landowner in the same situation -- both are required to permit such use upon payment of just compensation. n29 Therefore, the [***40] only question is whether Congress decided to exercise that authority with respect to Indian lands when it enacted the FPA. The answer to that inquiry was clearly articulated in a somewhat different context more than 20 years ago.

"The Federal Power Act constitutes a complete and comprehensive plan . . . for the development, transmission and utilization of electric power in any of the streams or other bodies of water over which Congress has jurisdiction under its commerce powers, and upon the public lands and reservations of the United States under its property powers. See § 4(e). It neither overlooks nor excludes Indians or lands owned or occupied by them. Instead, as has been shown, the Act specifically defines and treats with lands occupied by Indians -- 'tribal lands embraced within Indian reservations.' See §§ 3(2) and 10(e). The Act gives every indication that, within its comprehensive plan, Congress intended to include lands owned or occupied by any person or persons, including Indians." *FPC v. Tuscarora Indian Nation*, 362 U.S. 99, 118 (1960).

[*787] It is equally clear that, when enacting the FPA, Congress did not intend to give [***41] Indians some sort of special authority to prevent the Commission from exercising the licensing authority it was receiving from Congress. Indeed, Congress squarely considered and rejected such a proposal. During the course of the debate concerning the legislation, the Senate amended the bill to require tribal consent for some projects. Section 4(e) of the Senate version of the bill provided that "in respect to tribal lands [**2118] embraced within Indian reservations, which said lands were ceded to Indians by the United States by treaty, no license shall be issued except

by and with the consent of the council of the tribe." 59 Cong. Rec. 1534 (1920). However, that amendment was stricken from the bill by the Conference, the conferees stating that they "saw no reason why waterpower use should be singled out from all other uses of Indian reservation land for special action of the council of the tribe." H. R. Conf. Rep. No. 910, 66th Cong., 2d Sess., 8 (1920).

n28 The Bands' situation was somewhat different since it was necessary to secure the approval of the Secretary for any such contracts.

n29 The FPA requires that when licenses involve tribal lands within a reservation, "the Commission shall . . . fix a reasonable annual charge for the use thereof." 16 U. S. C. § 803(e). When a licensed facility is on private land, the licensee must acquire the appropriate right-of-way from the landowner either by private negotiation or through eminent domain. 16 U. S. C. § 814.

[***42]

In short, while § 8 of the MIRA gave the Bands extensive authority to determine whether to grant rights-of-way for water projects, that authority did not include the power to override Congress' subsequent decision that all lands, including tribal lands, could, upon compliance with the provisions of the FPA, be utilized to facilitate licensed hydroelectric projects. Under the FPA, the Secretary, with the duty to safeguard reservations, may condition, but may not veto, the issuance of a license for project works on an Indian reservation. We cannot believe that Congress nevertheless intended to leave a veto power with the concerned tribe or tribes. The Commission need not, therefore, seek the Bands' permission before it exercises its licensing authority with respect to their lands. n30

n30 The Bands suggest that even in the absence of § 8 of the MIRA, their consent would be necessary before the license could issue because of their sovereign power to prevent the use of their lands without their consent. Brief for Respondents La Jolla Band of Mission Indians et al. 37-39. However, it is highly questionable whether the Bands have inherent authority to prevent a federal agency from carrying out its statutory responsibility since such authority would seem to be inconsistent with their status. See *Oliphant v. Suquamish Indian Tribe*, 435 U.S. 191, 208-209 (1978). In any event, it is clear that all aspects of Indian sovereignty are subject to defeasance by Congress, *United States v. Wheeler*, 435 U.S.

313, 323 (1978), and, from the legislative history of the FPA, *supra*, at 787, that Congress intended to permit the Commission to issue licenses without the consent of the tribes involved.

[***43]

[*788] V

The Court of Appeals correctly determined that the Commission was required to include in the license any conditions which the Secretary of the Interior deems

necessary for the protection and utilization of the three reservations in which project works are located. It was in error, however, in concluding that the Commission was required to fulfill this and its other § 4(e) obligations with respect to the other three reservations affected by the project and that § 8 of the MIRA empowered the Bands to prevent the licensing of facilities on their lands. The court's judgment is affirmed in part and reversed in part, and the case is remanded to the court for further proceedings consistent with this opinion.

It is so ordered.

BANGOR HYDRO-ELECTRIC COMPANY, PETITIONER v. FEDERAL ENERGY
REGULATORY COMMISSION, RESPONDENT; UNITED STATES DEPARTMENT
OF THE INTERIOR; UNITED STATES DEPARTMENT OF COMMERCE,
INTERVENORS

No. 95-1083

UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA
CIRCUIT

316 U.S. App. D.C. 298; 78 F.3d 659; 1996 U.S. App. LEXIS
4498; 26 ELR 20822

January 19, 1996, Argued
March 15, 1996, Decided

PRIOR HISTORY: [**1] On Petition for Review of Orders of the Federal Energy
Regulatory Commission.

COUNSEL: John A. Whittaker, IV, argued the cause for petitioner, with whom
William J. Madden, Jr., was on the briefs.

Edward S. Geldermann, Attorney, Federal Energy Regulatory Commission, argued the
cause for respondent, with whom Jerome M. Feit, Solicitor, and Joseph S. Davies,
Deputy Solicitor, were on the brief. Eric L. Christensen entered an appearance.

Jonathan F. Klein, Attorney, United States Department of Justice, argued the
cause for intervenors, with whom Lois J. Schiffer, Assistant Attorney General,
Anne S. Almy, and John A. Bryson, attorneys, were on the brief.

Henri D. Bartholomot and Donald H. Clarke were on the joint brief for amici
curiae.

JUDGES: Before: SILBERMAN, BUCKLEY, and ROGERS, Circuit Judges. Opinion for the
Court filed by Circuit Judge SILBERMAN.

OPINIONBY: SILBERMAN

OPINION: [*661] SILBERMAN, Circuit Judge: Bangor Hydro-Electric petitions
for review of a FERC order requiring it to comply with a Department of Interior
fishing prescription. Interior has not provided reasonable support for its
prescription, and we therefore grant the petition.

1.

The Federal Energy Regulatory Commission [**2] issued Bangor a license to
continue to operate a hydropower facility located on the Union River in
Ellsworth, Maine. The license required Bangor to develop a plan for fish
passage, consistent with any future prescription made by the Secretary of the
Interior. Bangor submitted a plan relying extensively on trucking salmon and
alewives, unable to swim back to their spawning areas due to the presence of
Bangor's facility, from an existing trap facility n1 to locations upstream.
Bangor committed to constructing permanent upstream fish passage facilities--the
main alternative to trucking--only if the salmon run (fish coming downstream

after spawning) exceeded 500 for three consecutive years.

-----Footnotes-----

n1 The fish trapping facility is used for various fish management purposes.

-----End Footnotes-----

The United States Fish and Wildlife Service (FWS), an arm of the Department of Interior, notified FERC that it did not approve of the Bangor plan and that pursuant to @ 18 of the Federal Power Act, 16 U.S.C. @ 811 (1985), it would require Bangor to construct [**3] permanent upstream fish passages five years after the issuance of the license. Section 18 provides:

The Commission shall require the construction, maintenance, and operation by a licensee at its own expense of ... such fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.

Id. The FWS explained:

Given that the run of alewives could soon reach its ultimate size of 2.3 million fish, we believe that the permanent fish passage facilities should be [constructed] ... The permanent facilities would initially be used by alewives, but should also be designed to accommodate a run of up to 1000 salmon.

Bangor estimated that the fishways would cost approximately \$ 2 million and \$ 30,000 in lost power benefits annually. Interior was unmoved, explaining: "We will not sacrifice fish passage effectiveness or compromise fishery management objectives ... simply due to cost considerations." (emphasis added).

The Commission issued an order modifying Bangor's proposed fish passage plan requiring it to conform to FWS' fishway prescription. Bangor Hydro-Electric Co., 66 F.E.R.C. P 62,079 (1994). It refused [**4] to consider Bangor's contention that the FWS personnel lacked authority to require a @ 18 fishway prescription because the Secretary of Interior had not properly delegated that authority, explaining that the Commission should not "dispute the effectiveness of Interior's delegation practices." Id. at 64,254. FERC also declined to consider Bangor's arguments concerning the need for the fishway prescription or the process by which Interior decided to require the fishway, concluding that under *Escondido Mut. Water Co. v. La Jolla Band of Mission Indians*, 466 U.S. 765, 80 L. Ed. 2d 753, 104 S. Ct. 2105 (1984), and *Lynchburg Hydro. Assoc.*, 39 F.E.R.C. P 61,079 (1987), it had no choice but to require Bangor to construct the fishways. Bangor unsuccessfully sought rehearing. The Commission issued a stay of its order, which required Bangor to begin construction, pending completion of judicial review. Bangor Hydro-Electric, 70 F.E.R.C. P 61,216 (1995). On appeal, Bangor repeats its due process and evidentiary arguments and challenges FERC's refusal to consider them.

II.

We are met at the outset with a rather novel jurisdictional argument from the government (the Department) as intervenor. It claims that [**5] FERC is the wrong respondent. Interior is the real governmental party in interest because Bangor is actually challenging Interior's fishway prescription, [**662]

concerning which the Commission takes no position. Therefore, the petition should be denied. In *Escondido*, 466 U.S. at 778 & n.20, the Supreme Court, interpreting this unusual statute, explained that in these sorts of cases n2 the Commission is obliged to include the Department's prescription, but is free, if a petition for review is filed, to support, oppose, or remain neutral regarding the prescription.

-----Footnotes-----

n2 *Escondido* concerned @ 4(e), 16 U.S.C. @ 797(e) (1985), which provides that licenses shall be subject to such conditions that are deemed necessary by the Secretary of the department which supervises a reservation "for the adequate protection and utilization of [that] reservation." The parties do not contest (nor could they) FERC's conclusion in *Lynchburg*, 39 F.E.R.C. P 61,079, that @ 18 imposes a similar duty on the Commission to include fishway prescriptions imposed by the Secretary of Interior in licenses.

-----End Footnotes-----

[**6]

Nevertheless, the order on review is undeniably that of the Commission. The relevant statutory section provides:

Any party to a proceeding under this Act aggrieved by an order issued by the Commission in such proceeding may obtain a review of such order ... by filing ... a written petition praying that the order of the Commission be modified or set aside....

16 U.S.C. @ 825l (b) (1985) (emphases added). It seems beyond question that petitioner has been aggrieved within the meaning of that provision by the Commission's order regardless of the Commission's reasons for including the prescription in the order. It follows therefore that FERC is the appropriate named respondent even if the real defense is to be mounted by Interior as intervenor.

The Commission agrees with that reading, but suggests to us that the record should be remanded to it because Interior wishes to put in more material. But Interior has filed a motion to add to the record before us. Interior, consistent with its view that it is the proper respondent, seems to be treating the case as if petitioner were challenging a prescription that stemmed from a departmental "informal adjudication" [**7] *a la* *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 28 L. Ed. 2d 136, 91 S. Ct. 814 (1971), instead of from FERC's more formal licensing proceeding. See *U.S. Dep't of Interior v. FERC*, 293 U.S. App. D.C. 182, 952 F.2d 538 (D.C. Cir. 1992); *Cooley v. FERC*, 269 U.S. App. D.C. 136, 843 F.2d 1464, 1472-73 (D.C. Cir.), cert. denied, 488 U.S. 933, 102 L. Ed. 2d 344, 109 S. Ct. 327 (1988) (Commission erred in not addressing all the relevant evidence). We deny Interior's motion, and we also think it inappropriate to remand to FERC. *Escondido* explained that "the license applicant can seek review of the conditions in the court of appeals, but the court is to sustain the conditions if they are consistent with law and supported by the evidence presented to the Commission, either by the Secretary or other interested parties." 466 U.S. at 778 n.20 (emphasis added). The government contends this language in *Escondido* is only dicta, and it should not be read as confining Interior to the record before FERC. It may be dicta, but Supreme

Court dicta tends to have somewhat greater force--particularly when expressed so unequivocally. Even were we not bound by it, however, we think the Court correctly devised the interrelationship between Interior and FERC. If Congress [**8] had intended Interior to have authority to require prescriptions independent of the Commission's licensing process, it could easily have so specified. By providing instead that Interior's prescription is to be a FERC license requirement, Congress implicitly indicated that it would have to be supported as would any other Commission licensing requirement. The record before us, then, is no more and no less than what was presented to the Commission. The Commission appears to have correctly recognized this point; its regulation states that when the Department submits a prescription the Department "must specifically identify and explain ... the prescriptions and their evidentiary and legal basis." 18 C.F.R. @ 4.34(b)(1) (1995) (emphasis added). To be sure, this is an unorthodox administrative proceeding, but Escondido's reading of the statute and the Commission's regulation is abundantly clear, and we therefore think Interior had no excuse for not including any evidence it wished to rely on, in the court of appeals, in the record before the Commission. It is simply too late now to seek to shore up its case.

[*663] It also follows, we think, that petitioner's claim that FERC had some sort [**9] of responsibility to inquire into Interior's internal decisionmaking process must be rejected. Under this statute, FERC performs primarily as a neutral forum responsible for compiling the record for the benefit of the court of appeals. It may subsequently on review take a position or not as it wishes, but it is certainly not its responsibility to investigate or prosecute any part of the case below. Moreover, since the record must be the one presented to the Commission, Interior's internal deliberations are not typically relevant. The Commission retains authority to issue the underlying license, and if Interior's prescription were to be regarded by the Commission as somehow incompatible with a license, FERC could surely refuse to issue it. However, it is not the Commission's role to judge the validity of Interior's position--substantially or procedurally.

III.

The judicial review provision governing petitions for review of FERC orders was drafted long before the passage of the APA; concerning the scope of review, it explicitly states only that the finding of "the Commission as to the facts if supported by substantial evidence shall be conclusive." @ 8251 (b) (emphasis [**10] added). But the Supreme Court in Escondido observed (as seems inevitable) that a reviewing court must determine whether Interior's prescription is "consistent with law" or "reasonably related to [its] goal." 466 U.S. at 778 & n.20. In the latter formulation, the Court reads the statute implicitly as providing review on arbitrary and capricious grounds. n3 And petitioner makes an arbitrary and capricious challenge; it contends that the costs of Interior's prescription far outweigh any benefits to fish or the general environment and is therefore unreasonable. Interior responds--somewhat peculiarly--that although under the statute it is authorized to take costs into account, it is not required to do so. We rather doubt that is the case, but it is not necessary to resolve that dispute, because even assuming Interior's position is correct, we believe its support for the prescription is not adequate to meet the statute and Escondido's standard.

-----Footnotes-----

n3 The APA's "substantial evidence" and "arbitrary and capricious" standard connotes the same substantive standard of review. The substantial evidence standard is "only a specific application of [the more general arbitrary and capricious review], separately recited in the APA not to establish a more rigorous standard of factual support but to emphasize that in the case of formal proceedings the factual support must be found in the closed record as opposed to elsewhere." *Association of Data Processing Serv. Orgs., Inc. v. Board of Governors*, 240 U.S. App. D.C. 301, 745 F.2d 677, 683 (D.C. Cir. 1984). See also *Maryland People's Counsel v. FERC*, 245 U.S. App. D.C. 365, 761 F.2d 768, 774 (D.C. Cir. 1985). But, the term "arbitrary and capricious" more naturally fits a determination of a mixed question of factfinding and policy implementation--which is what we have before us. See, e.g., *Kisser v. Cisneros*, 304 U.S. App. D.C. 317, 14 F.3d 615, 619 (D.C. Cir. 1994) (in applying the "arbitrary and capricious" standard a court examines whether there is a rational connection between the facts and the choice made).

-----End Footnotes-----
[**11]

Interior's core position is that, in order to obtain its goal of a 2.3 million alewife run, it is necessary that "a minimum of 315,000 and perhaps as many as 800,000 adult alewives should be returned to upstream spawning areas" (called an "escapement"). Although all parties describe this as a "finding," it is, of course, not so much a determination of historical fact as a prediction based on opinions or inferences drawn from certain facts. See *National Resources Defense Counsel, Inc. v. Hodel*, 275 U.S. App. D.C. 69, 865 F.2d 288, 309 (D.C. Cir. 1988). If Interior is correct in that conclusion, it is undisputed that Bangor could not truck this number of alewives upstream. Interior expresses a secondary concern for salmon using the fishway to return upstream, which Interior contemplates could reach a run of 1,000. Finally, Interior mentions in passing that the fishway could be used by blueback herring, American shad, and American eel, which serve as forage for other fish and avian predators. Upstream trucking for these species may be inadequate given the risk that the fish may be placed beyond their natal stream areas, which could adversely affect spawning. Interior suggests that this is likely to be [**12] a particular problem for blueback herring (which are difficult to distinguish from alewives) because blueback herring require free-flowing water for spawning.

[*664] Bangor vigorously contests the need for an escapement of 315,000 (let alone 800,000) alewives to reach Interior's goal of a 2.3 million alewife run. Data from other river systems indicate that there is not a strong relationship between the escapement rate and alewife run; small spawning escapements often produce large runs. In the Union River itself, an escapement of 12,720 produced an alewife harvest of 1,026,200, while the largest escapement, 22,200, produced a harvest of 832,900. From this, Bangor argues that at most an escapement of 100,000 is needed, a number which can be trucked upstream. In any event, 315,000 is certainly not necessary.

Bangor also points out that the salmon run for the last 20 years has never exceeded 295 and that in 1992 only four salmon were caught at the fish trapping facility. The number of salmon affected is unlikely to increase given the discontinuance of a program in 1992 which stocked salmon in the Union River.

It is at best uncertain when, if ever, the stocking program will be resumed, but [**13] Bangor has committed to building a fishway passage if the salmon run reaches 500 for three consecutive years. As to Interior's other justifications, Bangor asserts that there is no evidence that there is any lack of food for predators which feed on the fish that may use a fishway passage and that blueback herring can easily be sorted from alewives since they spawn later than alewife. In any event, Interior's concern about blueback herring seems misplaced since in 1992 the same fish trap caught no blueback herring.

Interior is quite open about its policy view that it prefers fishways to alternative escapement remedies. It is, of course, entitled to a good deal of deference concerning its policy choice. That does not mean that Interior is not obliged to show some reasonable support for its determination to insist on that requirement in this case. It will not do to present only a "Field of Dreams" justification ("If you build it, they will come."). Interior's difficulty in this proceeding in which the key dispute is the appropriate escapement rate for alewives (Interior's concern for the other fish seems quite strained), is that it relies only on conclusory assertions. It does refer [**14] to a management plan put out by the Atlantic States Marine Fisheries Commission which allegedly concludes that the escapement rate for alewives should be between 40 and 75% of an annual run in order to rebuild and increase the run. This plan, unfortunately for Interior, is not in the record. n4 Petitioner, in contrast, presented an expert's report dealing with the relevant biological data from various river systems including the Union River, which quite pointedly undermines Interior's opinion or prediction that a 315,000 escapement is justified. Under these circumstances, we think we must conclude that Interior has not provided reasonable support--"substantial evidence"--for its "finding" and its requirement is not "reasonably related to its goal."

-----Footnotes-----

n4 Interior originally sought to add this report to the record on appeal but no longer attempts to do so.

-----End Footnotes-----

* * * *

For the preceding reasons, FERC's order requiring Bangor to comply with Interior's fishway prescription is vacated.

RELICENSING TOOL KIT:

Guidelines for Effective Participation In The FERC Relicensing Process

Introduction:

The following is a set of guidelines drafted by members of the Hydropower Reform Coalition (HRC) for use by various interests involved in the relicensing of hydropower facilities regulated by the Federal Energy Regulatory Commission (FERC). The relicensing of FERC-regulated dams has recently become a major tool for river conservation and restoration, with more than 150 projects having been relicensed since 1993, and 250 more scheduled for relicensing by 2010. Because rivers are a public resource, it is important during relicensing for all interested parties to have a say into how the dam and the river will be managed for the 30 to 50 year term of the FERC license. Fortunately, the relicensing process provides significant opportunities for public input. However, FERC's relicensing procedures are complex, sometimes making it difficult for parties less experienced with the process to participate effectively. We hope that this toolkit will provide some assistance to groups and individuals as they seek to influence how a FERC dam will be operated.

We stress that this document does not offer a complete explanation or outline of the relicensing process, and it does not substitute for reviewing actual FERC statutes and regulations. We recommend that parties also obtain advice from experienced legal counsel for many FERC filings. In addition, readers are encouraged to contact FERC for additional licensing guidance and materials.¹

Contents of the Relicensing Toolkit:

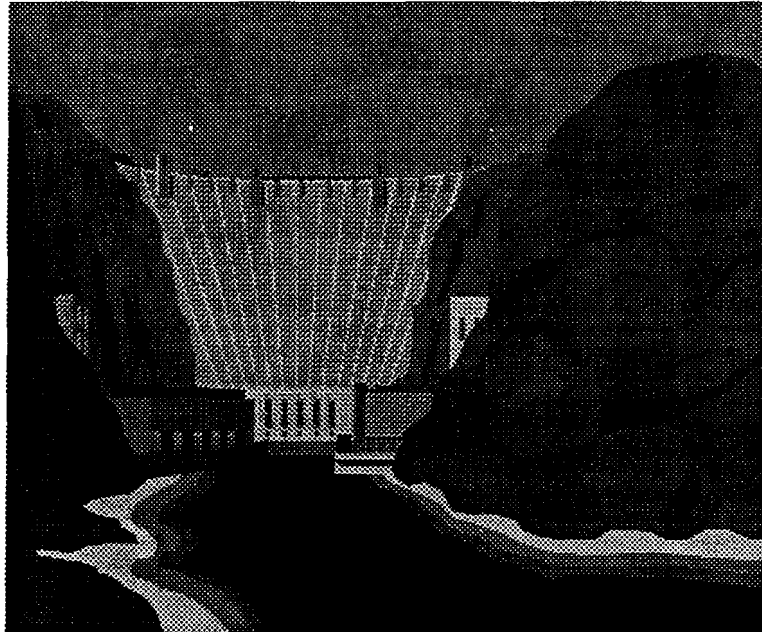
Each section of this toolkit describes a point in the relicensing process where interested parties can take action and have an impact in the relicensing process. Individual sections include explanations of applicability, substantive requirements, procedures and strategies which interested parties can use to participate in an effective fashion. Additional sections may be added subsequently as different needs are recognized.

Sections of this Tool Kit presently include:

- I. Intervention in FERC Relicensing Proceedings*** - Becoming an officially recognized party to a relicensing proceeding; important for involvement in later stages
- II. Additional Information Requests (AIR)*** - Requests to obtain scientific and technical information relevant to determining impacts of the hydropower project

¹ For materials from FERC, call the Public Reference Room at (202) 208-1371

***RELICENSING TOOL KIT:
Guidelines for Effective Participation In The
FERC Relicensing Process***



by the
HYDROPOWER REFORM COALITION

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July 21, 1997

COALITION STEERING COMMITTEE

American Rivers • American Whitewater Affiliation • Appalachian Mountain Club •
Conservation Law Foundation • Earthjustice Legal Defense Fund • Idaho Rivers United •
Michigan Hydro Relicensing Coalition • Natural Heritage Institute • New England F.L.O.W. •
New York Rivers United • River Alliance of Wisconsin • Trout Unlimited

- III. *Scoping*** - Establishing the relevant issues to be examined during the environmental review process
- IV. *Federal Power Act Section 4(e)*** - Resource agency conditioning of projects on federal reservation lands
- V. *Federal Power Act Section 18*** - Resource agency development of fish passage requirements
- VI. *Federal Power Act Section 10(j)*** - State and federal agency requests for fish and wildlife conditions
- VII. *Clean Water Act Section 401*** - State water quality agency certification of compliance with water quality requirements
- VIII. *Comments, Recommendations, Terms and Conditions*** - The process of commenting on a final license application and recommending license conditions
- IX. *Comments on Draft Environmental Assessments and Impact Statements*** - The opportunity for stakeholder involvement in the environmental review process
- X. *Requesting Rehearing*** - The process of appealing FERC decisions

The Relicensing Process:

FERC has jurisdiction over all hydropower dams not owned by the federal government that either: (1) occupy federal public lands or federal reservations; (2) are located on navigable streams; (3) use surplus water or water power from a federal government dam; or (4) were constructed after August 26, 1935 and are located on a non-navigable stream that affects the interests of interstate or foreign commerce (including providing power to an interstate power grid).

Rivers are owned by the public. As public resources, rivers cannot be owned by private industries. A developer may obtain a license, however, to dam the river for the purpose of hydropower generation. These licenses last 30 to 50 years and typically stipulate how the dams are operated, what minimum water flow levels are required, what forms of fish passage must be installed and, in some cases, how watershed lands are managed.

Well before a license expires, the dam owner must apply to FERC for a new license. The relicensing process allows FERC, state and federal resource agencies, conservation groups, and the general public to reconsider appropriate operations and land management for each project, taking into account current social and scientific knowledge.

In the past, FERC's primary goal had been the promotion of hydro dams as a means to harness a river's power generation potential, often without regard for the proposed dam's environmental impacts. A 1986 amendment to FERC's operating law (the Federal Power Act), however, required the Commission to take a more balanced approach to dam licensing. The amendment requires FERC, when deciding whether to issue a license, to consider not only the power generation potential of a river, but also to give equal consideration to energy conservation, protection of fish and wildlife, protection of recreational opportunities, and preservation of general environmental quality.

This "equal consideration" mandate requires FERC to consult with federal, state and local resource agencies, including fish, wildlife, recreation and land management agencies, in order to assess more accurately the impact of a hydro dam on the surrounding environment. In its evaluation of environmental impacts, FERC is obligated to prepare an Environmental Impact Statement (EIS) or Environmental Assessment (EA), investigative reports which assess the environmental consequences of a proposed hydropower project and compare the impacts with those of alternatives to the suggested action.

The following is a short summary of the 11 key steps in the relicensing process:

The FERC licensing process is based on very complicated laws and regulations. Please do not rely on this summary of the process, but instead refer to the Federal Power Act 16 U.S.C. 791-828c and its implementing regulations, 18 C.F.R. Parts 4 and 16.

1. Five years before hydropower license expiration, the dam owner files notice of intent to seek a license. FERC provides public notice of this intent. Interested members of the public can inspect project records submitted as part of notice of the intent. Initial meetings are scheduled between interested parties, resource agencies and dam owners.
2. Dam owner consults with federal and state resource agencies, and conducts first set of studies for application. Interested parties work with agencies to develop study recommendations.
3. Two years before expiration date, dam owner submits application for new license. Interested parties and resource agencies review the license application and identify any additional studies or information the applicant should submit. Requests for additional information are submitted to FERC (see *II. Additional Information Requests* below). To become official parties to FERC's proceeding, interested parties file a Motion to Intervene with FERC, which means FERC must consider and respond to their submitted comments and subsequent motions and recommendations (see *I. Intervention* below). Only parties that have formally intervened may appeal a final FERC decision.
4. FERC requests additional information from applicant, based, in part, on recommendations from interested parties and resource agencies. Applicant conducts additional studies and develops reports for FERC.

5. When additional studies/information have been submitted, FERC publishes notice that the application is complete, available for review, and ready for environmental analysis (see *III. Scoping* below). Interested parties and resource agencies review full application, submit comments on full application, and propose license terms and conditions to FERC (see *VIII. Comments, Terms and Conditions* below).
6. FERC prepares a draft Environmental Assessment or Environmental Impact Statement describing various proposed methods of operation for each area of concern, listing environmental impacts of each alternative operating scenario and identifying a preferred alternative. Interested parties and resource agencies comment to FERC on the draft environmental study, submit any changes to their previous recommended terms and conditions, and call for a hearing if there are any material factual issues in dispute (see *IX. Comments on DEAs and DEAs* below). If a draft environmental impact statement is issued, interested parties have a second opportunity to apply for formal intervention in the proceeding.
7. If FERC intends to disregard any fish and wildlife terms and conditions recommended by resource agencies, FERC convenes a meeting with the resource agencies to discuss the disputed conditions. FERC and agencies seek to resolve differences between their recommendations. Interested parties may attend this meeting as observers (see *VI. FPA Section 10(j)* below).
8. FERC makes a decision whether to hold a hearing on any material issues of fact. Such a hearing is very rare in the hydropower licensing arena.
9. FERC staff issues a final Environmental Assessment or Environmental Impact Statement. Interested parties and resource agencies may comment on a final environmental impact statement. A final environmental assessment is usually issued at the same time as the license, with no interim opportunity to comment.
10. FERC staff issues a decision on license renewal, i.e., whether a license is issued and with what conditions. Intervening parties (including intervening resource agencies) and/or the dam owner may request rehearing of the licensing decision by the five FERC Commissioners (see *X. Request for Rehearing* below). If no request for rehearing is issued within an allotted time, the license is deemed final and accepted by the dam owner.
11. The five FERC Commissioners issue a decision on rehearing. The Commission may reverse or revise a decision by FERC staff, or they may remand the decision to FERC staff for further analysis and a new decision. The parties that requested rehearing may appeal the Commission's decision to the US Court of Appeals and, if still dissatisfied, to the US Supreme Court.

The Coalition's FERC Relicensing Handbook:

This toolkit is one part of a larger handbook being developed by the Hydropower Reform Coalition to provide guidance to groups and individuals in the relicensing process.² The other materials in the handbook will include:

- An outline of the FERC relicensing process (to be completed, Fall 1997) -- A summary of the relicensing process, with references to FERC statutes and regulations.
- HRC "Recommendations for Cooperative Relicensing Proceedings" -- Guidance for parties contemplating developing an alternative relicensing procedure recently being allowed by FERC that enables more collaborative efforts among interested parties, the applicant, and resource agencies.
- HRC "Policy on Applied Science in the FERC Relicensing Process" -- Guidance for parties in developing proper studies and scientific support for environmental impact.
- HRC "Environmental Baseline in FERC Relicensing" -- Guidance for parties in establishing and evaluating the river environment that existed prior to dam construction in order to make an informed decision at relicensing that meets the legal standards of both the Federal Power Act and the National Environmental Policy Act.
- *River Renewal: Restoring Rivers Through Hydropower Dam Relicensing* -- A report prepared by American Rivers and the National Park Service that outlines the conservation and recreation mitigation measures that have been obtained in recent relicensings and summarizes the mitigation packages obtained through 9 recent settlement agreements.
- Copies of sample filings.
- Copies of significant FERC statutes and regulations.
- A comprehensive bibliography of articles and documents related to FERC licensed hydropower facilities.

About the Hydropower Reform Coalition:

The Hydropower Reform Coalition is a consortium of national, state, and local conservation and recreation organizations working to achieve river conservation and restoration through improved operation of hydropower dams. Formed in 1992, the Coalition is dedicated to improving the quality of rivers, ensuring continued public access to rivers, and reforming the relicensing process to ensure river protection in every FERC licensing. To achieve these goals, Coalition members

² To obtain additional materials, please contact us at (202) 547-6900 or hrc@igc.apc.org

intervene in relicensings across the country.

The Coalition coordinates these relicensing efforts to strengthen members' individual advocacy efforts; develops legal and strategic guidance documents for use in individual proceedings; and works with natural resource agencies on the state and federal level to improve their involvement in individual proceedings. The Coalition also advocates policy and practice improvements at FERC and resource agencies and meets regularly with the hydropower industry to educate them to our issues and improve relationships in individual proceedings.

Currently the Coalition has a Steering Committee of eleven organizations and an additional nineteen General Members. The members are listed below. For additional information about the Coalition or its work, contact us at (202) 547-6900 or hrc@igc.apc.org

Alabama Rivers Alliance	Friends of the River
American Canoe Association	Housatonic Coalition
*American Rivers	*Idaho Rivers United
*American Whitewater Affiliation	Montana River Action Network
*Appalachian Mountain Club	The Mountaineers
Atlantic Salmon Federation	*Natural Heritage Institute
California Hydropower Reform Coalition	*New England FLOW
California Save Our Streams	New Hampshire Rivers Council
California Sport Fishing Alliance	*New York Rivers United
California Trout	*Michigan Hydro Relicensing Coalition
Colorado Rivers Alliance	*River Alliance of Wisconsin
Committee to Save the Kings River	Rivers Council of Washington
*Conservation Law Foundation	Sawmill River Watershed Alliance
*EARTHJUSTICE Legal Defense Fund	The Steamboaters
Federation of Fly Fishers	*Trout Unlimited
Friends of the Eel	Tuolumne River Preservation Trust

* denotes
Steering
Committee
Member

I. Intervention in FERC Relicensing Proceedings

Anyone interested in affecting the outcome of a FERC relicensing should move to intervene. It is necessary to intervene in order to receive copies of all documents filed in the proceeding, to receive notices of meetings, site visits, and FERC decisions, to file a petition for rehearing if FERC's relicensing decision is unacceptable, and to appeal the order on rehearing to a Federal Court of Appeals.

If you have doubts about the wisdom of intervening, you should nevertheless move to intervene within the deadline. If you later decide for any reason that you no longer want to participate, you can either formally withdraw, or become inactive without penalty. However, if you don't initially intervene and later change your mind, you may not be able to obtain intervenor status with a late filing.³

Applicability:

Interested parties may officially intervene in each hydropower license proceeding initiated by FERC.

Procedures:

After an application for an original or new (relicense) license is filed by an applicant or licensee, FERC will issue a Notice of the application. The Notice will appear in both FERC's computer files and in the Federal Register, as well as in one or more local newspapers. If you know about an expected license application, you should monitor FERC's computer files and the Federal Register to ensure you do not miss the Notice.⁴

³ There is one exception to the deadline. In cases where FERC prepares a draft environmental impact statement (DEIS), it permits intervention during the comment period on the DEIS, although intervention is limited to issues raised by the DEIS. See 18 C.F.R. §380.10. Although conservation and recreation organizations will seldom intervene on matters not covered in the DEIS, intervention after the DEIS means there is no opportunity to participate in important scoping proceedings and to otherwise shape the proceeding early. See 18 C.F.R. §380.10 for guidance on intervention during the DEIS comment period.

⁴ To learn how to use FERC's computer bulletin board, contact the FERC Public Reference Room (202) 208-1371.

The Notice will state the deadline by which motions to intervene must be filed, usually (but not always) at least 30 days from the date of the Notice. It is exceedingly important that you meet this deadline if possible, because, as noted above, it becomes more difficult to intervene at a later date. The Notice will also allow for the filing of protests, but a protest simply sets forth a person's views and is placed in FERC's files, where it rarely affects a proceeding and provides no legal rights in the proceeding to the protester.

An organization or citizen affected by a hydroelectric project licensed by FERC may become a formal party to a relicensing proceeding by filing a motion to intervene pursuant to FERC Procedural Rule 214, 18 C.F.R. §385.214. Rule 214 prescribes the contents of the Motion. Before filing a motion to intervene, it is best to first review other motions to get an idea of the model, structure and content.

In essence, Rule 214 requires that the motion: (1) identify the organizations or citizens who are moving to intervene, including their addresses; (2) "state the movant's interest in sufficient factual detail to demonstrate that . . . the movant has or represents an interest which may be directly affected by the outcome of the proceeding . . .", (see Strategies, #2, below); (3) "state, to the extent known, the position taken by the movant and the basis in fact and law for that position," (see Strategies, #3, below); and (4) demonstrate "the movant's participation is in the public interest," (see Strategies, #4, below).

The motion should also specifically indicate that the movants oppose issuance of the license. For various technical reasons, this statement of opposition should always be included even if you ultimately believe you can accept a relicensed project.

Finally, a motion to intervene must set out, preferably in a footnote on the first page, the name of the representatives of the movants who should be added to the FERC Secretary's service list. Generally, only two names may be placed on the service list. These should be the persons who will be actively participating in the proceeding, typically an attorney, if you have one, and the person coordinating the case for the organizations and citizens intervening.

If a motion to intervene is filed after the deadline in the Notice, the motion to intervene must also "show good cause why the time limitation should be waived." Rule 214(b)(3). (see Strategies, #5, below). FERC has approved such late motions, but it is always preferable to file within the deadline.

If no answer in opposition to a timely motion to intervene is filed within fifteen days, the movant will automatically become a party to the proceeding at the end of fifteen days. Rule 214(c)(1). If an opposition is filed within fifteen days, or if the motion to intervene is filed late, "the movant becomes party only when the motion is expressly granted." Rule 214(c)(2).

The motion to intervene must be served on all parties on the official service list for the proceeding compiled by the FERC Secretary, in accordance with FERC Procedural Rule 2010, 18 C.F.R. § 385.2010. The service list may be obtained from the Secretary's Office. A Certificate of Service in the form set out at Rule 2010(h) must be attached to the motion.

Strategies:

1. In general, a motion to intervene can, in an emergency, be a relatively bare bones paper so long as all the elements required by Rule 214 are included. However, it is better to set forth in some detail your interest in the proceeding, the issues you believe will be important, and your position on those issues.
2. There is an arcane area of Federal law known as "standing" that governs who may bring a lawsuit in the federal courts. Volumes have been written in this area, both in learned journals and in judicial opinions. FERC generally does not insist that a motion to intervene meet all the detailed requirements of federal judicial standing. However, because you may want to seek review of an adverse FERC decision in federal court, it is the better practice to set forth all elements of standing in your motion to intervene.

Fortunately, in FERC relicensing cases, this is relatively easy. Essentially, an organization needs to state that it has members who have used, now use, and in the future will continue to use the riverine resources in the vicinity of the project, and that the project affects these uses. For example, members may fish in the reservoir or downstream of the project and be affected by reservoir levels or releases from the project. Similarly, members may boat at or near the project, and be affected by the project's operation. Other uses, such as hiking, birding, photography, nature study, and aesthetic uses, may also be affected by project operation. It is important to show that members use resources affected by the project, and that this use may be adversely affected. It is also important that you don't simply assert that members use the project area and are affected, but that you verify that in fact there are members whose use is actually affected by the project so that you can submit such evidence if challenged. This is particularly important for projects in remote areas.

If a citizen is a movant, she or he should make the same allegations in the motion to intervene.

So far in FERC cases that have gone to the Federal Courts of Appeals, unsubstantiated allegations of standing have not been challenged and thus have been sufficient. The safer course, however, is to attach to the motion to intervene affidavits by members of the intervening organizations and citizens that set forth these uses and the effect of the project on these uses. These affidavits will become part of the FERC administrative record that will be transmitted to the Court of Appeals if an appeal is taken.

3. The motion to intervene is the first opportunity to set forth the issues you believe are important to the relicensing and your position on these issues. Of course, at the outset of a proceeding, it is impossible to know all issues or your position on issues that have been identified until more time is available for study and the environmental review process both identifies issues and yields information on the issues.

The motion to intervene should set out the issues and your position to the extent practicable at the time of the motion, but you should not consider this your definitive filing in the case. Indeed, motions to intervene seldom play much role in the proceeding at all. Therefor, it is better to save your resources for later use in the proceeding, than to produce an opus in the motion to intervene.

You would, however, always want to set forth your position on whether an environmental impact statement should be prepared, or whether a shorter environmental assessment will suffice, and whether there should be adjudicatory hearings with live witnesses to resolve disputed issues of material fact. As a practical matter, FERC does not provide adjudicatory hearings in relicensing cases, so a request for an adjudicatory hearing would only preserve a point for appeal.

Other issues to raise in the motion could include: flows (for fisheries, boating, and water quality), fish passage (upstream and downstream), fish entrainment, reservoir fluctuation, use and protection of project and other affected lands (e.g., easements), dam decommissioning, trust funds for resource protection and decommissioning, need for power, economics of the project, cumulative impacts, alternatives to the project, and alternatives for the operation of the project if it is relicensed.

4. To demonstrate that your intervention is in the public interest, it is best if you can state that your organization has a special expertise or perspective on the issues in the case that no other party participating in the case possesses. Thus, you should state, if true, that you have staff or members with expertise on the issues, or that your members who use the project area and the affected resources bring a special perspective to the proceeding.
5. If you are forced by circumstances to file a late motion to intervene, you must show "good cause" as to why you should be permitted to intervene late. These reasons will depend upon the specifics of your situation, although it is seldom sufficient to allege only that you were unaware of the proceeding unless there are special circumstances for this ignorance. This is because FERC believes the public is given adequate notice by the Federal Register and newspaper notices. You must also show that the interests that you seek to represent are not adequately represented by the existing parties. In addition, a late motion should show why your late intervention won't harm or prejudice the existing parties and will not disrupt the proceeding.
6. You should also consider encouraging other persons, particularly sympathetic state and federal resource agencies, to intervene or join in your intervention motion. It is potentially burdensome, however, to encourage numerous citizens to intervene. This is because all these citizens will be placed on the service list and must receive a copy of every document you and other parties file in the proceeding. In some cases, there have been hundreds of parties on the service list, making the filing and service of copies exceedingly expensive.

II. Requesting Additional Information/Studies

FERC cannot make an informed licensing decision without adequate information on a hydroelectric project's operation and environmental impacts. The applicant is responsible for obtaining that information during the pre-application consultation process, and for providing that information in Exhibit E of the license application.

Study and information requests are a useful tool for ensuring that an applicant identifies the environmental effects of a hydroelectric project, and effective measures for eliminating or reducing those effects and restoring degraded resources. Although the link between a hydroelectric project and a particular type of environmental harm (such as declining fish populations) may seem obvious, understanding *how* the project reduces fish populations is essential for preventing further harm and restoring the resource. This often requires in-depth, rigorous scientific analysis. In addition to identifying specific causes of environmental degradation, studies are also useful for identifying options and measures to eliminate or reduce harmful impacts.

It has been the experience of HRC members that Additional Information Requests (AIRs) are among the most powerful tools for non-governmental parties in relicensing, *IF* they are well-written, substantially supported, and also requested by the state and federal resource agencies. Historically, licensees have refused to conduct many of the studies requested by agencies and non-governmental organizations (NGOs), relying on the FERC requirements for "successful" AIRs to fend off such requests. However, facing tens of thousands of AIRs, FERC has begun to grant AIRs whether or not the AIR meets each and every one of FERC's requirements. (see *X. Requesting Rehearing* below) FERC is also encouraging licensees to do more than "pro forma" paper consultations with agencies (and the public), instead actually meeting with agencies (and the public) in person to discuss requests.

Applicability:

Interested parties may submit Additional Information Requests in each hydropower license proceeding initiated by FERC.

Procedures:

There are two opportunities for the public to submit study requests during the relicensing process: during the pre-application consultation period, 18 C.F.R. § 4.32(b)(7), and immediately after an applicant files with FERC its application for a new license, 18 C.F.R. §16.8(b)(4). Although the FERC regulations expressly authorize only resource agencies and tribes to submit study requests during the pre-application consultation period, many applicants go beyond what is required in the FERC regulations and actively seek public input early in the relicensing process regarding

appropriate studies.⁵

It is important for conservation groups and concerned citizens to take advantage of the opportunity to submit study requests during the early stages of pre-application consultation. This provides ample notice to the applicant that additional information is needed, and provides several years to develop and execute the studies before the license application is prepared. If you wait until the license application is filed, the applicant may be less willing to conduct the study due to increased expenses and time delays. FERC will also be more reluctant to require additional studies, particularly if they would delay the license decision.⁶

It may not be possible, however, to identify all essential studies so early in the process. Consequently, it may be necessary to submit study requests during the 60-day window immediately following the application filing. Post-application study requests should also be made if the applicant has refused to conduct studies requested previously, the applicant has done an inadequate job in performing the study, or the prior studies turn up new information that warrants further study.

Content of AIRs:

Under the FERC regulations, study requests must include the following information: (1) a study description; (2) the study objectives; (3) an explanation of how the study will be useful in furthering resource goals; (4) who should conduct and participate in the study; (5) the study methodology and a statement of whether the methodology is generally accepted in the scientific community; and (6) an estimate of how long the study should take. 18 C.F.R. § 4.32(b)(7)

Conservation groups may lack the scientific or technical expertise to provide all of this information, particularly study methodologies. This should not deter you from submitting a request. If a need can be demonstrated for the information that the study would provide, the details of the study can be worked out. The most important point is that the request and its justification be submitted so that FERC and the applicant are informed of your request and the request becomes part of the administrative record.

In some proceedings, particularly where there are complex environmental issues that require a high level of technical expertise, it may be worthwhile to retain an independent expert to critique the applicant's study plan and identify additional study needs. If funding is not available, the applicant may be willing to cover the cost. Conservation groups have been able to obtain

⁵ It is a good idea to file an extra copy of your pre-application AIRs with FERC at the same time you submit them to the licensee. This will ensure both that FERC is aware of your request and that the request becomes part of the administrative record for the proceeding.

⁶ In a newly proposed rulemaking, FERC would preclude most post-filing AIRs. *see* 61 Fed. Reg. 4,031 (Dec. 3, 1996).

applicant funding for outside experts when the applicant perceived the expenditure as reducing the likelihood of a protracted, contentious licensing process.

Preparing AIRs:

The burden of preparing study requests can be reduced by collaborating with resource experts in state and federal agencies and affected Indian tribes. In some relicensing proceedings, conservation groups, resource agencies, and tribes have submitted joint study requests. Even if study requests are not submitted jointly, the agencies and tribes often are willing to help frame studies and provide advice on appropriate methodologies. Additionally, if an applicant is unwilling to accept study requests submitted by conservation groups during the pre-application consultation period, the agencies and tribes may incorporate those studies into their own requests. This is particularly valuable because agency AIRs carry more weight in FERC proceedings, especially during the consultation stage.

Studies should not be proposed in a vacuum; it is important that they be directed toward achieving resource objectives. There are many ways in which hydroelectric dams affect the river environment, and countless studies would be required to understand fully all of those impacts. Care should be taken to request studies that will yield information that will lead to real protection, restoration, and mitigation measures, not simply interesting information. Money spent on unnecessary studies is counter-productive.

Strategies:

1. Submit AIRs as early as possible in the relicensing process.
2. Clearly define the need for the information that you are seeking. Do not request information that is not linked to real protection, mitigation, and enhancement measures.
3. Collaborate with state and federal agencies and Indian tribes to minimize effort and maximize effectiveness.
4. Obtain outside expertise from consultants, resource agencies, or Coalition members, if necessary

III. Scoping

Scoping is the critical point in the relicensing process when the public must identify the resource issues, mitigation measures, and alternatives to existing project operations that FERC should analyze in its environmental review. The environmental review is required by the National Environmental Policy Act of 1969 (NEPA). Scoping proceedings often involve FERC staff, resource agencies, non-governmental organizations, and interested members of the public.

Public participation in this process is crucial. FERC relies heavily on the resource agencies, direct stakeholders, and the interested public to identify resource issues and mitigation measures that should be evaluated in an environmental impact statement (EIS) or environmental assessment (EA). It is therefore important to clearly identify the resource issues, mitigation measures, and project alternatives that you think should be covered in FERC's environmental analysis. Key issues to identify during scoping include: the need for a pre-project environmental baseline⁷; analysis of cumulative impacts of the proposed action⁸; and the use of dam decommissioning or dam removal as the "no action" alternative.⁹ Issues not raised during scoping likely will not be addressed in the NEPA document, and may not be considered in the licensing decision. Resource agencies sometimes fail to take the necessary initiative at this stage and frequently miss important issues, so you should not assume that all of the bases will be covered just because resource agencies are engaged.

Procedures:

Scoping commences shortly after a license application is filed, when FERC accepts the application for filing and environmental review. The NEPA regulations governing scoping are printed at 40 CFR §1501.7. The regulations require FERC to issue a public notice of intent to invite public participation in the scoping process and inform the public of how it can participate. These notices are published in the Federal Register, local newspapers and other local media, and on FERC's electronic (computer) bulletin board. If you know that a project is coming up for relicensing, you should monitor these media to ensure that you do not miss the Notice.¹⁰

The Notice will list the dates on which FERC plans to hold public hearings (if it determines that hearings are necessary) and deadlines for filing written comments. The public hearings are informal and provide an opportunity for any interested members of the public to voice concerns. If you have specific issues or concerns that you think warrant a public hearing, pressure FERC and the applicant to hold public scoping meetings rather than simply accepting written comments.

⁷ Pre-project baseline refers to the set of environmental conditions on a river before the project is constructed. The Coalition has released a document "Environmental Baseline in FERC Relicensing," which details the importance of a pre-project baseline.

⁸ Cumulative impacts refer to the combined impact human actions have on a river including but not limited to multiple dams, irrigation withdrawals, pollution, and channelization.

⁹ The no-action alternative refers to a licensing decision which would involve requiring no changes from the baseline and is a required step in the NEPA process. This alternative adds a great deal of significance to the definition of baseline.

¹⁰ To learn how to use FERC's computer bulletin board, contact the FERC Public Reference Room (202) 208-1371.

Even if you testify at a hearing, supply your recommendations to FERC and relevant resource agencies in writing as well. FERC tends to pay closer attention to written comments, as they are easier to refer to as decisions are made.

The four areas of the scoping process in which you should focus your comments are:

- 1) actions to be considered -- identifying needed information and studies for environmental analysis;
- 2) alternatives to be considered -- recognizing alternatives *to* a project including no-action and those alternatives *within* a project such as design options, 40 CFR §1502.14(e) & (d); and
- 3) potential impacts to be evaluated -- this helps to form the basis for the comparisons made within and between alternatives; and
- 4) mitigation measures to be evaluated -- means of reducing or eliminating environmental harm under the various alternatives.

The scoping process also allows FERC, the applicant, and all interested parties to work out an agenda for completion of the work, limit the size and extent of documents, and schedule future meeting times, dates, and places. Further guidance on how to participate effectively in the scoping process can be obtained from the Council on Environmental Quality's (CEQ) document titled "A Memorandum: Scoping Guidance," April 30, 1981, and also from CEQ's document titled "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," which is printed at 46 Federal Register 18026-18038 (Monday, March 23, 1981).

Strategies:

1. There are no established procedures for the scoping process so strategies may vary. Be organized and prepared in any case.
2. Make your comments constructive and positive. Adversarial comments will only increase the likelihood that your issues will not be seriously considered. Do not alienate those whose support you may need later. Phrase your recommendations in a way that allows people to improve upon them.
3. Always submit comments in writing, even if you have provided oral comments at a public hearing.
4. Be sure that your comments are targeted to specific issues and recommendations. Do not make broad recommendations that may be misinterpreted or are not susceptible to analysis.

5. Identify effects as well as causes. For example, most people recognize that dams or peaking operations cause harm but the specific negative effects should be identified.
6. Work closely with resource agencies to coordinate efforts. State and federal resource agencies wield significant clout with FERC so you should take advantage of this authority by encouraging them to support and inform your recommendations.
7. Focus on baseline, no-action alternative, cumulative impacts, and other issues that may not be addressed by other interests such as resource agencies. (See above for an explanation of these issues)
8. Ensure that the geographic scope of the environmental analysis extends beyond the immediate project vicinity to all affected areas. Dams can have significant impacts that occur miles downstream or upstream of the project, and these should be addressed during the NEPA process.
9. Ensure that past and ongoing project impacts are evaluated. FERC will often attempt to evaluate only the existing river conditions, and will not consider how the dam has altered those conditions over time.

IV. Federal Power Act Section 4(e)

Section 4(e) of the Federal Power Act (FPA) applies to a license for a project within a federal reservation, such as a National Forest or tribal lands. 16 U.S.C. §797(e) It contains substantive requirements for environmental protection which do not apply to project lands other than such reservations, and it establishes a second administrative forum for challenge to inadequate license conditions.

Applicability:

Section 4(e) applies to an original or new license (*ie.* relicense), although litigation pending as of January 1997 challenges its applicability to a new license see Southern California Edison v. FERC, (DC Cir.1997).

It applies to any project proposed or located within a federal reservation. This includes: National Forests managed by the U.S. Forest Service (USFS), recognized tribal lands¹¹, and other reservations administered by the U.S. Bureau of Land Management (BLM). For the statutory definition of a reservation, see 16 U.S.C. § 796(2) .

Substantive Requirements:

¹¹ The U.S. Department of the Interior has Section 4(e) jurisdiction over tribal lands.

Section 4(e) establishes two substantive requirements for licensing a project within a federal reservation.

First, FERC must find that the license will not interfere with or be inconsistent with the purpose for which the reservation was created or acquired. Rainsong Company v. FERC, 78 F. 3d 1435 (1996)

Second, a license must be issued on terms which the federal resource agency finds are "necessary for the adequate protection and utilization of that reservation." This is a conditioning, not a veto, authority -- the resource agency may not prevent FERC from issuing the license. However, the resource agency's conditions *must* be included in the license -- FERC may not alter or reject them.

Procedures:

FERC requires that Section 4(e) conditions be submitted within 60 days of its notice that the license application is ready for environmental analysis (NREA)¹²; or that the federal resource agency submit by that date preliminary conditions and a schedule for final action. 18 C.F.R. § 4.34(b)(1). In practice, agencies and/or tribes submit draft Section 4(e) conditions which are included in the draft NEPA document. The licensee and other parties file comments regarding draft Section 4(e) conditions. Sometimes disputes regarding draft Section 4(e) conditions are discussed at Section 10(j) dispute resolution meetings; more often, disputes over Section 4(e) conditions are continued in rounds of written correspondence in court. See Pacific Gas and Electric v. Thomas, 442 P 2d 641 (1968). Final Section 4(e) conditions tend to be submitted well after the NREA comment deadline.

FERC must incorporate, without modification, timely submitted Section 4(e) conditions. See Escondido Mutual Water Company et al. v. La Jolla Band of Mission Indians et al., 466 U.S. 765 (1984). The only exception is that FERC may reject a condition which is demonstrably unrelated to the reservation at issue. It is the responsibility of the federal land agency to develop the record for the Section 4(e) conditions to demonstrate that there is substantial evidence to support the condition.

The federal resource agency or tribe has its own procedures for public notice and comment on draft preliminary Section 4(e) conditions, and for appeal of final conditions. For the USFS procedures, see 36 C.F.R. Part 215; for BLM procedures, see 43 C.F.R. Part 4. Any person who timely commented on the preliminary Section 4(e) conditions may file an administrative appeal before the federal resource agency against the final conditions. This right of administrative appeal is in addition to the petition for rehearing filed before FERC against the license as a whole, including the incorporated Section 4(e) conditions (see *X. Request for Rehearing* below).

Any judicial review of the final Section 4(e) conditions must occur under the Federal Power Act, 16 U.S.C. § 8251, after FERC's final action on a petition for rehearing. That is, an interested person

¹² The NREA is provided by FERC once the application and all responses to AIRs are submitted to FERC and FERC concludes that the application is complete.

has two opportunities for administrative appeal of Section 4(e) conditions -- one, before the federal resource agency; the other, before FERC -- but one judicial forum, the same which is available to challenge any license. The rationale is that a particular Section 4(e) condition may not be included in the license for some reason or the license itself may not be issued, so the court's time should not be wasted before "final agency action," *ie.* FERC's issuance of a license.

In any judicial review, the Section 4(e) conditions will be evaluated as to whether they are "reasonably related" to the protection of the reservation and whether they are supported by substantial evidence in the administrative record. Escondido, 466 U.S. at 777. See also Bangor Hydro-Electric Company v. FERC et al., 78 F.3d 659 (1996).

Strategy:

1. Work closely with the federal land agency in the development of Section 4(e) conditions. FERC's *ex parte* rule does not apply to such discussions.
2. Make a written request to the federal land agency to put you on its own service or mailing list for the Section 4(e) conditions. Include a request that you be allowed to participate in any negotiations which that agency undertakes with the license applicant. Send an extra copy of your request to FERC for the administrative record.
3. Review the management plan for the federal reservation to identify specific requirements applicable to the project lands and waters. For example, each National Forest has a "Land and Resource Management Plan," known informally as a Forest Plan. Review the plan carefully to identify each of the requirements potentially applicable to the lands and waters included within the project boundaries or otherwise affected by the project.
4. File written comments on the preliminary Section 4(e) conditions both with the agency and with FERC. The federal land agency may establish a deadline for such comment independent of FERC's proceeding, or the preliminary Section 4(e) conditions may be released concurrently with FERC's draft NEPA document. Meet any deadline established by the federal land agency, FERC, or both for comments on the preliminary Section 4(e) conditions.¹³
5. In your comments, emphasize that the project must be conditioned on compliance with each applicable management requirement in the federal land agency's plan for the reservation. Encourage the agency or tribe to submit its own determination of compliance and consistency with the reservation's purpose both for the record and to guide FERC.

The first of the substantive requirements discussed above -- that FERC must find the project is not inconsistent with the reservation's purposes -- has had limited practical affect. Most federal reservations are created for multiple uses (timber production, water supply, recreation, and so

¹³ Submit all correspondence to both the federal land agency and FERC to ensure that it is in both agency's administrative record.

on), and FERC can readily find that a project is consistent with a development use. However, in at least one case, FERC has found a project to be inconsistent with such general purposes as interpreted by the federal land agency's management plan. That is, it evaluated the project for compliance with the specific management requirements adopted by the federal land agency and found it to be inconsistent. *see* Joseph M. Keating, 65 FERC ¶ 61,103, *reh'g denied*, 70 FERC ¶ 61,240 (1995); *Rainsong Company v. FERC* 78 F. 3d 1435 (1996). You should ask FERC to take this approach.

The second requirement -- that the federal land agency set conditions necessary for protection of the reservation -- has great potential value. The federal land agency should evaluate the project for consistency with each applicable requirement in the management plan. For example, in the relicensing proceeding for Southern California Edison's Kern #3 project, HRC members argued that the Sequoia National Forest Plan prohibited diversion in excess of 50 percent of project inflow, and that the project could not be relicensed as proposed to allow diversion up to 90 percent of such inflow.

6. File an administrative appeal before the federal land agency if you are dissatisfied with the final Section 4(e) conditions. The appeals officer for that agency has authority to modify such conditions on such appeal.

Grounds for challenging Section 4(e) conditions vary according to individual circumstances of a project. Under some cases, the USFS and BLM misuse Section 4(e) conditioning authority by making recommendations outside of the scope of their authority or by not requiring adequate license conditions. They tend not to use independent judgment in evaluating what conditions will adequately protect the federal reservation. In particular, they often ignore or understate the requirements of the management plan for the reservation, and instead rely on the same public interest standard which FERC applies. It is the HRC's policy that Section 4(e) conditions must comply with all requirements in the management plan applicable to the reservation.

7. FERC does not have authority to modify Section 4(e) conditions. However, if you file a petition for rehearing before FERC, you must state your grounds for objection to the Section 4(e) conditions, so as to preserve them for judicial review.



V. Federal Power Act Section 18

Section 18 of the Federal Power Act (FPA) states that FERC “shall require the construction maintenance, and operation by a licensee at its own expense of such...fishways as may be prescribed by the Secretary of the Interior or the Secretary of Commerce, as appropriate.” 16 U.S.C. § 811.

Applicability:

This section applies to any project that may impact the passage of any fish species present in the project area. It also applies in the circumstance where a project may affect passage of a species planned for introduction in the area. see Public Utilities District no. 1 of Okanogan County, Washington, 76 FERC ¶ 61,271 (1996).

The section applies to both upstream and downstream passage. P.L. 102-486, §1701(b) (1992). It is not limited to anadromous¹⁴ or other migratory species, though in practice no requirement has ever been issued for non-anadromous fish. (cite OTA Fish Passage Report)

As a general matter, the Fish and Wildlife Service (USFWS), within the Department of Interior, is involved in every FERC licensing proceeding while the Department of Commerce, through the National Marine Fisheries service (NMFS) is involved only in those involving anadromous fish.

Substantive Requirements:

The federal fish agency may prescribe a fishways which, in its judgment, is “necessary to maintain all life stages of such fish” impacted by the project. P.L. 102-486, §1701(b). The prescription is limited to two elements: 1) “physical structures, facilities, or devices” necessary for such protection; and 2) “project operations and measures related to such structures, facilities, or devices which are necessary to ensure [their] effectiveness....” *Id.*

FERC may reserve its authority to amend the license, subsequent to issuance, to include a fishway prescription, in the circumstance where the federal fish agency has inadequate information or some other reasonable ground to request deferral of such prescription. See Wisconsin Public Service Corporation, 62 FERC ¶ 61,095 (1993); aff’d Wisconsin Public Service Corporation v. FERC, 32 F. 3d 1165 (1994).

FERC has interpreted Section 18 to exclude any structure or operation intended solely to prevent or limit entrainment.¹⁵ Niagara Mohawk Power Corporation, 74 FERC ¶ 62,138 (1996). FERC has also ruled that it has final approval authority over the fishway construction plan and schedule;

¹⁴ Anadromous fish are born in a river, migrate to the ocean for much of their life cycle and then migrate back to the river to spawn. Salmon are anadromous.

¹⁵ Entrainment refers to fish which are harmed or killed during passage around, over, or through a dam structure. The term most commonly refers to damage caused by turbines.

and that the federal fish agency may not require its own approval as a condition of a Section 18 prescription. See Public Utilities District no. 1 of Okanogan County, Washington, 76 FERC ¶ 61,271 (1996).

Procedures:

FERC requires that any Section 18 prescription be submitted within 60 days of its notice that the license application is ready for environmental analysis (NREA); or that the federal fish agency submit preliminary conditions at that time and a schedule for final action. 18 C.F.R. §4.34(b)(1). In practice, the Section 18 prescription tends to be submitted well after the NREA comment deadline, often as part of comments on the NEPA document.

FERC must incorporate, without modification, a Section 18 prescription which is timely submitted and within the statutory scope. It is the responsibility of the federal fish agency to develop an administrative record to support the prescription's conditions and file that record with FERC. See Bangor Hydroelectric Company v. FERC et al., 78 F.3d 659 (1996).¹⁶

USFWS and NMFS do not have formal procedures for comment on their development of a Section 18 prescription, or for appeal of such prescription. However, in some cases they are now issuing draft prescriptions for comment. To formally challenge a prescription, you must file before FERC a timely petition for rehearing of the license which incorporates the prescription.

Because a fishway prescription is mandatory, FERC may not reject or alter the prescription, either in the license or on rehearing. Once FERC has issued its order on rehearing, you can appeal the license (and prescription) to the Federal Court of Appeals. The Court of Appeals has jurisdiction to review the legality of the prescription based on the administrative record developed by USFWS or NMFS and submitted to FERC. See Bangor Hydroelectric Company v. FERC et al., 78 F.3d 659 (1996).

Strategies:

1. Work closely with the federal fish agency in the development of Section 18 prescription. FERC's *ex parte* rule does not apply to such discussions.
2. Make a written request to the federal fish agency to put you on its own service or mailing list for the Section 18 prescription. Include a request that you be allowed to participate in any negotiations which that agency undertakes with the license applicant.¹⁷
3. Review any fisheries management plan adopted by USFWS, NMFS, or a state agency for the project area. Identify any fish species subject to the plan, passage needs, and any management

¹⁶ In the Bangor case, the Court deleted USFWS's fish passage requirements because there was not substantial evidence in the FERC record to support such requirements.

¹⁷ Send an extra copy of all correspondence to FERC for the license record.

requirement which may apply to the Section 18 prescription.

4. File written comments on the preliminary Section 18 prescription both with the agency and FERC. Although the federal fish agency may establish a deadline for such comment independent of FERC's proceeding, the preliminary prescription is usually released concurrently with FERC's draft NEPA document. Meet any deadline established by the federal fish agency, FERC, or both for comments on the preliminary prescription.¹⁸

5. Insist that the Section 18 prescription be based on a written administrative record, developed by the prescribing agency, setting forth the facts and analysis on which it relied, and demonstrating compliance with each applicable management requirement. The law requires this (18 C.F.R. § 4.34(b)(1)), although agency practice has been inconsistent.

¹⁸ Again, send copies of all correspondence both to the federal fish agency and FERC.

VI. Federal Power Act Section 10(j)

Section 10(j) of the Federal Power Act (FPA) requires that FERC solicit recommendations from the U.S. Department of Commerce's National Marine Fisheries Service, the U.S. Department of Interior's U.S. Fish and Wildlife Service, and state fish and wildlife agencies on licensing conditions for the protection, mitigation of damages to, and enhancement of fish and wildlife resources affected by the development, operation, and management of hydropower projects. 16 U.S.C. section 803(j). FERC must give deference to these recommended conditions, but can still alter or reject them by following prescribed procedures.

Applicability:

Fish and Wildlife agencies have authority to issue recommendations for each hydropower license issued by FERC, *i.e.*, original and new ("relicense") licenses.

Purpose:

This section was added to the FPA in order to facilitate the "balancing" between power and non-power resources that FERC is required to do in issuing a hydropower license. Due to a general sense that at FERC non-power resources were not easily given equal consideration, the 1986 Electric Consumers Protection Act (ECPA), which amended the FPA, requires FERC to not simply allow recommendations to be made, but actively seek recommendations from state and federal resource agencies as to "adequate and equitable" fish and wildlife measures.

However, as opposed to FPA Section 4(e) or Section 18 "prescriptions" or Section 10(j) recommendations do not have to be included in FERC's licenses. Section 10(j) allows FERC to reject recommendations that "may be inconsistent with the purposes and requirements of [the FPA] or other applicable law," when the agency has failed to support its recommendations with substantial evidence, or when FERC selects other conditions that FERC has determined will adequately protect fish and wildlife.

Procedures:

In a typical licensing proceeding, agencies file their Section 10(j) recommendations with their comments in response to FERC's notice that the application is ready for environmental analysis (*i.e.*, before FERC has issued a NEPA document). FERC will list all submitted Section 10(j) recommendations in its draft NEPA document, along with FERC's decision as to whether or not to include each Section 10(j) recommendation in the license. FERC bases its decision to exclude a Section 10(j) condition either on its determination that the recommendation is "inconsistent with the FPA or other applicable laws" or on the basis that the agency failed to provide sufficient evidence to support its recommendation.

If FERC disagrees with a Section 10(j) recommendation, then (usually concurrent with the issuance of the draft NEPA document) FERC issues a letter inviting resolution of such disputes. Some

disputes are resolved simply by telephone or letter, but FERC addresses the dispute at a public meeting, usually within two weeks of the issuance of the draft NEPA document. At such meetings, the standard agenda is as follows: (1) FERC presents its position regarding each rejected Section 10(j) recommendation; (2) the licensee presents its position regarding Section 10(j) recommendations, both accepted and rejected by FERC; and (3) agencies and the public may respond.¹⁹ In such public fora, and so soon after the issuance of the draft NEPA document, significant resolution rarely occurs. Additional correspondence may be sent between the agency and FERC if there is an interest in resolving the dispute.

If any conditions remain in dispute, FERC will note the dispute in its final NEPA document. The agency and others may comment to FERC on the rejection of any Section 10(j) conditions and, after the issuance of a license which fails to include recommended conditions, can seek rehearing of FERC's decision to exclude such Section 10(j) conditions. It is possible to seek judicial review, after FERC's final action on rehearing requests, of FERC's decision to exclude recommended Section 10(j) conditions. However, courts give great deference to FERC's interpretation of the FPA -- the action would have to proven to be "arbitrary and capricious," a very difficult standard to overcome.

There have been several recent developments regarding FERC's treatment of Section 10(j) recommendations. First, in its Mead decision, FERC has elected to change its economic analysis, such that recommended conditions that are not too costly may be accepted whether or not such conditions cumulatively result in an "uneconomic" project.²⁰ Second, Section 10(j) dispute meetings are becoming less rigid and are providing a greater opportunity for FERC and resource agencies to actually confer and negotiate.

Another development that is affecting the Section 10(j) process is the introduction of pre-filing environmental analysis and collaborative pre-filing consultations. NEPA documents prepared before the applicant submits its license application can inform the Section 10(j) process, such that Section 10(j) recommendations can be better supported and more effective. Collaborative pre-filing processes, where all interested parties are involved in developing studies and recommended mitigation measures allows the opportunity for collegial discussions of alternative conditions and environmental measures which allow for least-cost recommendations.

Strategy:

1. Work closely with federal and state fish and wildlife agencies in the development of their Section 10(j) recommendations. Their recommendations are afforded much more deference than recommendations from environmental groups or citizens. FERC's ex parte rule does not apply.
2. Insist that the agencies support their recommendations with written evidence specific to the case. FERC may reject out of hand any recommendation not supported by substantial evidence.

¹⁹ By regulation, only the agencies may participate in these "negotiations." In practice, FERC has allowed the public to comment at those meetings.

²⁰ Mead Paper Co., FERC #2506, Escanaba R., MI, July 13, 1995

3. Make written requests to fish and wildlife agencies to put you on their service lists for NEPA comments and Section 10(j) recommendations. Include a request that you be allowed to participate in any negotiations which those agencies undertake with the license applicant.²¹
4. With your written comments on the draft NEPA document, include direct comments regarding the rejection of Section 10(j) recommendations.
5. Attend the Section 10(j) dispute resolution meeting. Prior to the meeting, arrange for audio or videotaping and/or for a professional stenographer to record the meeting. Prepare your own oral comments, and submit written comments after the meeting. Ask FERC to explain any rejections that are *pro forma* (i.e., when FERC's rejection is only explained by an unsupported statement that the condition is "inconsistent" with the FPA.)
6. In pre-filing collaborative processes, encourage the participation of agencies with Section 10(j) authority and encourage the licensee to facilitate such participation (e.g., consult with the agencies regarding scheduling of meetings).

²¹ Send an extra copy of all correspondence to FERC for the license record.

VII. Clean Water Act Section 401

Under Clean Water Act (CWA) Section 401, FERC may license a hydropower project only if the State has certified the project will comply with applicable water quality standards. 33 U.S.C. §1341(a). FERC must include in the license any conditions the state requires in order to certify the project. If the state finds that a project would violate water quality standards, the state must deny certification, and FERC must also deny the license.

Applicability:

CWA Section 401 applies to any original or new license for a hydropower project which would discharge into waters subject to regulation under the Clean Water Act and by FERC. In practice, the limitation on applicability has no effect on FERC licensing or relicensing. The Clean Water Act is administered to apply to all of the nation's waters, including non-navigable bodies and even intermittent creeks. So any project under FERC's regulation must obtain a Section 401 certification.

Substantive Requirements:

CWA Section 401 contains two substantive requirements for certification of a project. First, any project discharge must comply with water quality standards established by the state for the receiving waters. A hydropower project creates two types of discharge: water, of course, and also sediment and other debris incident to construction. Both discharges must so comply.

Second, under the U.S. Supreme Court's recent interpretation of CWA Section 401, a project as a whole must comply with applicable water quality standards. See Jefferson County PUD no. 1 v. City of Tacoma, 511 U.S. 700 (1994). This allows the state to regulate project operations and facilities, not just discharges, provided the state finds that any conditions are "necessary to assure" compliance with applicable water quality standards. 33 U.S.C. § 1341(d). This includes water quantity as well as water quality. For example, the state can condition the amount of flow being released from the dam as well as the amount of dissolved oxygen in the water.

Procedures:

Under FERC's rules, Exhibit E of any license application must contain a water quality certification, evidence of a pending request for certification, or evidence that the state has waived certification. 18 C.F.R. §4.38(f)(7)(i).

The state must take final action (issuing, waiving, or denying certification) within one year of the date the license applicant submits a written request to the state. If the state fails to take action during that period, certification is deemed waived by operation of law. 18 C.F.R. §4.38(f)(7)(ii).

Since FERC's adoption of these rules in 1987, a state which is not prepared to issue a timely certification for a given project will deny it, subject to the applicant's later renewal of the request.

This effectively eliminates the one year time limitation. As a result, it is common for FERC to accept a license application for filing before the state certifies or waives certification, provided the applicant demonstrates that a request is or will be pending before the state in the course of the licensing proceeding.

A state's rules typically allow any person who participated in a certification proceeding to file an administrative or judicial appeal of the State's final action. Judicial review will be in a state court.

Each state has its own certification procedures. As a general matter, those procedures are published in the state's code of regulations and involve public notice, comment, and hearing on disputed issues of law and fact.

The state's water quality standards, which govern the state's decision on the certification, are not part of a general plan that applies to all activities in a given river basin. There are three types of standards: (1) designations of beneficial uses, such as water supply, fish propagation, and recreation; (2) numerical and narrative criteria, which limit the impacts on dissolved oxygen, turbidity, and like aspects of water quality; and (3) an anti-degradation policy, which prohibits any degradation that may interfere with beneficial uses. Certification conditions can be issued to ensure compliance with all three types of conditions.

If the state denies certification, FERC must also deny a license. If the state includes conditions in a certification, the Clean Water Act requires FERC to incorporate them. In practice, FERC claims authority to exclude or modify timely submitted conditions which it determines are not substantively related to water quality, or which establish procedures for the state's continuing supervision of the project after licensing. See Tunbridge Mill Corporation, 68 FERC ¶61,078 (July 15, 1994). This claim of authority is being litigated now in the U.S. Court of Appeals.

An applicant must make a new request for certification if it files with FERC an application for amendment to an existing license or pending license application which might have an adverse water quality impact. 18 C.F.R. §4.38(f)(7)(iii).

Strategy:

1. Work closely with the state agency in its review of a certification request. FERC's *ex parte* rule does not apply to such discussions.
2. Insist that the state provide substantial written evidence supporting its certification conditions.
3. Make a written request to the State agency to put you on its own service or mailing list for the certification proceeding. Include a request that you be allowed to participate in any negotiations which that agency undertakes with the applicant. Send an extra copy of all correspondence to FERC for the license record.

4. Review the water quality plan applicable to the waters at issue to identify specific standards and other requirements applicable to the project.
5. File written comments on the certification request. The state agency will typically establish a deadline for such comments independent of FERC's proceeding.
6. In your comments emphasize that the project as a whole, not just its discharges, must comply with all applicable standards. A state agency tends to have considerable discretion in evaluating what conditions are necessary for such compliance. Notwithstanding Jefferson County PUD, water quality officials still tend to think of their duties as limited to pollution control and dilution. In a proceeding with only an applicant and no intervenors, they may not focus on broader ecological quality, such as a designated beneficial use of fish propagation or recreation. Further, the water quality plan may not provide specific guidance on beneficial uses, such as a discussion of desired fish species, population, or distribution. Your written comments, including evidence on disputed factual issues, will be critical to assure that the certification takes full advantage of the state's authority under CWA Section 401.
7. File an administrative or judicial appeal of the state's final action, if you are dissatisfied and if the state's rules allow for it.
8. Grounds for challenging certification vary according to individual circumstances of a project. However, as a general matter, a state agency will not develop an adequate written record demonstrating the basis for its conditions. Further, it may defer improperly to the applicant regarding water quality impacts -- that is, take final action without independent evaluation of such impacts. You may also find that the state agency tends to ignore or understate the conditions necessary to prevent degradation of beneficial uses.
9. A certification is a floor, not the ceiling, on conditions which FERC may include in a license to protect water quality. Bear in mind, however, that the state is the primary forum for addressing water quality impacts, and FERC will be disinclined to impose more stringent conditions than required by the certification.
10. Seek reopener of the certification or waiver if the applicant amends the application in a way which may have an adverse water quality impact. Such a reopener is not limited to the new impact. You must request such reopener from FERC, by motion under 18 C.F.R. §4.38(f)(7)(iii).

VIII. Comments, Recommendations, Terms and Conditions

Once a license application has been declared “ready for environmental analysis,” FERC will send out a Notice of Application Ready for Environmental Analysis (NREA). Often, this notice occurs at the same time FERC sends out a Notice of Application Accepted for Filing with the Commission (see *I. Intervention* above). In its NREA, the Commission requests that all parties file within 60 days from the issuance date of the notice any comments, recommendations, terms and conditions, and prescriptions concerning the application. All reply comments must be filed with the Commission within 105 days from the date of the notice.

In effect these comments outline those conditions the parties wish to see in a final license. FERC uses these comments in reviewing environmental impacts of recommended conditions and in developing its own license conditions.

Procedures:

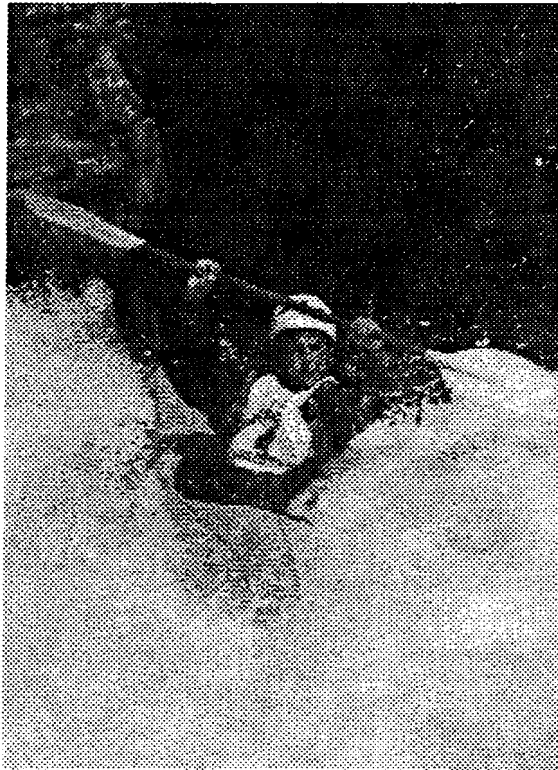
All filings must: (1) bear in all capital letters the title “COMMENTS”, “REPLY COMMENTS”, “RECOMMENDATIONS”, “TERMS AND CONDITIONS”, or “PRESCRIPTIONS”; (2) set forth in the heading the name of the applicant and the project number of the application to which the filing responds; (3) furnish the name, address and telephone number of the person submitting the filing; and (4) otherwise comply with the requirements of 18 CFR 385.2001 through 385.2005. All comments, recommendations, terms and conditions or prescriptions must set forth their evidentiary basis and otherwise comply with the requirements of 18 CFR 4.34(b).

The documents must be filed by providing the original and number of copies required by the Commission's regulations (currently 8 copies) to: Secretary, Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426. An additional copy must be sent to: Director, Division of Project Review, Office of Hydropower Licensing, Federal Energy Regulatory Commission at the above address. Each filing must be accompanied by proof of service on all persons listed on the service list prepared by the Commission in the proceeding, in accordance with 18 CFR 4.34(b), 385.2010.

Strategy:

1. Work closely with the state and federal fish and wildlife agencies in the development of their comments, recommendations, terms and conditions. FERC gives more deference to agency comments than those by environmental groups or citizens.
2. As with other filings by the agency, encourage them to support their recommendations with good evidence specific to your case.
3. Try to get a copy of the agencies' filings before you file your comments. These documents from the agency can be very lengthy because the terms and conditions are very specific and must include their evidentiary basis.

4. If you agree with the submissions of the state and federal fish and wildlife agencies, you can indicate concurrence with their filing and restrict your submission to specific areas of concern. This will allow you to make comments without a detailed evidentiary basis if you do not have such evidence separate from that of the agency.
5. Review a sample recommended terms and conditions from other NGO filings to get a feel for the structure and content of the filing.
6. Be sure that these recommended conditions address all of the impacts of concern. It is hard to obtain license conditions that no one has recommended in their filing. Recommended terms and conditions can address a variety of issues, including: (1) recreation mitigation such as access, facilities, recreational instream flows, and aesthetics; (2) conservation mitigation such as instream flows, bypassed reach restoration, reservoir operation, fish passage (up and downstream), fish protection from entrainment, watershed land management, erosion control, water quality protection, wildlife habitat conservation, and cultural resource conservation; and (3) additional mitigation such as trust funds, dam decommissioning funds, and public committees to oversee license implementation.



IX. Comments on Draft Environmental Impact Statements and Draft Environmental Assessments

Applicability:

FERC staff prepares either a Draft Environmental Impact Statement (DEIS) or a Draft Environmental Assessment (DEA)²² on each relicensing application. All parties to a relicensing proceeding, as well as the public at large, may file comments on these draft documents.

It is critical that intervening conservation and recreation organizations file comments on the DEIS or DEA. These comments are one of the most important documents you will file in a relicensing proceeding, so special attention, time and resources should be devoted to the comments. The comments are a key vehicle for putting your positions in the record in a coherent way and supporting these positions with evidence and expert reports or testimony.

When the FERC staff issues a DEIS or DEA, it will send a copy to all parties in the case, together with a Notice specifying when and how to file comments. The deadline date for filing will generally be 30 to 60 days from the date of the Notice. FERC will also publish a Notice in the Federal Register some time after it mails the Notice to the parties.

Comments must be sent to reach the FERC Secretary's office by the deadline. FERC has sometimes extended the deadline up to sixty days when asked by parties who are important to the proceeding. Therefor, if you need additional time, you should file a request specifying why additional time is needed, and requesting a specific date for the extension. It is crucial that you enlist state and federal resource agencies also to request additional time, as FERC will give their request more deference than a request solely from a conservation or recreation organization.

Unless the Notice specifies otherwise, parties to a relicensing proceeding should file an original and eight copies of the comments with the Secretary's office, and serve a copy on all persons on the service list. If the service list is so long that this presents a burden, contact HRC for suggestions on how these burdens may be relieved. A non-party commenter (*i.e.*, someone who has not intervened) can file a single copy of his or her comments with the Secretary's office.

Procedures:

The scope and focus of comments will depend very much on the specifics of each relicensing proceeding. Nevertheless, there are some general organizational tips and caveats that may be helpful in most situations. However, there is no single recipe for effective DEIS comments. You should therefor feel free to depart from these suggestions if you feel to do so would be more effective for your situation.

²² Unless otherwise indicated, the description of the comment process applies equally to DEISs and DEAs.

If your comments are lengthy, say ten pages or more, you should prepare a cover page and a Table of Contents, with the captions of the sections of your comments

The comments should contain an introduction that sets forth the nature of your organization's interest and expertise in the relicensing proceeding, and other observations about your participation in the process that may set the tone for the comments. The comments should also attempt to attract the reader's attention by explaining why the issues addressed in the comments are important. Finally, the introduction should contain a summary and a road map of the comments so that the reader is properly focussed and receptive to what follows.

Generally, it is best to organize the next section of the comments by separate sub-sections devoted to each important issue discussed, such as the need for the project, alternatives to the project, economics of the project, flows, endangered species, *etc.*, starting with the most important and key issues. This is an important section, and if you have available legal help, you should consider introducing each such section with a short statement of the principles of NEPA law that support your comments.

To the extent that expert assistance is available, each expert should prepare a report supporting the portion of the comments relating to his/her expertise and setting forth his/her analysis of the issue from a technical or scientific perspective. These reports should be attached to your comments, and in practice constitute your evidentiary presentation for the proceeding.

The comments may also cite other evidence, including scientific, technical and economic books, articles and treatises. If some of these documents are critical to your position, you should consider attaching the entire document or excerpts so that it becomes part of the FERC administrative record.

It is usually not effective to start at the front of the DEIS and list your comments page-by-page. Rather, in the issue by issue section described above, refer in your comments to the pages in the DEIS where the issue is addressed. Where appropriate, at the end of the sub-section, provide specific recommendations of how the DEIS should be changed. After you have discussed the important issues in the issue by issue section as suggested in the preceding paragraphs, it is appropriate to deal with less important points on the page-by-page method.

Strategies:

1. Consider a meeting of all parties, including resource agencies, that are sympathetic to your views for the purpose of coordinating your comments. Remember that resource agency comments will be given more deference than NGO comments. With or without a meeting, you should coordinate with your allies. It is helpful to prepare a draft of your comments a few weeks in advance of the deadline to circulate to your allies so that they can support your positions.
2. Resource agencies are frequently the repository of expert opinion on the issues. In the

days when FERC held live evidentiary hearings on license applications, these experts would often appear for live testimony. Now that FERC no longer holds such hearings, the agencies are apt to content themselves with general comments on the DEIS. They should be encouraged to file expert reports or testimony in support of DEIS comments. For example, if fish passage is an important issue, resource agency biologists could furnish biological reports on the need for fish passage and Fish and Wildlife Service engineers could furnish reports on the type and efficacy of the requested fish passage facilities.

3. Enlist members of your organization and the grass roots to file letters supporting your comments.
4. Do not waste time correcting typos, grammar and punctuation in the DEA/DEIS unless these are important to your issues. Save your breath for the important issues.
5. Do not rest solely on the comments, as these are read and answered only by FERC staff. It is the five Commissioners who often decide the case based on the recommendations of staff. After the final EIS or EA is issued, consider writing directly to the Commissioners themselves about two weeks before they are expected to decide on the license application. This letter should set forth your best arguments for your position in the proceeding to counter that of staff. Staff will almost always recommend what is in the final EIS.

X. Requesting Rehearing of FERC Orders/Decisions

Once FERC issues an order licensing a project, parties to the licensing proceeding (*i.e.*, those that were granted intervenor status) may appeal the decision. The decision must first be appealed to the five FERC Commissioners through a request for rehearing. Once the Commission has issued an order on rehearing, the decision can be appealed to the U.S. Court of Appeals.

Applicability:

A request for rehearing may be filed for a final decision or order in a FERC proceeding. Only those parties to the proceeding (the applicant and intervenors) may file a rehearing request.

Procedures:

Both the Federal Power Act, 16 U.S.C. §8251(a), and FERC's rules, 18 C.F.R. §385.714, provide that a party to a FERC proceeding aggrieved by a final order may file a Request for Rehearing with the Secretary's office "not later than 30 days after issuance of any final decision or order in a proceeding." More importantly, the Federal Power Act, 16 U.S.C. § 8251(b), also provides that "no objection to the order of the Commission shall be considered by the court unless such objection shall have been urged before the Commission in the application for rehearing unless there is a reasonable ground for failure to do so." Thus, while there is no requirement that a Request for Rehearing must be filed, failure to file within the 30 day period will preclude both further consideration by the Commission and subsequent review by a United States Court of Appeals.

These requirements are absolute and must be followed meticulously. The Request for Rehearing must be filed within 30 days from the date the final order is issued, not from the date it is mailed, served, received, or published in the Federal Register, and no time extensions are permitted. All objections that a party plans to raise on appeal in court must first be presented to the Commission in the Request for Rehearing. These strict requirements have foiled many appeals planned by unsuspecting parties.

Another foil to court review is failure to seek rehearing from FERC orders on rehearing that grant rehearing only in part or include new justification for FERC's decision. see Kelley v. FERC, 96 F.3d 1482 (DC Cir. 1996). You must continue to keep filing requests for rehearing at FERC until the Commission has "reheard" every FERC decision.

In addition to final license orders, any order that is issued by the Commission during the course of the proceedings before FERC must be reviewed to determine whether it could be considered a final order requiring a Request for Rehearing within 30 days, rather than waiting to address the issue in a final request for rehearing on the license order.

FERC's rules prescribe the contents of a Request for Rehearing at 18 C.F.R. §385.714(c):

- (c) Content of Request. Any request for rehearing must:
 - (1) State concisely the alleged error in the final decision or final order;
 - (2) Conform to the requirements in Rule 203(a) which are applicable to pleadings; and
 - (3) Set forth the matters relied upon by the party requesting rehearing, if rehearing is sought based on matters not available for consideration by the Commission at the time of the final decision or final order.

Although it is the better practice to file all evidence, information, and arguments before the final order or decision, sometimes this is not possible. In that case, a party should not hesitate to file additional or new evidence, information, and arguments with or in the Request for Rehearing. Such new information with the Request for Rehearing is specifically contemplated by 18 C.F.R. §385.714(c)(3).

FERC's rules also provide that the Commission may affirmatively request parties to present arguments on the issues raised in the Request for Rehearing, either by brief or oral argument, although this rarely occurs. However, in the absence of a request for additional arguments by the Commission, answers to a Request for Rehearing are not allowed. 18 C.F.R. §385.714(d). FERC interprets this prohibition strictly. In addition, a Request for Rehearing does not act as a stay of the FERC order. 18 C.F.R. §385.714(e). Therefore, to prevent a licensee from taking action under an order -- for example, starting to build a project licensed by the order -- the Request for Rehearing should include a motion that the Commission stay its final order pending its action on the Request for Rehearing.

Once a Request for Rehearing has been filed, FERC has 30 days to act on the request. The FPA provides that if FERC takes no action within the 30 day period, the Request for Rehearing will be deemed denied. 18 C.F.R. § 385.714(f). However, as a practical matter, FERC rarely rules on the merits of a Request for Rehearing within 30 days. Instead, it normally issues a so-called "tolling order" within the 30 day period, which in effect states that rehearing is granted to give the Commission time for additional consideration of the Request. This is simply a way for FERC to give itself more time than the statutory 30 days to rule on the Request. The fact that FERC grants rehearing for additional consideration is no indication that FERC will ultimately grant the relief requested on rehearing and is no indication of how it will ultimately rule on the Request for Rehearing. The Commission typically takes 6 to 18 months to rule on rehearings.

After the Commission rules on the Request for Rehearing, an aggrieved party has 60 days to appeal the order to court by filing a Petition for Review in Appellate Court pursuant to 16 U.S.C. §8251(b). No extensions of this 60 day statutory period are allowed.

There are several nuances to the requirement that all objections to the final order must be raised on rehearing at the Commission before they can be appealed to the Courts of Appeals, but the rationale governing this requirement is essentially that the Commission must be given an opportunity to correct any mistakes in its final orders before they will be considered by a court. For example, in cases where the Commission makes a ruling for the first time or advances a new rationale in its ruling on the Request for Rehearing, a second Request for Rehearing of that new ruling or rationale must be filed. This can occur, for example, when the Director of the Office of Hydropower Licensing has authority to issue the final order of the Commission, and the Commission's ruling on the Request for Rehearing

of the Director's final order decides the issues differently from the Director's order. In some cases it may be difficult to determine whether a second Request for Rehearing must be filed, or whether an appeal must be filed within the statutory 60 day period provided for Petitions for Review (see final paragraph below). In these situations, it may be necessary to file both a second Request for Rehearing and a Petition for Review in court in order to protect yourself (see note above *re: Kelly v. FERC*).

There is always the question of how detailed a Request for Rehearing must be to pass muster under the requirement that all objections must be raised before the Commission on rehearing before they can be advanced to a Court of Appeals. In general, each specific objection to the final order must be raised on rehearing, but each and every argument in support of the objection need not be raised. Thus, it is possible to refine and amplify the arguments in support of your position in court. However, to be safe, the Request for Rehearing should be definitive enough to alert the Commission to the issues and objections that are being raised. The courts simply will not allow the Commission to be sandbagged by an objection being raised for the first time in court. Even under these admonitions, it is possible, and usually desirable, to file concise Requests for Rehearing.

Strategy:

1. Carefully comply with filing deadlines for rehearing requests and appeals. These are jurisdictional and cannot be altered.
2. Carefully review each FERC order, including orders on rehearing, to determine whether rehearing must be requested within 30 days.
3. Before requesting rehearing, review the record to determine whether additional evidence needs to be submitted along with the rehearing request.
4. Ensure that the rehearing request addresses each issue to be appealed and provides sufficient information to alert the Commission to your arguments.
5. Because of the nuances and potential traps of requesting rehearing and appealing an order to the U.S. Court of Appeals, it is useful to consult a lawyer familiar with FERC procedures to help decide when and how to prepare a Request for Rehearing and appeal.

Tab 10

Regulations for the Licensing of Hydroelectric Projects

Docket No. RM95-16-000; Order No. 596

FEDERAL ENERGY REGULATORY COMMISSION - COMMISSION

81 F.E.R.C. P61,103; 1997 FERC LEXIS 2329

October 29, 1997

CORE TERMS: applicant, pre-filing, consultation, license, entity, regulations, hydropower, commenter, exemption, staff, prepare, scoping, tribe, collection, submit, scientific, licensing, environmental, contractor, environmental review, preparation, proposed rule, package, environmental review process, environmental assessment, offer of settlement, reporting, flexible, revised, Clean Water Act

OPINION:

[*]
FINAL RULE

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: The Federal Energy Regulatory Commission

(Commission) is revising its procedural regulations governing applications for licenses and exemptions for hydroelectric projects. The regulations offer an alternative administrative process whereby in appropriate circumstances the pre-filing consultation process and the environmental review process will be combined. This alternative process is designed to improve communication among affected entities and to be flexible and tailored to the facts and circumstances of the particular proceeding. The final rule does not delete or replace any existing regulations.

EFFECTIVE DATE: [Insert date 30 days after publication in the Federal Register.]

- ii -

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SUPPLEMENTARY INFORMATION: In addition to publishing the full text of this document in the Federal Register, [*2] the Commission provides all interested persons an opportunity to inspect or copy the contents of this document during normal business hours in Room 2A, 888 First Street, N.E., Washington D.C. 20426.

The Commission Issuance Posting System (CIPS), an electronic bulletin board service, provides access to the texts of formal documents issued by the Commission. CIPS is available at no charge to the user and may be accessed using a personal computer with a modem by dialing 202-208-1397 if dialing locally or 1-800-856-3920 if dialing long distance. To access CIPS, set your communications software to 19200, 14400, 12000, 9600, 7200, 4800, 2400, or 1200 bps, full duplex, no parity, 8 data bits and 1 stop bit. The full text of this order will be available on CIPS in ASCII and WordPerfect 6.1 format. CIPS user assistance is available at 202-208-2474.

CIPS is also available on the Internet. Telnet software is required. To access CIPS via the Internet, point your browser to the URL address: <http://www.ferc.fed.us> and select the Bulletin Board System. Read instructions on the next page, select FedWorld Dialup/Telnet. A screen will appear presenting you with several options, select option [*3] 1. There will be a welcome message from FedWorld and a log on prompt. Enter your user ID and password (if you already have an account). To establish an account, type the word NEW and answer the questions which follow. Upon establishing an account, the FedWorld Main Menu will appear. From the Main Menu, type /go ferc.

Finally, the complete text on diskette in WordPerfect format may be purchased from the Commission's copy contractor, La Dorn Systems Corporation. La Dorn Systems Corporation is also located in the Public Reference Room at 888 First Street, N.E., Washington, D.C. 20426.

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: James J. Hoecker, Chairman;

Vicky A. Bailey, and William L. Massey.

Regulations for the Licensing

of Hydroelectric Projects Docket No. RM95-16-000

ORDER No. 596

FINAL RULE

(Issued October 29, 1997)

I. INTRODUCTION

On November 26, 1996, the Federal Energy Regulatory Commission (Commission) issued a Notice of Proposed Rulemaking (NOPR) to revise its procedural regulations governing applications for licenses for hydroelectric projects. n1 In response to the comments received, n2 the Commission adopts [*4] a final rule in this proceeding which offers an alternative administrative process in which the pre-filing consultation and the environmental review processes will be combined. This alternative process is designed to improve communication between affected entities and to be flexible and tailored to the facts and circumstances of the particular proceeding. The final rule does not delete or replace any existing regulations.

-----Footnotes-----

n1 77 FERC P61,209 (1996).

n2 The commenters are listed in Appendix A.

-----End Footnotes-----

II. PURPOSE OF THE FINAL RULE

The NOPR was issued in response to a petition by the National Hydropower Association (NHA), seeking completely new Commission regulations to improve the licensing process for hydropower applicants. The Commission agreed with commenters on NHA's petition, that adoption of its proposed rules would not be fair to other entities interested in the licensing process, such as resource agencies, Indian tribes and citizens' groups, and would not in fact expedite [*5] licensing proceedings. The Commission noted, however, that the collaborative option in NHA's proposal resembled the alternative procedures that the Commission had been developing for use on a case-by-case basis as requested by the applicant, pursuant to waivers granted by the Office of Hydropower Licensing. The Commission determined that the experience with the alternative procedures had been positive, that many applicants and interested entities appeared to be interested in pursuing the alternative procedures, and that it would be helpful to refine, clarify, and codify the procedures in the regulations.

A wide range of entities, representing the hydropower industry, state and federal resource agencies, citizens' groups, and an Indian tribe, filed comments generally supporting adoption of the rule proposed in the NOPR. The commenters made a number of recommendations for improving the proposed rule, many of which are adopted in the final rule, as discussed in detail below.

The final rule offers alternative administrative procedures for the processing of applications for licenses to construct, operate, and maintain hydropower projects, including applications for certain major amendments [*6] to such licenses, and for applications for exemption. Under the final rule, in appropriate circumstances pre-filing consultation and environmental review can be combined into a single process. This alternative process can be used only

if there is a consensus among the interested entities to make use of it (consent of the applicant is required but agreement of everyone interested is not), and is designed to be flexible and tailored to the facts and circumstances of the particular proceeding. The final rule does not delete or replace any existing regulations, but would supplement the existing regulations by offering applicants an opportunity to use the alternative procedures.

The present regulations require applicants for a license to engage in consultation with federal and state resource agencies and Indian tribes during the preparation of the application for the license and prior to filing it. Thereafter the Commission performs an environmental review of the application pursuant to the National Environmental Policy Act (NEPA) ⁿ³ and related statutes. The final rule is intended to simplify and expedite the licensing process by combining the pre-filing consultation and environmental [*7] review processes into a single process, and by improving communication among the participants in the licensing process. We hope that adoption and use of the alternative procedures, on a voluntary basis by applicants, will result in expedited licensing proceedings before the Commission, including the narrowing of contested issues and the submission of offers of settlement that can be used as a basis for licensing orders.

-----Footnotes-----

ⁿ³ 42 U.S.C. @ 4321 et seq.

-----End Footnotes-----

III. DISCUSSION

A. Application for and Scope of Alternative Procedures

In proposed @ 4.34(i)(1) we set forth the scope of the alternative procedures and who could request them. The proposed regulatory text stated that the applicant could submit a request to the Commission to use the alternative procedures where it intended to file an application for a hydropower license or for the amendment of a license subject to the provisions of the pre-filing consultation regulations at @ 4.38.

Some commenters pointed out that [*8] the title of the rule in the notice in the Federal Register indicated it only applied to applications for relicense and that it should be changed to include all applications for license. A commenter recommended that an applicant be required to join with other interested entities, such as resource agencies, in making such a request. ⁿ⁴ Commenters also have asked whether the alternative procedures apply to applications for preliminary permits or exemption.

-----Footnotes-----

ⁿ⁴ / Comments of U.S. Department of Commerce, National Marine Fisheries Service (NMFS), at 5.

-----End Footnotes-----

We will not require the applicant to obtain the express consent of others in order to submit a request to use alternative procedures in preparing its

application. An applicant may voluntarily request to use the alternative procedures. As provided in the final rule and discussed below, the Commission will give public notice of, and interested entities may submit comments on, the applicant's request to use alternative procedures. If an applicant for a hydropower [*9] license wishes to use the standard procedures in preparing its application, it may comply with the pre-filing consultation requirements of @ 4.38 or @ 16.8 of the regulations and need not prepare a preliminary draft NEPA document.

The title of the notice accompanying this final rule in the Federal Register accurately describes the application of the new rule, extending to all applications for the licensing of hydroelectric projects. The alternative procedures apply only to applications for license and amendments to licenses that are subject to the pre-filing consultation rules contained in @ 4.38 and @ 16.8 of the regulations. Since applications for preliminary permit are not subject to such requirements, we see no reason to make the alternative procedures available to such applicants. On the other hand, applications for exemption are subject to the pre-filing consultation requirements of @ 4.38, and we conclude that these alternative procedures should be available to applicants for exemption, if they wish to take advantage of them and meet the applicable requirements of the final rule. Accordingly, we are making changes in the rule to clarify that it also applies to applicants [*10] for exemption.

B. Objectives of Process

In the proposed regulatory text at @ 4.34(i)(2), we set forth the goals of the alternative procedures, which included integrating the pre-filing consultation process and the environmental review process, facilitating greater participation by Commission staff and the public in the pre-filing consultation process, allowing the applicant to prepare an environmental assessment (EA) or a contractor to prepare an environmental impact statement (EIS), encouraging the applicant and interested persons to narrow any areas of disagreement, and promoting settlement of the issues raised by the hydropower proposal.

Commenters have recommended that these statements of objective be broadened in the final rule. They have asked that the interests of Indian tribes be kept in mind. n5 A commenter has also asked that the stated objectives include providing for effective participation in the process by citizens' groups, including the provision of financial assistance where appropriate, and allowing such participants a role in selecting contractors to conduct scientific studies and prepare required documents. n6 Commenters have asked the Commission to keep [*11] in mind in regard to the proposed regulations the goal of promoting competition between rival applicants for proposed hydropower facilities. n7 A commenter was concerned that the proposed rule may suggest that under the alternative procedures the Commission would delegate to an outside party its responsibility for NEPA documents. n8

-----Footnotes-----

n5 Comments of Penobscot Nation (Penobscots), U.S. Dept. of the Interior (Interior) at 4, 10.

n6 Hydropower Reform Coalition (HRC) Comments at 8-10.

n7 Comments of Holyoke Gas & Electric Dept. and the Northern California Power Agency.

n8 Comments of NMFS at 3.

-----End Footnotes-----

We believe that the language of the objectives of the alternative procedures should be revised. We have changed proposed @ 4.34(i)(2)(i) to reflect the goal of combining into one process not only the pre-filing consultation procedures and the environmental review process under NEPA, but also those administrative processes associated with section 401(a) of the Clean Water Act n9 and other statutes. We are revising proposed [*12] @ 4.34(i)(2)(ii) to make clear that the goal of the alternative procedures includes greater participation in the process by and improved communication among all concerned entities, including the applicant, resource agencies, Indian tribes, the public and Commission staff. While meeting certain minimum requirements of openness and fairness, the process is designed to be as flexible as possible, tailored to the circumstances of each case.

-----Footnotes-----

n9 33 U.S.C. @ 1341(a)(1).

-----End Footnotes-----

Section 4.34(i)(2)(iv) is revised to state that the rule is designed to promote cooperative efforts by the applicant and interested entities, including the sharing of pertinent information about the resource impacts of the applicant's hydropower proposal and appropriate mitigation and enhancement measures. The goal of encouraging settlement is not confined to submitting a formal offer of settlement among parties on the application when it is filed, but includes any agreement that can be reached that narrows the range of [*13] contested issues, both on necessary studies and on mitigation and enhancement measures.

We decline to modify the goal statement in the regulations as recommended by HRC. We have no objection to an applicant voluntarily deciding to provide financial assistance to citizens' groups to facilitate their effective participation in the alternative process or to allowing such groups an appropriate role in choosing contractors to do necessary studies. We believe that if any participant believes such measures are important and would further the successful completion of the process and the achievement of its other objectives, these questions should be discussed among the participants. But we do not believe it would be appropriate or helpful for the Commission to attempt to force participants to make such arrangements, which should be strictly voluntary and arise from the particular circumstances and dynamics of each case.

The final rule establishing alternative procedures for hydropower applications is neutral in regard to its impact on potential rival applicants for hydropower facilities, such as an applicant seeking to renew its license for such facilities and a municipal competitor seeking [*14] a license for the same facilities. No applicant in a competitive proceeding has asked the Commission to use the alternative procedures. However, nothing in the final rule precludes granting such a request. If it is made, we will consider whether it should be

granted, considering all the relevant factors presented.

We are changing the language of @ 4.34(i)(2)(iii) to state that the applicant or its contractor or consultant will only prepare a preliminary draft EA or a preliminary draft EIS, which after filing (with the related application) will be subject to complete review, revision and issuance for comment by the Commission.

Finally, we are adding a @ 4.34(i)(2)(v) to the rules, to make it clear that another objective of the alternative procedures is the orderly and expeditious review by the Commission of any agreement or offer of settlement filed to resolve issues raised by an application for hydropower license, amendment, or exemption. We hope that involvement of the Commission's staff, prior to the filing of an application and agreement or offer of settlement with the Commission, together with the preparation of preliminary draft NEPA documents during the pre-filing consultation [*15] process, will result in filings that the Commission can expeditiously review. These filings should include water quality certification under section 401 of the Clean Water Act, with any applicable conditions, and (after filing of the application) a final decision by any land management agency under section 4(e) of the Federal Power Act (FPA), n10 with mandatory conditions, should be submitted to the Commission so that we can make a prompt decision on the license or exemption application.

-----Footnotes-----

n10 16 U.S.C. @@ 791a et seq.

-----End Footnotes-----

C. Demonstration Required of Applicant

The NOPR proposed in @ 4.34(i)(3)(i) to require that the applicant, in its request to the Commission for use of the alternative procedures, demonstrate that it had made a reasonable effort to contact all resource agencies, Indian tribes, citizens' groups and others affected by the hydropower proposal, and that a "consensus" exists that the use of alternative procedures is appropriate.

This proposed regulatory text generated [*16] the most controversy in the rulemaking. Commenters disagreed vigorously as to what "consensus" should mean, with some arguing that it should mean unanimous agreement by all concerned, n11 and others arguing that it should mean the preponderance of views, at least by the major participants in the process. n12 Some commenters have proposed elaborate voting schemes in this regard, n13 while others have claimed that certain entities, such as resource agencies, should have a veto power over use of the alternative procedures. n14 Some commenters have asked the Commission to specify in the rule exactly what the requester should include in its showing. n15

-----Footnotes-----

n11 E.g., Comments of HRC at 4-5, Interior at 3-4.

n12 E.g., Comments of NHA at 4, 15-18, Alabama Power Co. and Georgia Power Co. at 3-5.

n13 E.g., Comments of Public Generating Pool at 6-8.

n14 Comments of U.S. Dept. of Agriculture, Forest Service, at 2.

n15 Comments of NMFS at 5.

-----End Footnotes-----

The term "consensus" in ordinary usage means "general agreement" [*17] or "collective opinion: the judgment arrived at by most of those concerned." n16 That is how the Commission employs the term here. While unanimous views obviously reflect consensus, unanimity is not always essential to a fundamentally consensual approach in a multi-party situation. The final rule does not require the applicant, in the request for use of the alternative procedures, to show that everyone concerned supports the use of these procedures. The applicant need only show that the weight of opinions expressed make it reasonable to conclude that under the circumstances it appears that use of the alternative procedures will be productive. We do not require the applicant to make any formal showing, such as a signed agreement or use of a particular voting procedure, to memorialize the consensus on use of the procedures. We do not give any single interested entity a veto power over the applicant's use of alternative procedures.

-----Footnotes-----

n16 Webster's Third New International Dictionary (1981).

-----End Footnotes-----

We envision a series of [*18] interactions between the applicant and participants that goes beyond an exchange of letters. Such interactions could include teleconferences and meetings involving Commission staff to explore the alternative procedures. In some cases the applicant's showing may rely on a lack of objections raised in such meetings. This situation may arise at the outset of the pre-filing consultation process, when interested entities are unsure of how the alternative procedures may compare to those otherwise required under Commission regulations and are unaware of the relative benefits of the alternative. The Commission believes that in these situations it is worth allowing the applicant and participants to try the alternative process rather than closing the door on this option.

To protect the rights of all interested entities to be advised of the request for alternative procedures and to file comments on the request in order to make their views known directly to the Commission, the final rule specifies, as proposed in the NOPR, that in all cases the Commission will give public notice in the Federal Register of the filing by an applicant of a request to use alternative procedures. Comments may [*19] be filed in response to this notice, and the Commission will take them into account in deciding whether or not to grant the request. The decision on the request will be final and not subject to interlocutory rehearing or appeal. n17

-----Footnotes-----

n17 The Commission will place a copy of the decision (on the request to use alternative procedures) on the Commission Issuance Posting System (CIPS), so that it can readily be found by anyone interested.

-----End Footnotes-----

D. Required Steps to Follow

In @ 4.34(i)(4), the NOPR set forth certain minimum steps that all alternative procedures should include as appropriate: (1) the initial information meeting; (2) the scoping of environmental issues; (3) the analysis of scientific studies and further scoping; and (4) the preparation of a preliminary draft NEPA document and related application. Participants would be free, under the communications protocol to be submitted with the request to use alternative procedures, to describe those steps in greater detail or to agree to steps in addition to those set [*20] forth in the proposed rule.

Some commenters objected to the statement that these steps would only be included "as appropriate," and expressed their strongly held views that the steps were the minimum that should be required in any alternative procedure. n18 Others argued in general for more flexibility. n19 Some commenters wanted more requirements in the regulatory text, to make clear that the alternative process must include distribution by the applicant of an initial information package, that the initial information meeting should be open to the public, and that there should be cooperation between the applicant and interested persons on the determination of necessary studies and their design and scope. n20

-----Footnotes-----

n18 E.g., Comments of Interior at 4, Forest Service at 3.

n19 NMFS Comments at 4-5.

n20 HRC Comments at 9-10, 13.

-----End Footnotes-----

Commenters also requested that the Commission specify in detail in the regulations the deadlines that would apply during the alternative process. n21

-----Footnotes-----

n21 E.g., Comments of Forest Service at 4.

-----End Footnotes-----

[*21]

We have set forth in the final rule a list of the minimum steps we think should be a part of any alternative process, if it is to serve its objectives of expediting the completion of the administrative process, while at the same time being fair to all participants. The final rule adopted provides for the inclusion of three steps by combining the second and third steps (dealing with the scoping and study processes, as outlined above) that were proposed in the NOPR. We do not believe that the requirement that these three steps be

included restricts the flexibility of the alternative process.

We do not, however, make the inclusion of these three steps mandatory in every alternative process, as there may be special circumstances where some of them are not possible or necessary.

The best example of such a case is if the alternative process begins after the applicant has already completed the first step in the standard pre-filing consultation process (the initial information meeting open to the public). The Commission will entertain requests to use the alternative process at any reasonable time, and they need not be submitted before the commencement of the standard pre-filing consultation [*22] process. In such a case, if the Commission grants the request, it would make no sense to require by rule that the applicant repeat a step that is the same as or substantially similar to a step it has already taken under the standard process. The Commission is sensitive to the concerns expressed in the comments and will not abridge procedures allowed in the alternative process in a way that would curtail notice to or participatory rights of any interested entity. We wish to be flexible and fair to all concerned.

We agree with the comments asking for changes in the regulatory text to clarify the basic requirements for the completion of these minimum steps in the alternative process. Accordingly, @ 4.34(i)(4) of the final rule makes clear that the applicant must distribute an initial information package and conduct an initial information meeting open to the public, as required in the standard process, and that the approved procedures must include provisions for the cooperative scoping of environmental issues with all participants, including the selection and design of required scientific studies and any further scoping. Our goal is to promote as much candid communication as possible [*23] among the participants about the applicant's proposal, its resource impacts, and the proposals and views of the other participants.

We do not think it is necessary or appropriate to spell out, in greater detail in the regulations, deadlines for the alternative process. The establishment of these deadlines should be done cooperatively by the participants in a manner that fits the circumstances and needs of each case, with the guidance and support of Commission staff. We believe that the successful use of the alternative procedures is predicated on a climate of cooperation among the applicant and interested entities. Therefore we do not believe that the Commission should mandate by rule exactly how the alternative process may unfold in every case. To do so would unnecessarily repeat requirements in the standard pre-filing consultation process, which remains available for use in appropriate cases, and would undercut the flexibility and spirit of cooperation and open communication that lie at the heart of the alternative process.

E. Notice, Filings and Service Requirements

The NOPR proposed in @ 4.34(i)(5) that the Commission would give public notice of the filing of the applicant's [*24] request to use the alternative procedures, inviting comment on the request. Proposed @ 4.34(6)(i) would require the Commission and the applicant to give public notice of each of the four steps required in the alternative process under proposed @ 4.34(i)(4). The applicant would be required to give notice of each of these stages to entities on a mailing list approved by the Commission. The proposal required the applicant

to file with the Commission quarterly reports on the progress of the alternative process, pursuant to @ 4.34(i)(6)(ii), and implied in @ 4.34(i)(6)(iii) that the applicant would also have to file with the Commission the critical documents generated in the process, namely the initial information package, scoping documents, and the preliminary draft environmental review document.

Some commenters have urged the Commission to add language to the rule in order to make it clear how the Commission and the applicant would give notice. n22 A commenter urged that, in the case of an applicant seeking a new license, the applicant be required to give notice at the outset to (1) any entity that had contacted the Commission during the period of the previous license about the project [*25] in question and (2) published lists of citizens' groups that may have an interest. n23 The Commission was also asked to require that various filings made by the applicant in the course of the alternative process be served on all participants in the process. n24 Resource agencies requested that the Commission require the applicant, at the conclusion of the alternative process, to index its public file (which documents the pre-filing consultation and environmental review processes) and submit all of these documents, together with the index, to the Commission with its application. n25 Commenters also expressed concern that omission of Exhibit E would eliminate important information from the Commission's record. n26

-----Footnotes-----

n22 E.g., Comments of Interior at 5.

n23 HRC Comments at 5-6.

n24 Comments of Interior at 6-7.

n25 Comments of Interior at 6-7 and Forest Service at 1.

n26 Comments of Interior at 7.

-----End Footnotes-----

We agree that revisions should be made in the final rule about the requirements for notice, filings and [*26] service of documents. New section 4.34(i)(3)(iii) requires the applicant, when it files its request for alternative procedures with the Commission, to serve copies on all affected resource agencies and Indian tribes and all entities that have expressed an interest in the alternative process. As provided in @ 4.34(i)(5), the Commission will give notice in the Federal Register of receipt of the request. We believe that these requirements, together with the rule's requirement that the applicant must have made reasonable efforts to contact interested entities prior to the filing of its request (see @ 4.34(i)(3)(i)), will be sufficient to put the public on notice of the request. As discussed in section III.C above, the Commission will consider any comments received in determining whether to grant the request.

Section 4.34(6)(i) is also revised from the proposal to make clear that the Commission's public notice of each of the first two stages in the alternative process, described in @ 4.34(i)(4), will appear in the Federal Register, and that the applicant's public notice of these stages is required to appear in

local newspapers in the county or counties in which the project is located.
[*27] Section 4.34(i)(6)(ii) is revised to make clear that reports to the Commission on the pre-filing consultation process are required only every six months, and that this requirement can be satisfied by the submission of documents already available, such as summaries or minutes of meetings held. This section also clarifies what critical documents in the process the applicant must file with the Commission and provides that copies of these documents must be served on each participant in the process that requests a copy. n27

-----Footnotes-----

n27 Applicants should note that in order to have sufficient copies for internal distribution, the Commission requires the submission of an original and eight copies of all filings in hydropower matters. See 18 CFR @ 4.34(h). The final rule makes clear that this requirement applies to filings with the Commission that are made in the course of the alternative pre-filing process described in @ 4.34(i). See @ 4.34(i)(6)(ii).

-----End Footnotes-----

When the applicant files its application and preliminary draft environmental review [*28] document with the Commission, these filings, and such additional material as will be specified by the Commission in each case, will replace the Exhibit E material that is required in the standard process. We will not permit applicants to omit material necessary for the Commission's review in these filings.

We do not think it necessary to require the applicant to index all of the documents in its public file compiled during the alternative process and to submit those documents, together with the index, to the Commission with its application. n28 Any party to the proceeding before the Commission may file any material it wishes as part of its comments on the application, or the party may request that materials in the possession of the applicant be filed with the Commission. The Commission may order such filings if it believes they would be in the public interest. See the final rule @ 4.34(i)(6)(iv).

-----Footnotes-----

n28 The final rule requires the applicant to maintain a public file of all relevant documents in the pre-filing consultation process. See @ 4.34(i)(6)(iii).

-----End Footnotes-----

[*29]

F. Requests for Scientific Studies

Under the proposed rule @ 4.34(i)(6)(v), the procedures approved in the alternative process may require all participants in the process to submit during the pre-filing consultation period their requests for scientific studies by the applicant. The proposal also allowed requests for such studies to be filed with the Commission after the filing of the application for good cause, with an explanation of why it was not possible to request the study during the pre-filing period.

This proposal was controversial. Some commenters pointed out that it was too restrictive, and that any party should be able to file a request for scientific studies by the applicant after the filing of its application, so long as good cause is shown. The Commission was also asked to give examples of situations in which a party would be able to show good cause. n29 Other commenters wanted the rule to be tightened to eliminate in whole or in part the right of any party to request scientific studies after the filing of the application. n30

-----Footnotes-----

n29 HRC Comments at 11-12, U.S. Environmental Protection Agency at 1, Washington Dept. of Fish and Wildlife at 3-4. [*30]

n30 Reply Comments of EEI at 4-6.

-----End Footnotes-----

We believe that an important result of the alternative process, and the greater participation and communication among participants it encourages, should be the amicable resolution among participants of disputes about necessary scientific studies during the pre-filing consultation period, not after the application is filed with the Commission. With improved communication among the participants and the availability of dispute resolution in the alternative process, we do not expect to receive frequent requests for additional studies after the filing of an application that is subject to the alternative process. We understand, however, that not all such disputes will be so resolved, and that some participants, even though they have participated actively and in good faith in the alternative process, may be unwilling thereby to waive their requests for certain studies, even if the other participants in the process do not think they are necessary. The alternative process does not require such a waiver. We hope that through the alternative process, with the assistance of [*31] Commission staff, participants will be able to resolve all important differences about a hydropower proposal, including disputes about necessary studies. If the participants cannot resolve such a dispute, even with the dispute resolution procedure discussed in the next section, a party may raise it to the Commission's attention after the filing of the application. In such a case, the Commission will rule on the request, either by separate order or when issuing a decision on the application.

The requirement of good cause is self-explanatory, and the Commission does not wish to bind by rule the discretion of future Commissions to do justice in a particular case. We will not, therefore, encumber the final rule or include in this preamble additional language that would attempt to explain what would suffice to make a showing of good cause in a particular case.

G. Dispute Resolution

The proposed rule was silent on whether the Commission's provisions for dispute resolution, available in the standard pre-filing consultation process, would apply to the alternative process. Commenters asked whether they could seek resolution of disputes by the Commission in the alternative process, [*32] should it be necessary. n31

-----Footnotes-----

n31 Comments of Interior at 8.

-----End Footnotes-----

We believe that participants should be able to ask the Commission to resolve disputes arising during the alternative process, but only if they have first made reasonable efforts to resolve the disputes with other participants, using any mechanisms established by agreement among the participants and the help of Commission staff, where appropriate. Any such request should be served on all participants and must document what efforts have been made to resolve the dispute.

H. Collapse of Consensus

The NOPR asked the commenters to address what they thought should happen if the consensus that had appeared to exist when the Commission granted an applicant's request for alternative procedures subsequently collapsed.

Many commenters attempted to answer this question. Most seemed to recognize that in certain circumstances it would make no sense to continue with the alternative process, n32 and some asked the Commission to direct what should happen in such circumstances. [*33] n33

-----Footnotes-----

n32 Comments of Duke Power Co. at 2-3, Pacific Gas & Electric Co. at 4; HRC Comments at 7, Reply Comments at 11-12.

n33 Comments of Forest Service at 4, Montana Power Co. at 6-7, EEI Reply Comments at 6.

-----End Footnotes-----

Despite the best of intentions of the participants, it is possible in some instances for the consensus supporting the continued use of the alternative procedures to collapse. We do not mean by this loss of consensus a disagreement on what studies should be conducted or what mitigation or enhancement measures should be required in response to the applicant's proposal, or loss of confidence on the part of one participant or a few participants in the process. We believe that a consensus will collapse if the weight of opinion of the applicant and the other participants is that the process has become a waste of their valuable time and resources and that the public interest would be better served under the circumstances by the Commission's directing a completion of the pre-filing process and what further steps [*34] are required of the applicant. In such a situation an alternative pre-filing process directed by the Commission would be required in order to clarify what steps the applicant would have to take in the time remaining to file an acceptable application.

Accordingly, the final rule adds @ 4.34(i)(7) to allow a participant (including the applicant), in the event that a consensus supporting the alternative process is lost, to file a request that the Commission direct what steps should be taken to complete the pre-filing consultation process.

I. Grandfather Provision

The NOPR asked what should be done about alternative processes already approved by the Commission, pursuant to case-by-case waivers of current regulatory requirements, if the Commission adopts a final rule establishing alternative procedures.

All commenters addressing this question felt that the rule should grandfather such already approved processes.

We agree and are adding @ 4.34 (i)(9) to the final rule to grandfather existing alternative processes. Steps already taken do not have to be repeated, and applicants are not required to act inconsistently with written agreements already reached by participants in such cases. [*35] Other provisions of the new rule, however, such as public file requirements or requirements to file materials with the Commission (consisting of an original and eight copies) and serve copies on other participants, that may be in addition to those already agreed to in cases where waivers have been granted, will apply to all such cases after the effective date of the final rule.

J. Miscellaneous

NHA asked the Commission to improve its public noticing of hydropower applications, by including the licensee name and the name of the project in addition to the project number, and to use public libraries to facilitate notice to the public. NHA also asked the Commission to explain what the NOPR meant in stating that staff could participate in cases where there was no alternative process proposed and approved, pursuant to proposed @ 4.34(i)(7).

Resource agencies were concerned about the impact of the alternative procedures on the Commission's obligations under NEPA, section 10(j) of the FPA and the Endangered Species Act (ESA). n34 Federal agencies were concerned about whether the alternative procedures would affect their participation as cooperating agencies for NEPA purposes. n35 [*36] A number of commenters asked the Commission to explain how the alternative pre-filing procedures would affect the Commission's conduct of the hearing process on the application when it is filed. n36

-----Footnotes-----

n34 16 U.S.C. @@ 1531-1544. Comments of Interior at 9 and NMFS at 4.

n35 Comments of Forest Service at 4, Interior at 10.

n36 Comments of NMFS at 3, Western Urban Water Coalition at 4, Public Generating Pool at 14-29, Sacramento Municipal Utility District at 18-36, and the City and County of Denver at 2-3.

-----End Footnotes-----

Regarding notices concerning a hydropower project, the Commission agrees with NHA that all public notices of a hydropower application should include not only the project number but also the name of the licensee and the name of the project. Participants in the alternative process may agree to use public libraries to facilitate notice and to provide information to the public, in

addition to complying with the notice and public file requirements contained in the final rule.

The [*37] final rule contains a provision at @ 4.34(i)(8) making it clear that, at the Commission's discretion, its staff may participate not only in the pre-filing consultation process where alternative procedures are in use, but also in other cases where these procedures are not being used. The Commission may commit its staff, upon request and on a case-by-case basis, to limited participation in the pre-filing consultation process in connection with the preparation of any application for license, exemption, or license amendment. The goals of such participation may include exploring whether the participants in the process should consider the use of alternative procedures and, to the extent feasible and appropriate, assisting in the informal resolution of disputes and the combination of the pre-filing consultation process with the NEPA process and related processes, such as the grant of water quality certification under the Clean Water Act and the issuance of mandatory conditions pursuant to section 4(e) of the FPA.

In such cases, on request and at its discretion, the Commission may approve suitable modifications to the procedures otherwise applicable during the pre-filing and post-filing periods, [*38] similar to those made for alternative procedures set forth in the proposed rule. If the applicant subsequently requests and is granted permission to use alternative procedures, the Commission may direct how the applicant and interested entities may shift from the standard pre-filing consultation process to the alternative process.

The final rule does not affect the Commission's compliance with NEPA, section 10(j) of the FPA, or the ESA, nor does it in any way deprive a party of the right to contest issues before the Commission and obtain a decision on these issues based on the administrative record before the Commission. The Commission will review the application for adequacy, and if it is accepted for filing the Commission will invite interventions and set a deadline for the submission of final recommendations, prescriptions, mandatory conditions, and comments. Upon receipt of the application the Commission will not issue a notice inviting additional study requests, and the Commission will not issue a notice that the application is ready for environmental analysis, as would occur under the standard procedures. The Commission will review the preliminary draft NEPA document, prepared [*39] in the course of the pre-filing consultation period under the alternative procedures, and issue a draft NEPA document for comment. The Commission will take any steps required to examine contested issues and comply in its usual manner with statutory mandates applicable to the case, such as section 10(j) of the FPA and the ESA. The Commission will then issue the NEPA document in final form and an order on the application for license, exemption, or license amendment.

If an agreement or offer of settlement is filed in connection with an application that the Commission grants, the order will address the agreement or offer of settlement. If contested issues remain, as determined by the position of the parties and resource agencies before the Commission, the order will resolve the issues based on the administrative record before the Commission.

Finally, an agency, such as a federal land management agency with authority over the proposed project under FPA section 4(e) or a state agency with responsibility for issuing a certification for the project under the Clean Water Act, is free to participate fully in any alternative procedures under the

final rule and subsequently to elect to be a cooperating [*40] agency with the Commission for NEPA purposes. The Commission will continue to enforce its policy, however, that such an agency cannot intervene as a party in the proceeding and at the same time be a cooperating agency for NEPA purposes. We believe that allowing an agency to pursue both of these roles simultaneously could raise concerns about compliance by the Commission with its ex parte rule.
n37

-----Footnotes-----

n37 18 CFR 385.2201.

-----End Footnotes-----

IV. ENVIRONMENTAL ANALYSIS

Commission regulations describe the circumstances where preparation of an environmental assessment or an environmental impact statement will be required.
n38 The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. n39 No environmental consideration is necessary for the promulgation of a rule that is clarifying, corrective, or procedural, or that does not substantially change the effect of legislation or regulations being amended. n40

-----Footnotes-----

n38 Regulations Implementing National Environmental Policy Act, 52 FR 47897 (Dec. 17, 1987), codified at 18 CFR Part 380. [*41]

n39 18 CFR 380.4(a)(2)(ii).

n40 18 CFR 380.4.

-----End Footnotes-----

This final rule is procedural in nature. It proposes alternative procedures that participants to a hydroelectric licensing or exemption proceeding may wish to use. Thus, no environmental assessment or environmental impact statement is necessary for the requirements proposed in the rule.

V. REGULATORY FLEXIBILITY CERTIFICATION

The Regulatory Flexibility Act of 1980 (RFA) n41 generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. Pursuant to section 605(b) of the RFA, the Commission hereby certifies that the regulations promulgated will not have a significant economic impact on a substantial number of small entities.

-----Footnotes-----

n41 5 U.S.C. @@ 601-612.

-----End Footnotes-----

The procedures adopted herein are purely voluntary in nature, and are designed to reduce burdens on small entities [*42] (as well as large entities) rather than to increase them. More fundamentally, the alternative process we are proposing herein is voluntary. The procedures constitute an alternative to the procedures currently prescribed in our regulations, and will not be available unless it is the consensus of the persons and entities interested in the proceeding, as discussed herein, to use the alternative procedures. Under this approach, each small entity will be able to evaluate for itself whether the alternative procedures are beneficial or burdensome, and oppose their adoption if they appeared to be more burdensome than beneficial. Under these circumstances, the economic impact of the proposed rule will be either neutral or beneficial to the small entities affected by it.

VI. INFORMATION COLLECTION REQUIREMENTS

The Office of Management and Budget (OMB) regulations require OMB to approve certain reporting and recordkeeping requirements (collections of information) imposed by agency rule. n42 OMB has reviewed the NOPR without comment. The final rule adopted herein will impose reporting burdens only on those applicants that voluntarily choose to use the alternate procedures. Respondents [*43] subject to the filing requirements of this final rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number. The Final Rule will affect two existing data collections, FERC-500 and FERC-505. Most of the reporting burdens associated with preparing and filing an application for a hydropower license, exemption, or amendment to license are imposed by existing regulations.

-----Footnotes-----

n42 5 CFR 1320.11.

-----End Footnotes-----

Public Reporting Burden:

The alternative procedures will only require minor additional filing requirements with the Commission. The other additional burdens of the alternative procedures, as compared to the standard procedures, do not involve filings with the Commission, but will consist of various outreach efforts of the applicant and related interactions with entities interested in its hydropower proposal. An applicant would presumably only incur such additional burdens if it believed that, in the long run, it would save on litigation [*44] and other costs incurred to pursue the standard procedures.

The Commission has made approximate estimates of the additional time that may be required of an applicant to comply with the alternative procedures, as compared with the standard procedures. It is difficult to be precise about such estimates, because the time required for one applicant could vary considerably from the time required for other applicants, depending upon the circumstances involved, including the complexity of the issues raised, the total number of participants in the pre-filing process, and how cooperatively those participants worked together. If the alternative procedures were successful and resulted, for example, in the filing of an agreement or offer of settlement with the

Commission, the applicant may be able to save substantially more time by avoiding litigation than was invested in the alternative procedures. If an applicant requested and was allowed to use the alternative procedures, the main additional burden, with the estimated hours to comply with each, are estimated to be:

Process	Burden(Hours of Effort)
(1) contact interested entities;	80 hours
(2) prepare and submit request, including communications protocol;	80 hours
(3) prepare and distribute scoping and hold related meetings;	50 hours
(4) develop agenda and other documents, including minutes, for all meetings and prepare and distribute them (only additional time as compared to presently required meetings;	600 hours
(5) prepare and publish public notices;	24 hours
(6) prepare and submit semi-annual progress reports and make other required Commission filings;	48 hours
(7) maintain a complete record of the pre-filing consultation proceedings that would be open to the public.	250 hours

It is estimated that to prepare and distribute the preliminary draft environmental review document would not take any more time than to prepare Exhibit E under the standard process. Therefore, the estimated additional burden of the tasks required of an applicant if it voluntarily undertakes the alternative process totals 1132 hours.

The OMB regulations require OMB to approve certain information collection requirements imposed by agency rule. Accordingly, pursuant to OMB regulations, the Commission is providing notice of its proposed information collections to OMB.

Title: FERC-500 "Application for License for Water Projects with More than 5MW Capacity"; [*46] FERC-505 "Application for Water Projects 5MW or Less Capacity".

Action: Proposed Data Collections.

OMB Control No.: 1902-0058; 1902-0115.

Respondents: Businesses or other for profit.

Frequency of Responses: On Occasion.

Necessity of Information: There are approximately 1,021 hydropower licenses issued by the Commission that are currently outstanding. These licenses all expire at the completion of fixed terms, and at expiration the license holders may apply for a new licenses. Other applicants may apply for exemptions or original licenses to construct and operate new or existing hydropower

projects.

The final rule authorizes a potential applicant for a license, exemption or certain major amendments to a license to file a request for alternative procedures if the applicant wants to use such procedures, as authorized by the rule. The rule also requires the filing of a communications protocol with the request for alternative procedures. The applicant will have to do a number of other things in the pre-filing consultation process, including distribution of an initial information package and conduct an initial public meeting, which are required under existing [*47] Commission regulations. The applicant, possibly with a contractor's assistance, would have to conduct the scoping of environmental issues; this is a new requirement, not now imposed on applicants, but which is related to currently required pre-filing consultation duties of the applicant and would substitute in part for the environmental review process traditionally done by the Commission after the filing of an application for hydropower license or for certain major license amendments.

The applicant would have to do studies of the resource impacts of its proposal, as it now must do under current Commission regulations governing the pre-filing consultation process. The applicant or the contractor would also have to prepare a preliminary draft NEPA document and submit additional information in lieu of what is now required as Exhibit E to a hydropower application. These two filing requirements -- what is now required and what would be required under the regulations for the alternative procedures -- are similar.

The applicant would have to file with the Commission semi-annual reports on the progress of the pre-filing consultation process under the alternative procedures. No such reports [*48] are now required, although the filing of these reports under the alternative procedures avoids the requirement in the current regulations for the applicant to document the entire pre-filing consultation process when the application is filed. Under the alternative procedures the applicant would have to maintain a public file of the pre-filing process and to give various public notices during this process, while current regulations do not require maintenance of a public file containing all this information or the issuance of as many such notices during the pre-filing consultation period.

Internal Review: The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements. The Commission's Office of Hydropower Licensing will upon receipt of the application review it to determine the broad impact of the license application. Commission staff conducts a systematic review of the prepared application with supplemental documentation provided by the solicitation of comments from other agencies and the public. The Commission will take any steps required to examine contested issues [*49] and comply with statutory mandates applicable to the case. These reviews ensure that the Federal Power Act as amended by other statutory provisions is formally administered to ensure compliance by the licensee. These requirements conform to the Commission's plan for efficient information collection, communication, and management within the hydroelectric industry.

Interested persons may obtain information on the reporting requirements by contacting the following:

Federal Energy Regulatory Commission

888 First Street, NE
Washington, DC 20426

[Attention: Michael Miller, Division of Information Services
Phone: (202)208-1415. fax: (202)273-0873,
email: mmiller at ferc.fed.us]

Comments are solicited on the Commission's need for this information, whether the information will have practical utility, the accuracy of the provided burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques. For submitting comments concerning the collections of information and the associated burden estimates, please send your comments to the contact [*50] listed above and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington DC, 20503. [Attention: Desk Officer for the Federal Energy Regulatory Commission, phone (202) 395-3087, fax: (202) 395-7285]

Estimated Annual Burden (includes burden hours already approved for standard procedures):

Data Collection	No. Of Respondents	No. Of Responses	Hours per Response	Total Annual Hours
FERC-500	6	6	853	5,120
FERC-505	10	10	182	1,818

Total Annual Hours for collections

(Reporting + Recordkeeping, (if appropriate)) = 6,938

Information Collection costs: The Commission seeks comments on the costs to comply with these requirements. It has projected the average annualized cost for all respondents to be:

Data Collection	Annualized Capital/Start-up Costs	Annualized Costs (Operations & Maintenance)	Total Annualized Costs
FERC-500	\$ 269,861	\$ 0.00	\$ 269,861.00
FERC-505	\$ 95,822	\$ 0.00	\$ 95,822.00
Total			\$ 365,683.00

VII. Effective Date

This rule is effective [insert date that is 30 days after publication in the Federal Register]. If OMB has not approved the information collection provisions at that time, the Commission will issue a notice delaying the effective [*51] date until OMB approval of the final rule.

List of Subjects

18 CFR Part 4

Electric power, Reporting and recordkeeping requirements.

18 CFR Part 375

Authority delegations (Government agencies), Seals and insignia, Sunshine Act.

By the Commission.

In consideration of the foregoing, the Commission amends Parts 4 and 375 of Chapter I, Title 18, Code of Federal Regulations, as set forth below.

PART 4 -- LICENSES, PERMITS, EXEMPTIONS, AND DETERMINATION OF PROJECT COSTS

1. The authority citation for Part 4 continues to read as follows:

Authority: 16 U.S.C. 791a-825r, 2601-2645; 42 U.S.C. 7101-7352.

2. In @ 4.34, the title is revised and a new paragraph (i) is added to read as follows:

@ 4.34 Hearings on applications; consultation on terms and conditions; motions to intervene; alternative procedures.

* * * * *

(i) Alternative procedures.

(1) An applicant may submit to the Commission a request to approve the use of alternative procedures for pre-filing consultation and the filing and processing of an application for an original, new or subsequent [*52] hydropower license or exemption that is subject @ 4.38 or @ 16.8 of this chapter, or for the amendment of a license that is subject to the provisions of @ 4.38.

(2) The goal of such alternative procedures shall be to:

(i) Combine into a single process the pre-filing consultation process, the environmental review process under the National Environmental Policy Act and administrative

processes associated with the Clean Water Act and other statutes;

(ii) facilitate greater participation by and improve communication among the potential applicant, resource agencies, Indian tribes, the public and Commission staff in a flexible pre-filing consultation process tailored to the circumstances of each case;

(iii) allow for the preparation of a preliminary draft environmental assessment by an applicant or its contractor or consultant, or of a preliminary draft environmental impact statement by a contractor or consultant chosen by the Commission and funded by the applicant;

(iv) promote cooperative efforts by the potential applicant and interested entities and encourage them to share information about resource impacts and mitigation and enhancement proposals and to narrow any areas of disagreement [*53] and reach agreement or settlement of the issues raised by the hydropower proposal; and

(v) facilitate an orderly and expeditious review of an agreement or offer of settlement of an application for a hydropower license, exemption or amendment to a license.

(3) A potential hydropower applicant requesting the use of alternative procedures must:

(i) demonstrate that a reasonable effort has been made to contact all resource agencies, Indian tribes, citizens' groups,

and others affected by the applicant's proposal, and that a consensus exists that the use of alternative procedures is appropriate under the circumstances;

(ii) submit a communications protocol, supported by interested entities, governing how the applicant and other participants in the pre-filing consultation process, including the Commission staff, may communicate with each other regarding the merits of the applicant's proposal and proposals and recommendations of interested entities; and

(iii) serve a copy of the request on all affected resource agencies and Indian tribes and on all entities contacted by the applicant that have expressed an interest in the alternative pre-filing consultation process.

(4) As appropriate [*54] under the circumstances of the case, the alternative procedures should include provisions for:

(i) distribution of an initial information package and conduct of an initial information meeting open to the public;

(ii) the cooperative scoping of environmental issues

(including necessary scientific studies), the analysis of completed studies and any further scoping; and

(iii) the preparation of a preliminary draft environmental assessment or preliminary draft environmental impact statement and related application.

(5) The Commission will give public notice in the Federal Register inviting comment on the applicant's request to use alternative procedures. The Commission will consider any such comments in determining whether to grant or deny the applicant's request to use alternative procedures. Such a decision will not be subject to interlocutory rehearing or appeal.

(6) If the Commission accepts the use of alternative procedures, the following provisions will apply.

(i) To the extent feasible under the circumstances of the proceeding, the Commission will give notice in the Federal Register and the applicant will give notice, in a local newspaper of general circulation in the county [*55] or counties in which the project is located, of the initial information meeting and the scoping of environmental issues. The applicant will also send notice of these stages to a mailing list approved by the Commission.

(ii) Every six months, the applicant shall file with the Commission a report summarizing the progress made in the pre-filing consultation process and referencing the applicant's public file, where additional information on that process can be obtained. Summaries or minutes of meetings held in the process may be used to satisfy this filing requirement. The applicant must also file with the Commission a copy of its initial information package, each scoping document, and the preliminary

draft environmental review document. All filings with the Commission under this section must include the number of copies required by paragraph (h) of this section, and the applicant shall send a copy of these filings to each participant that requests a copy.

(iii) At a suitable location, the applicant will maintain a public file of all relevant documents, including scientific studies, correspondence, and minutes or summaries of meetings, compiled during the pre-filing consultation process. [*56] The Commission will maintain a public file of the applicant's initial information package, scoping documents, periodic reports on the pre-filing consultation process, and the preliminary draft environmental review document.

(iv) An applicant authorized to use alternative procedures may substitute a preliminary draft environmental review document and additional material specified by the Commission instead of Exhibit E to its application and need not supply additional documentation of the pre-filing consultation process. The applicant will file with the Commission the results of any studies conducted or other documentation as directed by the Commission, either on its own motion or in response to a motion by a party to the licensing or exemption proceeding.

(v) Pursuant to the procedures approved, the participants will set reasonable deadlines requiring all resource agencies,

Indian tribes, citizens' groups, and interested persons to submit to the applicant requests for scientific studies during the pre-filing consultation process, and additional requests for studies may be made to the Commission after the filing of the application only for good cause shown.

(vi) During the pre-filing [*57] process the Commission may require the filing of preliminary fish and wildlife recommendations, prescriptions, mandatory conditions, and comments, to be submitted in final form after the filing of the application; no notice that the application is ready for environmental analysis need be given by the Commission after the filing of an application pursuant to these procedures.

(vii) Any potential applicant, resource agency, Indian tribe, citizens' group, or other entity participating in the alternative pre-filing consultation process may file a request with the Commission to resolve a dispute concerning the alternative process (including a dispute over required studies), but only after reasonable efforts have been made to resolve the dispute with other participants in the process. No such request shall be accepted for filing unless the entity submitting it certifies that it has been served on all other participants. The request must document what efforts have been made to resolve the dispute.

(7) If the potential applicant or any resource agency, Indian tribe, citizens' group, or other entity participating in

the alternative pre-filing consultation process can show that it has cooperated [*58] in the process but a consensus supporting the use of the process no longer exists and that continued use of the alternative process will not be productive, the participant may petition the Commission for an order directing the use by the potential applicant of appropriate procedures to complete its application. No such request shall be accepted for filing unless the entity submitting it certifies that it has been served on all other participants. The request must recommend specific procedures that are appropriate under the circumstances.

(8) The Commission may participate in the pre-filing consultation process and assist in the integration of this process and the environmental review process in any case, including appropriate cases where the applicant, contractor, or consultant funded by the applicant is not preparing a preliminary draft environmental assessment or preliminary draft environmental impact statement, but where staff assistance is available and could expedite the proceeding.

(9) In all cases where the Commission has approved the use of alternative pre-filing consultation procedures prior to [insert date 30 days after publication of final rule in the Federal Register [*59]], during the pre-filing process the potential applicant need not follow any additional requirements imposed by paragraph (i) of this section, if in so doing the applicant would repeat any steps already taken in the preparation of its

application and supporting documentation or act inconsistently with any written agreement signed before [enter date 30 days after publication of the final rule in the Federal Register] by the applicant and the other participants in the alternative process.

PART 375 -- THE COMMISSION

3. The authority citation for Part 375 continues to read as follows:

Authority: 5 U.S.C. 551-557; 15 U.S.C. 717-717w, 3301-3432; 16 U.S.C. 791-825r, 2601-2645; 42 U.S.C. 7101-7352.

4. In @ 375.314, paragraph (u) is added to read as follows:

@ 375.314 Delegations to the Director of the Office of Hydropower Licensing.

* * * * *

(u) Approve, on a case-specific basis, and issue such orders as may be necessary in connection with the use of alternative procedures, under @ 4.34(i) of this chapter, for the development [*60] of an application for an original, new or subsequent license, exemption, or license amendment subject to the pre-filing consultation process, and assist in the pre-filing consultation and related processes.

Note: The appendix will not appear in the Code of Federal Regulations.

APPENDIX:

APPENDIX A

COMMENTS

Citizens' Groups

Adirondack Mountain Club

American Rivers

Appalachian Mountain Club

California Hydropower Reform Coalition

Conservation Law Foundation

Hydropower Reform Coalition

Idaho Rivers United

Michigan Hydro Relicensing Coalition

New England FLOW

New York Rivers United

Trout Unlimited

Federal Agencies

U.S. Department of Agriculture, U.S. Forest Service

U.S. Department of Commerce, National Marine Fisheries Service

U.S. Department of the Interior

U.S. Environmental Protection Agency

Indian Tribes

Penobscot Nation

Industry Associations

American Public Power Association

Edison Electric Institute

National Hydropower Association

Public Generating Pool

Western Urban Water Coalition

State Agencies

Georgia Department of Natural Resources

New York State Department of Environmental Conservation

Washington Department [*61] of Fish and Game

Licensees

Adirondack Hydro Development Corporation

Alabama Power Company and Georgia Power Company

Denver Water

Duke Power Company

Holyoke Gas & Electric Company

and Northern California Water Power Agency

Minnesota Power & Light Company

Montana Power Company

Pacific Gas and Electric Company

Portland General Electric Company

Sacramento Municipal Utility District

Seattle City Light

Reply Comments

Alabama Power Company and Georgia Power Company

City of Holyoke, Massachusetts Gas & Electric Department

Duke Power Company

Edison Electric Institute

Hydropower Reform Coalition

National Hydropower Association

Sacramento Municipal Utility District

**Guidelines on the
Applicant Prepared Environmental
Assessment (APEA) Process**

June 26, 1998

**Office of Hydropower Licensing
Division of Licensing and Compliance**

Section 2403(b) of the Energy Policy Act of 1992 (Act) allows an applicant to file a draft environmental assessment (DEA), pursuant to the National Environmental Policy Act of 1969 (NEPA), ^{1/} with its license application. The Act also requires the Federal Energy Regulatory Commission (Commission) to institute procedures to advise applicants who choose this route. This document provides general advice consistent with the statutory provisions, and with Commission Order No. 596 on alternative licensing procedures. The APEA Process is only one form of alternative licensing process. Other approaches to licensing can include the use of such elements as collaborative teams, settlements, alternate dispute resolution and mediation. Other licensing approaches include the traditional licensing process, the APEA process, and the use of third party contracting. Also, participants may devise hybrid processes using any or all of the above elements in order to provide themselves additional flexibility and promote consensus-based decisionmaking.

We've divided the process into three stages, consistent with the Commission's three stage consultation regulations. In each stage, we: 1) highlight the objective; and 2) discuss the major milestones and work products. The process, as outlined by the bullet items and arrows, provides a framework for applicants, consultants, Commission staff and other interested entities to complete the process successfully. The guidance herein is intended to be flexibly administered, to suit the circumstances of specific cases.

APPLICANT PREPARED EA (APEA) PROCESS

Commission Staff Goal and Role: 1) front-load NEPA review and other licensing requirements (i.e., 401 water quality certification, section 106-historic preservation consultation, section 7-endangered species consultation, etc.) by providing oversight for an applicant who prepares a DEA during the pre-filing consultation period; 2) facilitate a process whereby the DEA fully evaluates and balances the interests of all stakeholders involved; and 3) expedite the licensing process.

Stage 1 Consultation

Stage 1 Consultation sets the tone for the process and has two important features: participation in the activities ancillary to the licensing process and the beginning of NEPA scoping, including a site visit. Part of the licensing process includes the applicant inviting federal, state, and local agencies, nongovernmental organizations (NGOs), and other interested members of the public to participate. Once the applicant has gathered a group to participate, and gained consensus that the use of an alternative process is appropriate, the applicant and participants should prepare a communications protocol.

A communications protocol governs how the applicant and other participants, including Commission staff, may communicate with each other regarding the merits of the applicant's

^{1/} National Environmental Policy Act of 1969, as amended.

proposal, and proposals and recommendations of interested entities. It also explains how information generated throughout the APEA process, including documentation of communications, is going to be entered into the record and made available for public review. Sample communication protocols are available from Commission staff.

Once a communication protocol has been prepared and agreed on, the applicant will file a request with the Commission to approve the use of the applicant prepared EA process, along with a copy of the communication protocol and documentation that a consensus exists on the use of the process. The Commission will give public notice of the applicant's request. If the request is approved, the Commission will assign staff to work with the participants. If a federal land managing agency is involved and desires cooperating agency status in the Commission's NEPA document, a Letter of Understanding (LOU) may be prepared by staff at, or shortly before, the time the final license application and APEA is filed with the Commission.

NEPA Scoping

NEPA scoping and a site visit may begin in Stage 1. Basically, there are two options: 1) the applicant can begin the NEPA scoping by combining the 1st Stage joint agency and public meeting [required in 18 C.F.R. §4.38(b)(3) and 16.8] with a NEPA scoping meeting; or 2) the applicant can hold the 1st Stage meeting and postpone NEPA scoping until Stage 2. The Commission and the Council on Environmental Quality (CEQ) prefer to scope the issues as early as possible.

There are advantages and disadvantages of beginning NEPA scoping at the 1st Stage consultation meeting. The advantage is that the applicant and participants can focus on identifying the issues up-front to develop study plans for the project. This may help eliminate the "cart before the horse" syndrome where the applicant is requested to study everything to find out if it's an issue. Another advantage is that the applicant can ask for input regarding project alternatives and ask the meeting participants to provide information, such as existing studies, that other agencies, NGOs or the public might have. Most APEA efforts have completed NEPA scoping in Stage 1.

It may not be possible to combine NEPA scoping with the 1st Stage consultation meeting, because the participants may not be able to identify the issues owing to a lack of data.

Consider combining the NEPA scoping and 1st Stage joint meeting when:

- 1) applicants ask to begin the APEA process at the beginning of Stage 1, and
- 2) project issues and potential impacts are fairly well-known. This option is most appropriate for relicenses or unlicensed existing projects (UL's).

Here are the milestones and work products for Stage 1 Consultation

- Applicant decides to do APEA - preferably at the preliminary permit stage (original license), at the notice of intent to file stage (relicense) or earlier. 2/

2/ Applicant and interested stakeholders can request to meet with staff to discuss the process.

- Applicant generates a project mailing list (federal, state, local agencies, NGOs, and any other interested entities, such as property owners along the river).
 - Applicant meets with interested entities, gains consensus on the process, and prepares a communication protocol.
 - Applicant files with the Commission (cc: the mailing list) a request for approval of the APEA process, and the Commission issues public notice of applicant's request.
 - Commission responds to the applicant's letter, either approving or denying their request after considering comments filed in response to the Commission's notice.
- ⇒ Commission staff are selected to advise applicant
- If applicable, the Commission will execute a Letter of Understanding (LOU) with cooperating federal land-managing agencies.
 - Applicant mails Initial Stage Consultation Document (ISCD) to the mailing list and files it with the Commission. The ISCD must be comprehensive and contain adequate information to provide a basis for participants to comment and make recommendations concerning study plans, etc.

BASED ON THE AMOUNT OF AVAILABLE PROJECT INFORMATION, THE COMMISSION STAFF WILL ADVISE THE APPLICANT TO: (A) HOLD THE 1ST STAGE MEETING ONLY; OR (B) COMBINE THE 1ST STAGE AND NEPA

- (A) Applicant holds joint agency and public meeting within 60 days of mailing/filing the ISCD; conducts a site visit; Applicant requests that the agencies, NGOs, and public provide initial study requests. The Commission, in most cases, will issue a public notice of this meeting.
 - ⇒ Comments from agencies/NGOs/Public on the ISCD are due 60 days after joint meeting. Agencies, NGOs, and the public should request initial studies.
- Applicant, agencies, or others can, if needed, request dispute resolution on study requests.
- (B) Applicant prepares Scoping Document 1 (SD1) ^{3/} and mails 30 days before joint agency/public meeting. Applicant can attach Scoping Document I to the ISCD and mail together. Both must be filed with the Commission.

^{3/} SDI can be very brief since the ISCD will provide a great deal of information. However, Commission staff should have an opportunity to review all scoping documents before they are issued.

- ==> Commission issues a public notice of NEPA scoping.
- ==> Applicant holds NEPA scoping meetings (public and agency); conducts site visit.
- ==> Comments from agencies/NGOs/Public on the ISCD and SDI are due 60 days after joint meeting. This includes requests for initial studies. Comments on scoping and additional study requests are due to the Applicant, with a copy to the Commission staff.
- Applicant, agencies, or others can, if needed, request dispute resolution on study requests.
- Applicant issues Scoping Document II (SDII), and files it with the Commission.
- Applicant should apply for the 401 WQC so that the WQC agency can determine whether it requires any additional information to act on water quality certification. The applicant should also apply for Coastal Zone Management Act (CZMA) Consistency Certification at this time, if applicable.

Stage 2 Consultation

Several activities occur during Stage 2: 1) data collection and analysis [1-2 field seasons]; 2) scoping [if not completed in Stage 1]; 3) final request for additional studies pursuant to 18 C.F.R. Section 4.32 (b)(7); 4) development of the preliminary DEA and draft license application; 5) request for agency/NGO/public preliminary recommendations, terms and conditions; and 6) issuance of the draft license application and preliminary DEA for comment [as required in 18 C.F.R. §4.38(c)(4); §16.8].

Here are the milestones and work products for Stage 2.

- Applicant will copy Commission and all participants on study plans (Commission staff reviews, advises, comments).
- Applicant completes first field season of studies.

IF NEPA SCOPING WASN'T DONE IN STAGE 1, PROCEED WITH (A); IF NEPA SCOPING WAS DONE IN STAGE 1, FOLLOW (B).

- (A) Applicant provides study results to all interested participants along with SD1 which must be filed with the Commission.

- ==> In SD1, applicant issues a request for any further study recommendations.
- Applicant holds a NEPA Scoping meeting and site visit 30 days after mailing SDI. The Commission will issue a public notice of NEPA scoping.
- Comments on scoping and additional study requests are due to the Applicant, with a copy to the Commission staff, 60 days after SD1 is mailed; 30 days after the

NEPA scoping meeting. Note: Requests for additional scientific studies may be filed **after** the filing of the application, but only upon the showing of good cause.

- If a dispute regarding an additional study request can not be resolved, an applicant, agency, or NGO may request dispute resolution.
- (B) Since scoping meetings were held in Stage 1, the Applicant mails study results to all participants for 60-day review.
 - ==> Applicant issues a request for any further study recommendations 30 days after study results have been mailed and allows 60 days after issuance of that letter for agencies, NGOs, public, to request additional studies, if needed. Note: Requests for additional scientific studies may be filed **after** the filing of the application, but only upon the showing of good cause.
- If a dispute regarding an additional study request can not be resolved, an applicant, agency, or others may request dispute resolution.

ALL APPLICANTS FOLLOW THE STEPS OUTLINED BELOW

- Second field season of studies, if needed.
- Applicant begins preparing draft license application and preliminary DEA (PDEA).
- Applicant requests preliminary terms and conditions from the stakeholders to analyze in the PDEA.
- Applicant presents and analyzes its proposal for licensing/relicensing the project in the PDEA along with any preliminary terms and conditions, prescriptions and recommendations from the participants and sends to all participants for review and comment. ^{4/} The PDEA should contain the results of any additional studies that were completed in stage 2.

==>NOTE: The PDEA must include the applicant's proposal and reasonable alternatives.

==> In most cases, Commission will issue a notice of availability of the PDEA with a request for preliminary terms and conditions, prescriptions and recommendations.

- The applicant will incorporate comments, preliminary terms and conditions and recommendations from the participants into the DEA and final license application.

^{4/} To allow sufficient time for the applicant to evaluate and balance the participants' recommendations and preliminary terms and conditions, the applicant should mail the PDEA about 8 months prior to the deadline date for filing the final license application and DEA with the Commission.

==> Comments from agencies, NGOs, and the public are due to the applicant 90 days from mailing the draft license application and PDEA.

- Hold a meeting, if needed, (not later than 60 days from the disagreeing parties' letter) to discuss the applicant's proposal, analyses, etc., that were presented in the PDEA and discuss any changes (such as settlement agreements, the preliminary conditions and recommendations) to be incorporated and analyzed in the DEA and final license application.
- Prepare final application and DEA. 5/

Stage 3 Consultation

At this stage, the Commission staff conducts an independent analysis and makes a recommendation on licensing.

Here are the milestones for Stage 3.

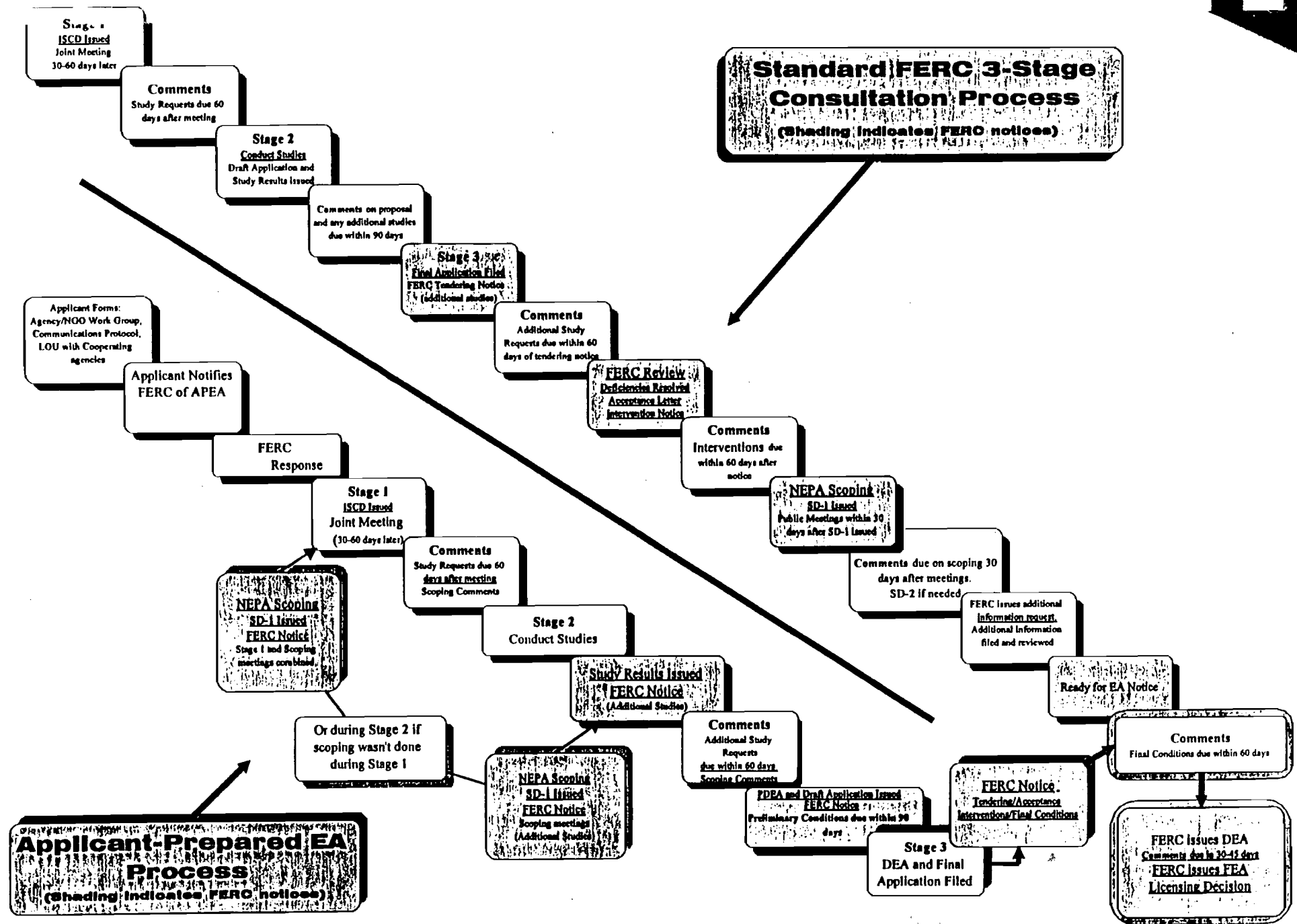
- Applicant files license application and DEA with Commission, and distributes it to the mailing list.
 - ==> Staff reviews the application and DEA for adequacy.
- The Commission issues a notice of acceptance, provides opportunity for interested entities to request intervenor status, and requests final terms, conditions [including final 401 WQC conditions] recommendations, and 4(e) conditions if applicable, from participants.
 - ==> 60-day period to file a motion to intervene with the Commission.
 - ==> 105-day comment period (60 days for agency final recommendations; 45 days for the applicant's response to agency final recommendations.
 - ==> This 60-day recommendation period is also an opportunity for agencies, NGOs, and other interested entities to comment on the applicant's license application and DEA.
- Commission staff receives final agency terms and conditions, prescriptions and participants' final recommendations.
- Commission staff modifies the DEA in light of responses to final agency and participants' recommendations.
 - ==> Staff completes comprehensive development analysis; writes Finding of Significant Impact or of No Significant Impact.
- Commission issues staff DEA.

5/ Commission staff should have the opportunity to review the DEA before it is filed.

- ==> 30-day comment period on the DEA or 45 days comment if section 10(j) issues apply.
- Commission staff revises DEA in light of comments received and the results of section 10(j) negotiations, if applicable.
 - Commission issues Final EA.
 - Commission requests Final 4(e) conditions, if applicable. 6/
 - License order issued. 7/

6 / Some 4(e) agencies have a practice of providing only preliminary terms and conditions before a final NEPA document is issued. However, Staff will work with cooperating agencies with the goal of expediting final 4(e) conditions so that they may be incorporated into the Final EA, rather than have those conditions provided afterward.

7/ Assumes 401 WQC and CZMA certification has been received/waived and no intervenors in opposition.



Traditional Process

Prefiling Consultation

Process Selection

- Applicant develops consultation mailing list

Stage One

- Applicant Issues ISCD
- Joint Meeting 30-60 days later
- Comments and Study requests due 60 days after meeting

Stage Two

- Applicant Conducts Studies
- Applicant Provides Draft License Application to Agencies, Tribes, and others
- Comments due to applicant in 90 days
- Applicant holds joint meeting within 60 days of comments if there is substantive disagreement on issues

Stage Three

- Applicant files License Application with FERC
- Application mailed to agencies and made available to public

License Processing

Application Acceptance

- FERC issues public notice that application has been filed
- Additional study requests are due within 60 days
- Commission Staff reviews application for adequacy
- Commission issues public notice that application is accepted
- Protests and interventions due 60 days after notice

NEPA Scoping

- Commission Staff prepares scoping document
- Staff conducts scoping meeting
- Comments due 30 days following meeting
- Staff determines need for additional information
- Commission issues notice that the application is ready for Environmental Review
- Comments due 60 days after notice

NEPA Document Preparation

- Staff prepares and issues draft EA or EIS
- Comments due 30-45 days later
- Commission initiates 10(j) negotiation process if needed
- Staff issues final EA or EIS

Commission Action

- Commission issues licensing decision order
- Parties have 30 days to file for rehearing

APEA Process

Prefiling Consultation

Process Selection

- Work Group Formation
- Setup Communications Protocol
- APEA Request

Stage One

- Applicant Issues ISCD / SD1
- Joint Meeting/Scoping Meeting SD2
- Comments and Study requests due 60 days after meeting

Stage Two

- Applicant Conducts Studies
- Issue request for Additional Studies
- Scoping (if not completed in stage one)
- Draft EA Document Prepared
- Request Preliminary Recommendations and Comments
- Joint meeting if substantive disagreement
- Final License Application and EA Prepared

Stage Three

- Applicant files License Application and EA
- Application and EA mailed to agencies and made available to Public

License Processing

Application Acceptance

- FERC issues public notice accepting application, Requesting Interventions, and Requesting Final Terms and Conditions.
- Comments due 60 days after notice

NEPA Document Preparation

- Staff prepares and issues draft EA or EIS
- Comments due 30-45 days later
- Commission initiates 10(j) negotiation process if needed
- Staff issues final EA or EIS

Commission Action

- Commission issues licensing decision order
- Parties have 30 days to file for rehearing

Traditional Process

General Public

Pre-Application Process

Annual Federal register listing of licenses expiring during next 6 years

Federal Register notification of existing licensee's notice of intent and of availability of project information

Newspaper notification of joint meeting and availability of first stage consultation package

Joint meeting (and possible site visit)

Written comments and recommendations to the applicant

Application Filed

Federal Register notice of application processing deadlines

Federal Register and newspaper notice of application acceptance and dates for comments

Comments to the FERC on applicant's proposal

Comments on the FERC's Scoping Document

Comments on the FERC's national environmental Policy Act documents

Resource Agencies and Indian Tribes

Pre-Application Process

Annual federal Register listing of licenses expiring during next 6 years

Notification of existing licensee's notice of intent and of availability of project information

Transmittal of applicants's first stage consultation package

Advance written notice of joint meeting

Joint meeting to initiate first stage consultation

Site visit

Written comments on resource issues, management objectives, necessary studies, and recommended methodologies

Review copy of draft application and study results

Written comments and applicant's draft application

Joint meeting to discuss areas of disagreement, if any

Application Filed

Transmittal of copy of filed application and of any deficiency correction or additional information

Comments on filed application and deficiency corrections

Mailed notification of processing deadlines

Mailed notification of application acceptance and request for comments, interventions, and recommendations

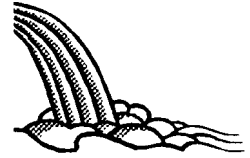
Comments on the FERC's Scoping document

Comments on the FERC's NEPA document

Section 10j negotiation

HYDROPOWER REFORM COALITION

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April 2, 1997

RECOMMENDATIONS FOR COOPERATIVE RELICENSING PROCEEDINGS

Increasingly, many Federal Energy Regulatory Commission (FERC) hydropower dam relicensings are following courses more collaborative or cooperative than the process established by FERC's regulations implementing the Federal Power Act. These cooperative approaches take various forms depending on the circumstances and participants. Generally, these proceedings offer advantages over the standard relicensing process, with increased opportunity for public input, early consideration of environmental impacts, and reduced contentiousness and litigation. These benefits, however, are not guaranteed every time an "alternative" procedure is developed, nor do the benefits come without costs.

The purpose of the following guidance is to offer recommendations for creating an effective cooperative process and to identify some of the benefits and costs of participating in one. The recommendations are based on the collective experience of the Hydropower Reform Coalition's participation in numerous FERC relicensing proceedings, including cooperative and traditional proceedings.

On December 3, 1996, FERC proposed new regulations for the relicensing of hydroelectric projects (61 Fed. Reg. 233) that would codify most elements of FERC's Applicant Prepared Environmental Assessment (APEA) process, as described in FERC's APEA policy statement released on April 7, 1996 (included as Appendix C to the proposed regulations). FERC's proposed regulations offer an alternative relicensing process whereby the pre-filing consultation process and the environmental review process are integrated, and all interested stakeholders are provided an opportunity to participate. While the APEA process and the proposed new regulations include important features of a good cooperative process, the Coalition believes several aspects need to be improved, consistent with the recommendations below.

Although cooperative proceedings vary from case to case, two fundamental features generally characterize all cooperatives. First, public interests such as state and federal resource agencies, conservation and recreation organizations, civic entities and citizens participate from the beginning of the process and take part in most aspects of the proceeding, including developing the process protocol, designing studies, and developing protection, mitigation and enhancement (PM&E) measures to be included in a new license. Second, the National Environmental Policy Act (NEPA) environmental review is integrated with the consultation stage that occurs before a license application is filed, as opposed to beginning the process after filing. A cooperative process

COALITION STEERING COMMITTEE

American Rivers • American Whitewater Affiliation • Appalachian Mountain Club
California HRC • Conservation Law Foundation • Earthjustice Legal Defense Fund • Friends of the River
Idaho Rivers United • Michigan Hydro Relicensing Coalition • Natural Heritage Institute • New England F.L.O.W.
New York Rivers United • River Alliance of Wisconsin • Trout Unlimited

can take many forms, from only technical cooperation on study design, to more extensive cooperation on all aspects of the relicensing.

The cooperative relicensing approach offers potential advantages over the standard process, including: greater participation by a broader constituency of river interests; broader and earlier consensus on the type and scope of studies, avoiding disagreements about the adequacy of study results; more extensive and thorough treatment of environmental and social issues; early identification and resolution of significant issues; broad support/endorsement of the license application package, including PM&E measures and license conditions; expedited processing of the license application by FERC; reduced risk of litigation; and a project license that more accurately reflects the collective interests of the entire stakeholder community. In short, interested parties can facilitate improved license conditions through a cooperative process both because they can have more substantive input into developing license conditions, and because the cooperative process can reduce the resources spent on the relicensing proceeding, thus freeing more resources for mitigation.

Several issues warrant consideration before entering into a cooperative proceeding, however. For example, what happens if the process breaks down due to disagreements? Does it revert to standard FERC relicensing? What constitutes a breakdown? Further, as a condition of FERC's approval of a cooperative relicensing proceeding, which grants license applicants the benefit of fast-track license processing, FERC sometimes limits requests for further information or studies (Additional Information Requests, AIRs) to a stage earlier in the process than what the existing regulations allow. The AIR limitation raises the concern that participants would be unable to ensure that application information is complete and accurate. These issues may be of more concern in some relicensing proceedings than in others, depending on the reputation and commitment of the applicant and the nature of the resources at stake.

Perhaps the most significant concern is the considerable amount of time and resources required to participate effectively in cooperative proceedings. Many participants find the demanding work load associated with typical cooperatives very difficult to sustain for the duration of the proceeding, while licensees usually have the resources to meet process demands. Because each cooperative process is developed by the participants, strategies can be designed to address concerns such as resource inequities, information deficiencies and conflict resolution.

The costs and benefits of cooperative proceedings deserve careful consideration before agreeing to participate. The conditions in each relicensing are unique -- there are different dam operations, different river conditions, different licensees, different interested parties, *etc.* The conditions of a specific relicensing may not warrant a cooperative proceeding, and interested parties may prefer to rely instead on the traditional FERC relicensing process or to create a modified FERC process with elements of a cooperative. The Coalition recommends careful consideration of all benefits and costs of a cooperative proceeding before agreeing to such a procedure in each relicensing.

¹ FERC argues that the timing of AIRs must be limited in order to meet the goal of expediting the process.

What follows are strategies recommended by the Hydropower Reform Coalition to develop an effective and fair cooperative relicensing proceeding in those relicensings where a cooperative approach is appropriate. For each recommendation, basic principles are outlined and then avenues to implement the principle (often more than one) are suggested. These avenues are options that may be appropriate, given the particular circumstances in the relicensing.

There is not a guaranteed recipe for an effective cooperative proceeding. Even if a cooperative seems appropriate for a particular relicensing, conditions that will make that cooperative proceeding effective will differ. Individual conditions can be crafted to meet the unique needs of the relicensing and to ensure that the proceeding is both effective and protective of natural resource concerns.

Recommendations for Cooperative Relicensing Proceedings

OBJECTIVE 1: Effective public participation

A. Start the cooperative process as early as possible -- It is easiest to design and implement a cooperative process during the initial stages of relicensing, preferably before the initial consultation documents are developed. **Avenue:** The Applicant should initiate the cooperative process when it publicizes its intent to file an application for a new license (this may be before the formal notice of intent to file an application).

B. Ensure all interested parties have an opportunity to participate -- In order to avoid future delays and/or conflicts due to late-arriving interests, the Applicant should ensure that all members of the public have an opportunity to participate from the beginning of the process. **Avenue:** The Applicant should notify all parties that may be affected by the project that a cooperative relicensing proceeding will take place and invite them to participate.

C. Confirm that all interested parties believe a cooperative proceeding is the preferred approach -- Even if all parties have been notified of the proposed cooperative proceeding, some parties may have reason to conclude that a cooperative proceeding is not the advisable approach for that particular relicensing. For example, they may believe that the proposed procedures will not provide them sufficient time and/or opportunity to address their concerns, or they may have grounds to conclude that the licensee's agenda for the process will not facilitate agreement. **Avenue:** Before agreeing to a cooperative proceeding, ensure that a consensus exists among all interested parties that the use of the alternative procedures is appropriate under the circumstances.

D. Provide early public involvement in application preparation -- The traditional relicensing process does not encourage public input until after the Initial Consultation Package (ICP) has been developed, which can adversely limit the breadth and depth of project evaluation. Involvement should occur earlier. **Avenue:** The Applicant should provide for public scoping of resource issues prior to developing the Initial Consultation Package. If this is not possible, the

² "Avenues" are suggested approaches to addressing the recommended principle. For some principles, more than one suggested avenue is provided. Depending on the conditions of the relicensing, the preferred avenue for addressing a principle will differ.

applicant should not seek to define the limits to project evaluation in the ICP, but defer to the results of the scoping process.

E. Ensure all parties have the resources to participate sufficiently in the process --

Commonly, the disparity among participants' resources makes it difficult to maintain a fair and balanced process. This disparity should be eliminated to the extent possible. Allowing a disparity to remain may result in needed participants dropping out of the process, which could result in disagreements later on in the relicensing. **Avenues:** (1) The Applicant should provide funding for technical consultant(s) to represent conservation and recreation groups at meetings if necessary, or to provide the groups with sufficient expertise to participate in scoping issues, the study phase, and in development of protection mitigation and enhancement (PM&E) measures. (2) The Applicant should provide funding for reasonable NGO travel and related expenses to defray the costs of the more demanding cooperative process. (3) The Applicant should provide NGO funding to cover labor expenses involved in participating in the cooperative process.

F. Provide equal access to information for all participants in the cooperative process -- Full disclosure of all relevant information is essential to a fair, effective cooperative process. **Avenue:** The Applicant should provide equal access to information, agenda setting, *etc.*, to all participants. This requires full disclosure of technical information by all participants unless privilege or proprietary claims apply.

G. Ensure sufficient opportunity to request additional information -- Many cooperative process proposals seek a waiver of Additional Information Requests (AIRs) by agencies, tribes and other interested parties after the license application has been submitted. This is potentially problematic because additional study/information needs may arise post-application, even if every effort is made to identify all study/information needs in the consultation process. In addition, the use of a cooperative proceeding does not guarantee that the licensee will agree to conduct all requested studies and that the studies will be conducted in an acceptable fashion. If there is a good-faith effort by all parties made during the consultation process to identify study/information needs, scope appropriate studies, and commit to conducting necessary studies, requests for additional studies should not have to be made and thus retaining later AIR opportunities should not be objectionable to licensees. **Avenue:** To ensure all study/information needs are satisfied, participants should not agree to waive the opportunity for Additional Information Requests.

OBJECTIVE 2: Productive and fair process

A. Achieve a clear agreement regarding the purpose(s) of the cooperative proceeding and stick to it -- There can be many different purposes for a cooperative proceeding (*e.g.*, develop mutually-agreeable study plans, develop a settlement agreement, complete a timely relicensing proceeding). The purpose(s) of the proceeding should be discussed in the beginning of the process, and all parties together should agree on the specific purpose(s). These purposes should then be used to guide the direction of the cooperative and ensure that excessive time is not spent on issues not central to those purposes.

B. Establish a predictable and fair process -- Relicensing is long and complex, involving significant, human and financial resources. In order to establish and sustain a fair and predictable process from beginning to end, all participants should participate in developing, and commit to,

general principles and process guidelines. It is important to resolve as many process-related questions as possible before addressing substantive issues. **Avenue:** At a minimum, participants should develop and adopt: (1) a mission statement and goals; (2) a well-defined process protocol, which could include forming committees responsible for specific elements of the relicensing (*e.g.*, technical issues, general process coordination); (3) rules for interacting with the media; (4) a code of conduct, and; (5) protocols for communications among relicensing participants. Care should be taken to avoid overly complex and burdensome procedures that impede resolution of substantive issues.

C. Discourage potentially divisive side agreements -- Entering into divisive "side agreements" between one or a few interests and the applicant can erode the trust and cohesion critical to an effective cooperative. **Avenue:** Gain commitment of participants not to enter into secretive or divisive side agreements. Holding caucuses (*i.e.*, holding informal side meetings involving only certain participants) is acceptable.

D. Maintain efficient, coordinated process -- Cooperative relicensings typically involve many participants and numerous parallel processes that need to be coordinated. Provisions should be made at the outset to coordinate all proceedings and facilitate communications. **Avenue:** Select by consensus an independent facilitator funded by the applicant to guide the process, including scheduling and facilitating meetings, recording meeting minutes, coordinating communications among participants, *etc.*

E. Promote broad-based decisions to minimize disputes and resulting disruptions to cooperative process -- A goal of many cooperative proceedings is to achieve what is most beneficial to all parties involved. In some proceedings, consensus-based decisionmaking can ensure the most beneficial result. In other, especially large proceedings, a consensus process would result in watered down or "least-common denominator" decisions. The participants should explicitly outline a decisionmaking process with which everyone agrees. **Avenues:** If appropriate, the goal of consensus decision-making should apply to all stages of the process, including devising studies and selecting consultants. If consensus is not appropriate, participants should develop and agree on a decisionmaking process that is designed to ensure broader-based decisions. A dispute resolution process, (either the formal FERC mechanism (18 C.F.R. § 16.8(b)(5)) or a separate process) should be established to resolve substantive disputes. If decisions are made without full consensus, the views of dissenting participants should be clearly noted in the record, including the basis for the dissenting view.

F. Avoid potential conflicts with FERC regulations -- Components of some cooperative proceedings could conflict with FERC regulations. Such complications should be avoided, if possible. If conflicts are unavoidable, FERC should be involved to seek a mutually-agreeable resolution. **Avenue:** The Applicant should notify FERC (or invite to participate) at the beginning of a cooperative process to ensure that FERC staff will not preempt the process for lack of awareness of it. FERC staff would participate in an advisory capacity to ensure the process meets FERC regulations.

G. Ensure clear communications among conservation and recreation organizations -- In most cases, a cooperative process will include numerous conservation and recreation organizations. In order to avoid complications among participating conservation and recreation

organizations, groups should collaborate. **Avenue:** Groups should discuss the manner in which they will interact in the relicensing and agree to a protocol if appropriate.

H. Participants maintain productive approach -- Perhaps more than any single element, the cooperative process depends on each participant maintaining a productive, problem solving approach to coax the process through the many difficult decisions that must be made.

J. Ensure an accurate and un-biased record is maintained throughout process -- A fair record will reduce mistrust and disputes. **Avenue:** Establish a mechanism to record meetings objectively, such as a facilitator transcribing meetings or developing unbiased minutes that are distributed in a timely fashion to participants who are given a chance to correct any inaccuracies.

OBJECTIVE 3: Effective participation by resource agencies

Resource agencies participate from beginning of process -- State and federal resource agencies should participate from the very beginning of the relicensing process to facilitate early agreement regarding study design, and measures for the protection, mitigation and enhancement of resource values. **Avenue:** Participants should define a clear role for agencies at the onset that enables full participation in the cooperative process while not inappropriately compromising their regulatory authority.

OBJECTIVE 4: Objective, accurate and comprehensive information base

A. Produce an objective, thorough and accurate NEPA document -- A strong NEPA document should provide thorough, objective analysis of the issues to substantiate the basis of mutually-agreed PM&E measures and the overall licensing decision. **Avenues:** (1) To attain the highest degree of impartiality in the NEPA process, an applicant prepared Environmental Assessment (EA) should be prepared by an independent consultant selected by the applicant and acceptable to all cooperative participants. (2) The scope of work for the studies should be developed by the cooperative team or a delegated subcommittee. (3) The bid proposal for the environmental document also should be approved by the cooperative team or a delegated subcommittee. (4) The cooperative team or a delegated subcommittee should participate in developing the NEPA document. (5) Should the parties reach an agreement on PM&E measures, the agreed-upon terms should function as the preferred alternative in the EIS or be the basis for an EA (For additional Coalition recommendations regarding adequate environmental reviews, see HRC's *Policy on Environmental Review in FERC Relicensing*).

B. Consider a full range of studies and PM&E measures -- The Federal Power Act requires informed decision-making for all uses of resources. Cooperative participants should focus on identifying studies to gather information on the full range of PM&E measures desired by participants so that an informed decision can be made. **Avenue:** All parties should submit a list of desired PM&E measures at the outset of the process. The compiled list should be used in identifying study needs.

C. Maintain a focus on developing PM&E measures -- The cooperative team should ensure that the focus of the relicensing remains on the identification of effective, mutually-agreeable PM&E measures. This will minimize time spent on unnecessary issues. **Avenue:** Discuss

possible agreements on PM&E measures early in the process to identify areas of agreement and define areas where more thorough studies are needed to resolve disputes.

D. Minimize disagreements and time delays related to identifying study information needs, designing studies and analyzing results -- Much of the disagreement and delay in the traditional relicensing process stems from differences of opinion between the applicant and agencies, tribes, and other interested parties over the studies necessary to analyze project impacts and the conclusions drawn from those studies. The cooperative process should be designed to eliminate these disagreements. **Avenue:** The cooperative team or technical resource teams created by the cooperative team should identify study information needs, study design, and analysis of study results. Outside experts could assist in an advisory capacity to resolve disputes.

E. Ensure an adequate record for FERC licensing -- Even if all interested parties reach agreement on desired operations and PM&E measures at the project, FERC must still make an independent determination that the project is in the public interest. Keeping FERC informed of progress during the cooperative process will make FERC's review faster and easier. However, FERC's public interest determination must be based on information in the record. **Avenue:** The cooperative team should establish a defined protocol to ensure that sufficient information to support recommended operations and PM&E measures is contained in the record before FERC.

Public Service Company of Colorado

Project No. 2275-001

FEDERAL ENERGY REGULATORY COMMISSION - COMMISSION

79 F.E.R.C. P61,148; 1997 FERC LEXIS 834

ORDER ISSUING SUBSEQUENT LICENSE

May 7, 1997

CORE TERMS: license, licensee, recommendation, water, bypassed, fish, wildlife, reservoir, issuance, powerhouse, forest, environmental, monitoring, staff, dam, recreational, occupancy, cultural, historic, fishery, habitat, enhancement, conveyed, mills, kwh, annual, aperture, card, certification, relicensing

PANEL:

[*1] Before Commissioners: Elizabeth Anne Moler, Chair; Vicky A. Bailey, James J. Hoecker, William L. Massey, and Donald F. Santa, Jr.

OPINION:

On December 30, 1991, the Public Service Company of Colorado (Public Service) filed an application for a subsequent license pursuant to Sections 4(e) and 15 of the Federal Power Act (FPA) n1 to continue to operate and maintain the 1.31-megawatt (MW) Salida Hydroelectric Project No. 2275, located on the South Arkansas River and on Fooses Creek, near Poncha Springs, in Chaffee County, Colorado, and in part within the San Isabel National Forest. n2 For the reasons discussed below, we will issue a subsequent license to Public Service for a term of 30 years.

-----Footnotes-----

n1 16 U.S.C. @@ 797(e) and 808.

n2 Public Service, a public utility, was issued an original license for the Salida Project on March 5, 1965, for a term expiring December 31, 1993. 33 FPC 417. The project is currently operating pursuant to a notice of authorization for continued project operation, issued January 13, 1994. 59 FR 3084 (January 20, 1994). 66 FERC P61,039. A portion of the Salida Project occupies United States lands within the San Isabel National Forest. Therefore, Section 23(b)(1) of the FPA, 16 U.S.C. @ 817(1), requires the project to be licensed.

-----End Footnotes-----

[*2]

BACKGROUND

Notice of the application has been published. Colorado Trout Unlimited (Trout Unlimited) filed an untimely motion to intervene in opposition to the application, which was granted by an unpublished notice issued December 22, 1993. Comments on the application for subsequent license were filed by the U.S. Department of the Interior (Interior), the U.S. Department of Agriculture's Forest Service (Forest Service), the Colorado Division of Wildlife (Colorado

Wildlife), and the U.S. Army Corps of Engineers.

On April 7, 1995, the Commission's staff made available for public comment a draft Environmental Assessment (EA) for the project. n3 The draft EA was prepared jointly by the Commission's staff and staff of the Forest Service, which manages the San Isabel National Forest. n4 Comments were filed by Public Service, the U.S. Fish and Wildlife Service (FWS), Colorado Wildlife, the Forest Service, the U.S. Environmental Protection Agency (EPA), Trout Unlimited, and four individuals (Fred Rasmussen, Jack Leighton, Dan Downing, and Bill Sustrich).

-----Footnotes-----

n3 See Notice of Availability of Draft Environmental Assessment, 60 FR 18806 (April 13, 1995). [*3]

n4 The Forest Service is a cooperating agency with the Commission for this relicensing proceeding (see the Council on Environmental Quality's guidelines under the National Environmental Policy Act at 40 C.F.R. @ 1501.6), as set forth in a letter of understanding between the Commission and the Forest Service executed on January 18, 1994.

-----End Footnotes-----

The Forest Service and the Commission's staff jointly prepared a final EA for the project, n5 which was issued on September 27, 1996, and is incorporated by reference in this order.

-----Footnotes-----

n5 See Final Environmental Assessment for Hydropower License, Salida Hydroelectric Project, FERC Project No. 2275-001, Colorado, prepared by FERC Office of Hydropower Licensing, Washington, D.C., and USDA Forest Service, San Isabel National Forest, Pueblo, Colorado (September 27, 1996). Notice of Availability of Final Environmental Assessment, 61 FR 51697 (October 3, 1996).

-----End Footnotes-----

Trout Unlimited [*4] is opposed to relicensing of the project because of its effect on aquatic resources of the South Arkansas River, and contends that the project, as currently operated under the original license, does not provide sufficient habitat for fish in the project's three bypassed reaches. Trout Unlimited recommends license requirements for minimum flows to the bypassed reaches, in the event that a subsequent license is issued. n6

-----Footnotes-----

n6 Of the four named individuals who filed comments on the draft EA, Mr. Rasmussen, Mr. Leighton, and Mr. Dan Downing recommend higher minimum flows. Mr. Sustrich supports the findings in the draft EA.

-----End Footnotes-----

The Forest Service has submitted mandatory license conditions pursuant to Section 4(e) of the FPA, which include requirements (also included in a

"Statement of Concurrence" between the Forest Service and Public Service, filed July 29, 1996 ("flow agreement")) for progressively increasing (depending on the results of biological monitoring), in ten- and five-year stages, minimum flows in the bypassed reaches. [*5] Interior has concurred in the flow agreement. Colorado Wildlife objects to the flow agreement's lack of a requirement to increase minimum flows during the various flow stages, depending on the quality and quantity of increases in aquatic habitat produced by the increasing minimum flows, and recommends license conditions to satisfy its concerns.

We are adopting the conditions in the flow agreement and rejecting other recommended conditions.

PROJECT DESCRIPTION

The project includes two developments: the Salida No. 1 Hydroelectric Plant and the Salida No. 2 Hydroelectric Plant. The Salida No. 1 and 2 developments are located, respectively, at river mile (RM) 14.3 and 12.0 above the confluence of the South Arkansas River and the Arkansas River. A portion of the Salida Project is located on 33 acres of United States lands within the San Isabel National Forest. n7

-----Footnotes-----

n7 Certain project lands and works (e.g., Salida No. 2 powerhouse) are not within the San Isabel National Forest. See Figure No. 2 of the Final EA.

-----End Footnotes-----

The [*6] Salida No. 1 development includes an 11.8-foot-high, 50-foot-long, concrete gravity dam, impounding the Garfield reservoir, with a capacity of three acre-feet; a 26- to 24-inch diameter, 4,806-foot-long steel gravity pipeline from Garfield dam to Fooses reservoir; a 31-foot-high, 218-foot-long earth and rockfill dam, impounding the Fooses reservoir, with a capacity of 13 acre-feet; a 30- to 28-inch diameter, 8,080-foot-long steel penstock from Fooses dam to the Salida No. 1 powerhouse, containing one Francis turbine with a 750-kilowatt (kW) generating unit; a bypassed reach approximately 2.1 miles long on the South Arkansas River; a 0.4-mile-long bypassed reach on Fooses Creek; and a tailrace discharging into the forebay of the Salida No. 2 development.

The Salida No. 2 development includes a 15-foot-high, 250-foot-long earthfill dam, impounding forebay No. 2, with a capacity of 10 acre-feet; a 34- to 28-inch-diameter, 11,668-foot-long steel penstock from the forebay to the Salida No. 2 powerhouse, containing a Pelton impulse turbine with a 560-kW generating unit; a 2.4-mile-long bypassed reach on the South Arkansas River; and a tailrace discharging into the South Arkansas River. [*7] n8

-----Footnotes-----

n8 Powerhouse No. 2 also houses an unused 240-kW generator, which is not part of the project as originally licensed. See ordering paragraph (B)(ii)(b) of the original license, which includes, as in this subsequent license, only the 560 kW generating unit in Powerhouse No. 2. 33 FPC at 419.

-----End Footnotes-----

A more detailed description of the project is contained in ordering paragraph (B)(2) of this order. Salida No. 1 and 2 developments are each operated in a run-of-river mode, and Public Service proposes to continue this mode of operation. Both plants are remotely controlled from the control room at Public Service's Cabin Creek Pumped Storage Project No. 2351, located near Georgetown, Colorado, about 150 miles north of the Salida Project. Public Service does not propose any new construction or increased generating capacity at the project.

WATER QUALITY CERTIFICATION

Under Section 401(a)(1) of the Clean Water Act, 33 U.S.C. @ 1341(a)(1), the Commission may not issue [*8] a license for a hydroelectric project unless the state certifying agency has either issued water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable time, not to exceed one year.

Public Service applied for water quality certification for the project on April 5, 1991. On April 29, 1991, the Colorado Department of Health, the state certifying agency, issued water quality certification for the project, and did not include any conditions.

APPLICANT'S PLANS AND CAPABILITIES

In accordance with Sections 10 and 15 of the FPA, n9 we evaluated Public Service's record as a licensee for consumption efficiency improvement program and for compliance history and ability to comply with the subsequent license.
n10

-----Footnotes-----

n9 16 U.S.C. @@ 803 and 808.

n10 In Order No. 513, the Commission's relicensing rulemaking proceeding, the Commission exempted licensees (such as Public Service) of minor projects (installed capacity less than 1.5 megawatts, see 18 C.F.R. @ 4.30(b)(17)) whose licenses waive Sections 14 and 15 of the FPA, from the information requirements in 18 C.F.R. @ 16.10, which corresponds to the information requirements of Sections 10 and 15 of the FPA (consumption improvement program; compliance history and ability to comply with the new license; safe management, operation, and maintenance of the project; ability to provide efficient and reliable service; need for power; transmission service; cost effectiveness of plans; and actions affecting the public). The Commission stated that it would require those licensees to provide items of information required under Section 16.10 that the Commission deems necessary to evaluate their individual applications. See 54 FR 23756 (June 2, 1989); 55 FR 10768 (March 23, 1990), FERC Stats. & Regs., Regs. Preambles 1986-1990 P 30,854 at pp. 31,444-45 (May 17, 1989).

-----End Footnotes-----

[*9]

A. Consumption Efficiency Improvement Program

(Section 10(a)(2)(C))

We have reviewed Public Service's efforts to encourage and help its customers to conserve electricity and find that the company is making a good faith effort. Public Service promotes conservation of electricity among its customers in compliance with the requirements and policies of the Colorado Public Service Commission. Public Service's plans and activities to promote and achieve conservation of electric energy and to reduce the peak demand for generating capacity include implementation of demand-side management programs, shifting of on-peak demand to off-peak hours, and operating the system more efficiently.

B. Compliance History and Ability to Comply with the Subsequent License
(Section 15(a)(3)(A))

We reviewed Public Service's record of compliance with the terms and conditions of the existing license for the Salida Project. We find that Public Service's overall record of making timely filings and compliance with its license is satisfactory, and that Public Service can provide the resources and expertise necessary to comply with the requirements of this license.

SECTION 4(e) FINDINGS AND CONCLUSIONS

Section [*10] 4(e) of the FPA n11 states that the Commission may issue a license for a project within a reservation of the United States only after making a finding that the project as licensed will not interfere or be inconsistent with the purpose for which the reservation was created or acquired. n12 Section 3(2) of the FPA n13 defines reservations as including national forests. Section 4(e) also requires that licenses issued for hydroelectric projects located within United States reservations must include all conditions that the Secretary of the department under whose supervision the reservation falls (here, the Forest Service) shall deem necessary for the adequate protection and utilization of the reservation. n14

-----Footnotes-----

n11 16 U.S.C. @ 797(e).

n12 National Forest lands are established and administered "to improve and protect the forest within the boundaries, or for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States" 16 U.S.C. @ 475 (Organic Administration Act of 1897). National Forests are also "established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." 16 U.S.C. @ 528 (Multiple-Use Sustained-Yield Act of 1960). See also the National Forest Management Act of 1976 (90 Stat. 2949). [*11]

n13 16 U.S.C. @ 796(2).

n14 On November 30, 1993, the Forest Service filed comments and conditions comprising the preliminary report of the Secretary of Agriculture pursuant to Section 4(e). On January 14, 1994, Public Service filed reply comments to the preliminary report, asserting that Section 4(e) does not apply to relicensing proceedings. Public Service has not pressed the point in these proceedings but, in any event, the Commission rejects Public Service's contention. See City of

Pasadena Water and Power Department, 46 FERC P61,004 (1989).

-----End Footnotes-----

On January 21, 1997, the Forest Service filed license conditions under Section 4(e), which are set out in the Appendix to this order. n15 They include a "general" provision, stating the purpose of including Section 4(e) conditions, "Standard Forest Service Provisions," requiring Forest Service approval of project design drawings and periodic licensee/Forest Service consultation, and "special conditions" (Articles 104 through 112 of the license), n16 requiring the licensee to:

(1) Maintain [*12] continuous bypass flows downstream of Garfield Dam, Fooses Dam, n17 and the Salida No. 2 Forebay Dam (Article 104);

(2) Develop a plan and schedule to modify the facilities needed to release the specified bypass flows (Article 105);

(3) Establish a stream improvement fund and contribute the sum of \$ 50,000 to support a program for the design, construction, and maintenance of aquatic habitat improvements in the South Arkansas River in the project area on National Forest lands (Article 106);

(4) Prepare and file with the Commission, for its approval, a plan for monitoring the effects of the minimum bypass flows and stream improvements required (Article 107);

(5) Consult with the Forest Service, Fish and Wildlife Service, and Colorado Wildlife with respect to the progress made in creating a sustainable fishery and their recommendations for the operation, flows, gauges, and other monitoring at the project and develop and file with the Commission a plan for future project operation (Article 108);

(6) Cooperate with the Forest Service and other interested participants to identify and pursue sources of funding to enhance the operation of the project as a resource of renewable energy generation [*13] consistent with environmental values (Article 109);

(7) File with the Commission for approval a plan to restore the 0.34-acre wetland area upstream of Garfield Dam that has been degraded by dredging of Garfield Reservoir (Article 111); and

(8) File with the Commission for approval a revised recreation plan for the project (Article 112). n18

-----Footnotes-----

n15 These conditions, particularly those pertaining to minimum flows, were the culmination of the negotiation process conducted pursuant to Section 10(j) of the FPA, as described later in this order. There has been considerable overlap of the Section 4(e) and Section 10(j) processes, as the issues of bypassed reach minimum flows and wetlands restoration were central to both.

n16 The "special conditions" include the provisions of the flow agreement (Articles 104 through 109). The special conditions also include a provision

(Article 110) reserving the Forest Service's right of rehearing for any changes made by the Commission to any plan resulting from Articles 104 through 109. The Commission cannot expand the limitations on the right of rehearing in Section 313 of the FPA.

-----End Footnotes-----
[*14]

-----Footnotes-----

n17 Under the flow agreement, there would be no minimum flow in this reach until ten years following the issuance of the license.

-----End Footnotes-----

-----Footnotes-----

n18 Under Section 4(e), the Commission is required to include in a license only those conditions that relate to project works located within the federal reservation in question. See Minnesota Power & Light Company, 72 FERC P61,028 (1995). As noted, certain portions of the Salida Project are located outside of the San Isabel National Forest. Consequently, our adoption of conditions submitted by the Forest Service is, for project works located outside the boundary of the San Isabel National Forest, pursuant to Section 10(a)(1), not Section 4(e).

-----End Footnotes-----

To implement the legislatively prescribed purposes of the San Isabel National Forest, the Forest Service has adopted the Pike and San Isabel National [*15] Forest, Comanche and Cimarron National Grasslands Land and Resource Management Plan (the forest plan). n19 The forest plan establishes a standard of maintaining habitat, including aquatic habitat, at a level of at least 80 percent of capacity.

-----Footnotes-----

n19 U.S. Department of Agriculture, 1985.

-----End Footnotes-----

Under current operations, the project's bypassed reaches are nearly dewatered for approximately eight and one-half months of the year (generally, from September to the middle of May), with the project's turbines using the entire river flow to generate power. n20 The only flows in the bypassed reaches are from springs or small tributaries. n21 Water is spilled over the dams into the bypassed reaches only when river flows exceed the hydraulic capacity of the project's turbines, generally from May to August, when snowmelt results in flows in excess of the hydraulic capacity. n22 Severe winter temperatures sometimes require shutting down Salida No. 1 powerhouse during intermittent low-flow periods to allow water stored in Fooses reservoir to [*16] increase sufficiently to resume operations. n23 Winter shut-downs can cause the project's powerplants to freeze and result in plant damage. n24

-----Footnotes-----

n20 See the final EA at pp. 18-19. As noted, the project's developments are operated in a run-of-river mode (outflows equaling inflows). Flows used to generate energy at Salida No 1 development are diverted to the Salida No. 2 forebay, located adjacent to Salida No. 1 powerhouse.

n21 Cree Creek and Como Creek enter the river above the Salida No. 1 powerhouse, while Lost Creek and the North Fork of the South Arkansas River augment flows in the Salida No. 2 bypassed reach. See the final EA at p. 19.

n22 The hydraulic capacity of Salida Nos. 1 and 2 are 36.5 cfs and 25 cfs, respectively.

n23 Id. at p. 18.

n24 Id. at p. 65.

-----End Footnotes-----

Condition 1 of the flow agreement provides a staged approach to implementing bypass flows that will meet the aquatic habitat standards of the forest plan by 20 years after license issuance. The conditions call for incremental [*17] increases in flows at ten, 15, and 20 years from the date of issuance of the license. Specifically, flows downstream of Fooses Dam will remain at zero for the first ten years of the license, and flows will increase to one cubic foot per second (cfs) after 10 years, to 1.5 cfs after 15 years, and to 2.4 cfs after 20 years. Downstream of Garfield Dam, flows of two cfs will begin upon issuance of the license, and will continue for 10 years thereafter, and at ten, 15, and 20 years after issuance of the license, the flows will be increased to 2.5, 3.0, and 3.4 cfs, respectively. Downstream of the Salida No. 2 Forebay Dam, 3.0 cfs must be provided for the first ten years of the license term. At 10, 15, and 20 years following the license issuance, the flow will be increased to 5, 6, and 6.9 cfs, respectively. The flow increases are required unless the results of monitoring demonstrate that lesser flows will support "commensurate progress" in creating a "sustainable fishery."

Trout Unlimited contends that the Forest Service's flow condition does not comply with the forest plan because the flows that Trout Unlimited believes would comply with the minimum aquatic habitat requirement will not [*18] be implemented until 20 years after licensing. The Forest Service responded, n25 and we agree, that since the condition will provide for reaching the forest plan habitat goals during the term of the license, and will measurably improve resource protection in the project's bypassed reaches, the condition is acceptable.

-----Footnotes-----

n25 Letter from Elizabeth Estill, Regional Forester, U.S. Forest Service, Lakewood, Colorado, November 22, 1996.

-----End Footnotes-----

We conclude that the issuance of the subsequent license for the Salida Project, and the operation and maintenance of the project pursuant to the

terms of the license including all of the conditions set forth in this order, will not interfere or be inconsistent with the purposes for which the San Isabel Forest was created.

RECOMMENDATIONS OF FEDERAL AND STATE FISH AND WILDLIFE AGENCIES AND SECTION 10(j) PROCESS

Under the provisions of Section 10(j)(1) of the FPA, n26 the Commission is required to include license conditions, based upon recommendations of state and federal fish and wildlife agencies, [*19] submitted pursuant to the Fish and Wildlife Coordination Act, n27 for the protection of, mitigation of adverse impacts to, and enhancement of fish and wildlife resources affected by the project. If the Commission believes that any such recommendations may be inconsistent with the purposes and requirements of Part I of the FPA, or other applicable law, Section 10(j)(2) of the FPA n28 requires the Commission and the agencies to attempt to resolve such inconsistencies, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies. If the Commission still does not adopt a recommendation, it must explain how the recommendation is inconsistent with Part I of the FPA or other applicable law and how the conditions imposed by the Commission adequately and equitably protect, mitigate damages to, and enhance fish and wildlife.

-----Footnotes-----

n26 16 U.S.C. @ 803(j).

n27 16 U.S.C. @ 661 et seq.

n28 16 U.S.C. @ 803(j)(2).

-----End Footnotes-----

[*20]

Three recommendations pursuant to Section 10(j) were filed by FWS and four were filed by Colorado Wildlife. The FWS 10(j) recommendations include minimum instream flows for the project's three bypassed reaches, monitoring of the flow releases, and restoration of a project-impacted wetland area at the Garfield Reservoir. n29 Colorado Wildlife's recommendations were nearly identical, except that Colorado Wildlife also recommended permanent biological monitoring of the effectiveness of the minimum flows. n30

-----Footnotes-----

n29 See Interior's letter, on behalf of FWS, filed November 29, 1993.

n30 See Colorado Wildlife's letter filed November 30, 1993. Colorado Wildlife also recommended that the licensee maintain public access to project waters for fishing, a recommendation that is outside the scope of Section 10(j). See 18 C.F.R. @ 4.30(b)(9)(ii), which excludes recommendations for "facilities, programs, or other measures to benefit recreation or tourism" from its definition of "fish and wildlife recommendation." We have, however, examined this recommendation pursuant to Section 10(a) and agree that public access should be maintained. Under the Commission's policy for recreational development at licensed projects (18 C.F.R. @ 2.7), the licensee is responsible for such access. In addition, the Forest Service's Section 4(e) Article 112 (in the

Appendix) includes conditions that will improve public access at the project.

-----End Footnotes-----

[*21]

This license contains conditions for flow monitoring (Article 107 in the Appendix and Article 403) and wetland restoration (Article 111 in the Appendix) consistent with the FWS and Colorado Wildlife recommendations. The Commission staff, however, notified FWS and Colorado Wildlife that it had preliminarily concluded that the agencies' recommendations for minimum flows and permanent monitoring stations for evaluating the viability of fish populations were inconsistent with the requirements of Part I of the FPA, because the cost of these measures would have a significant adverse effect on project economics and, therefore, on the power development benefits of the project. n31

-----Footnotes-----

n31 See the staff letters dated April 6, 1995, to Colorado Wildlife and FWS.

-----End Footnotes-----

The Commission staff subsequently met with the agencies in an attempt to resolve these issues, n32 but no final resolution was reached. Public Service, however, continued to meet with representatives of the agencies, and continued to keep the Commission apprised of [*22] developments, n33 which culminated in the flow agreement. n34 By letter dated August 19, 1996, FWS concurred with the conditions in the flow agreement, and stated that the conditions satisfy its concerns under Section 10(j).

-----Footnotes-----

n32 A meeting pursuant to Section 10(j) of the FPA was conducted by the Commission staff on September 27, 1995, in Colorado Springs, Colorado. This meeting was attended by representatives of the Commission staff, Colorado Wildlife, FWS, the Forest Service, Trout Unlimited, and Public Service.

n33 For example, by letter dated April 18, 1996, to the Director of the Commission's Office of Hydropower Licensing, Division of Project Review, the attorney for Public Service reported on progress made at a meeting held in Lakewood, Colorado, on April 12, 1996.

n34 FWS, Colorado Wildlife, and Trout Unlimited were also involved in the meetings that led to the flow agreement. The flow agreement commits Public Service to a combination of minimum flows, habitat improvements, and monitoring over the term of any license that may be issued. The flow agreement was analyzed in the final EA, and is incorporated here in Articles 104 through 109 of the license (see the Appendix). We are making minor modifications to the minimum flow provisions of the agreement. We are allowing for flows to be modified during emergency situations beyond the control of the licensee. See Article 402, which provides for such instances. We have also corrected in Article 105 what appears to be an inadvertent reference to "flows specified in Article 101," which we believe should read "flows specified in Article 104."

-----End Footnotes-----

[*23]

By letter dated August 12, 1996, Colorado Wildlife requested that the flow agreement be modified to allow for increasing or decreasing minimum flows from the programmed flows, depending on the results of monitoring at any time during the license; n35 to define more clearly the terms "sustainable fishery" and "commensurate progress;" and, on an annual basis, to collect and evaluate data on, and hold agency/licensee consultations about, whether a sustainable fishery has been established.

-----Footnotes-----

n35 Trout Unlimited, in its November 12, 1996 letter, expressed a similar concern.

-----End Footnotes-----

Under the flow agreement, the goal of a sustainable fishery will be achieved, albeit not at the rate perhaps that Colorado Wildlife would prefer. In consultation with the state and federal resource agencies and with the solicitation of comments from Trout Unlimited, flows will be increased, unless evaluation shows that increases are unnecessary, at 10, 15, and 20 years following issuance of this license. n36 Accelerating the agreement's flow increases [*24] at any time during the license term, as Colorado Wildlife recommends, would be inconsistent with the purposes and requirements of Part I of the FPA, because the cost of accelerating the increases would have a significant adverse impact on project economics, which are marginal. n37 We believe that the agreed-upon flow increases and habitat evaluation regime strike a proper balance between environmental and energy values of the Salida Project, because they provide for achieving the goal of a sustainable fishery under a schedule that allows the project to continue operating, particularly during critical low flow periods during the winter. n38

-----Footnotes-----

n36 See Articles 104 and 108.

n37 The final EA (Table 14) shows that, under existing conditions, the project's power costs \$ 35,000 a year more than alternative power. The project's power under the first stage of the flow agreement, which requires the lowest minimum flows, will cost \$ 87,000 a year more than alternative power, and under the last stage of the flow agreement, which requires the highest minimum flows, will cost \$ 135,000 a year more than alternative power. [*25]

n38 As noted, the provisions of the flow agreement were included in the Forest Service's mandatory Section 4(e) license conditions, and the Commission must accept the conditions that pertain to project works (Salida No. 1 development) within the San Isabel National Forest. Although it is not an issue here, the Commission could require more stringent conditions so long as they do not conflict with the Section 4(e) conditions. Compare Carex Hydro, 52 FERC P61,216 (1990), where the Commission found that it could include in the license for Project No. 9049 more stringent minimum flow conditions than the minimum flow conditions contained in the project's water quality certification, which automatically become license conditions pursuant Section 401(d) of the Clean Water Act.

-----End Footnotes-----

Pursuant to the flow agreement (see Article 107), a monitoring plan will be developed, in consultation with Colorado Wildlife and the other resource agencies, which includes setting criteria for evaluating the effectiveness of measures for creating a sustainable fishery. More information is required [*26] to specifically define the requirements for "sustainable fishery" and "commensurate progress," and to establish the frequency of data collection, and it is not in the public interest to delay the issuance of this license to obtain the information and make the required determinations. Such concerns are appropriately addressed in a post-licensing proceeding, as required under Article 107.

The final EA (at p. 82) estimated the cost of annual data collection at \$ 11,000 per year and went on to recommend (at pp. 94-95) rejecting annual data collection as being too costly. The impact of such costs on project economics must be considered in determining the frequency of data collection. In addition, annual consultation and evaluation may conflict with the requirements to evaluate aquatic habitat in years 9, 14, and 19 of the new license to determine whether to step up the flows to the next level. To the extent that Colorado Wildlife's recommendations for annual consultation, evaluation, and data collection are for the purposes of accelerating staged minimum flows, such recommendations are inconsistent with the license conditions imposed herein under (as appropriate) FPA Sections 4(e) and [*27] 10(a)(1).

In accordance with Section 10(j), we find that the conditions that are being included in this license for minimum flows, monitoring, and wetland restoration n39 will adequately protect, mitigate damage to, and enhance fish and wildlife resources affected by the project. Therefore, we conclude that the fish and wildlife measures required in this license comply with the requirements of Section 10(j) of the FPA.

-----Footnotes-----

n39 As noted, Article 111 requires Public Service to restore the wetland area adjacent to Garfield reservoir, which has been adversely affected by past dredging at the project.

-----End Footnotes-----

CONSISTENCY WITH COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA n40 requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. n41 Under Section 10(a)(2)(A), federal and state agencies filed 15 comprehensive plans addressing various resources in Colorado. Of these, the Commission [*28] staff identified and reviewed two plans relevant to this project, the forest plan and the Colorado Statewide Comprehensive Outdoor Recreation Plan. As described in the final EA, pp. 88-90, no conflicts were found with these plans.

-----Footnotes-----

n40 16 U.S.C. @ 803(a)(2)(A).

n41 Comprehensive plans for this purpose are defined at 18 C.F.R. @ 2.19 (1996).

-----End Footnotes-----

NATIONAL HISTORIC PRESERVATION ACT

Section 10(a)(2)(B) of the FPA n42 requires the Commission to consider the recommendations of relevant state and federal agencies exercising administration over, inter alia, cultural resources affected by licensed projects.

-----Footnotes-----

n42 16 U.S.C. @ 803(a)(2)(B).

-----End Footnotes-----

Section 106 of the National Historic Preservation Act (NHPA), n43 requires federal agencies to take into account, prior to licensing a project, the effect [*29] of the project upon properties listed or eligible for listing on the National Register of Historic Places (National Register) and to provide the Advisory Council on Historic Preservation (Advisory Council) a reasonable opportunity to comment. The Section 106 process generally includes three steps. First, the Commission, in consultation with the State Historic Preservation Officer (SHPO), must identify any historic properties that may be affected by the project. Second, a determination is made whether the project could have an effect on historic properties. Third, the Advisory Council is given an opportunity to comment. However, if the Commission and the SHPO agree that the project will have no effect on historic properties, it is not necessary to consult the Advisory Council, and no further action is necessary.

-----Footnotes-----

n43 16 U.S.C. @ 470(s).

-----End Footnotes-----

Public Service conducted a cultural resources survey and determined that the project facilities are eligible for inclusion in the National Register [*30] as the Salida Historic Hydroelectric District (the District). The SHPO and the Forest Service found the survey reports satisfactory and concurred with Public Service that the District is eligible for inclusion on the National Register. n44 The Commission agrees with the SHPO and the Forest Service.

-----Footnotes-----

n44 See Final Environmental Assessment, Project No 2275-001, at pp. 52-56 for a detailed discussion of this issue.

-----End Footnotes-----

We also agree with the SHPO that the project will have no effect on the historic properties, n45 as defined under the NHPA. n46 As noted, Public

Service does not propose any changes to the dams or powerhouse structures. Accordingly, we find that issuing a subsequent license for the Salida Project will have no effect on the historic properties, as defined under the NHPA.

-----Footnotes-----

n45 Section 800.9(a) of the regulations of the Advisory Council, 36 C.F.R. @ 800.9(a), states that: An undertaking has an effect on historic property when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of a property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered. [*31]

n46 By letter dated May 1, 1991, the SHPO[O><O] for Colorado stated his opinion that the Salida hydroelectric complex was eligible for listing in the National Register as a historic district under Criteria A (history) and C (architecture and engineering), and that relicensing of the Salida project would have no effect on these or other historic properties.

-----End Footnotes-----

Under Section 800.5(b) of the Advisory Council's regulations, where, as here, the Commission and the SHPO both find that a proposed project will have no effect on historic properties, the Commission "is not required to take any further steps in the section 106 process." n47

-----Footnotes-----

n47 36 C.F.R. @ 800.5(b). See Appalachian Power Company, 66 FERC P61,316 at pp. 61,959-61 (1994). For a more detailed discussion of this process, see Thomas Hodgson & Sons, 63 FERC P61,068 at pp. 61,298-300 (1993).

-----End Footnotes-----

Both the SHPO and the Forest Service [*32] have expressed concern that any future alteration to the project may have an effect on eligible properties. The SHPO states that in such an event, it would provide technical advice on how to avoid adverse impacts on the District. The Forest Service has requested that the licensee be required to develop a cultural resources management plan in the event that any modifications to the District are proposed.

Article 404 includes measures to ensure that any repair and routine maintenance work will be done according to approved preservation standards. It also provides that if any non-routine physical modifications (that is, not normal maintenance work) are made to the District, the licensee must prepare a cultural resources management plan after consultation with the Forest Service and the SHPO. It also requires that tours of the historic project be provided to parties interested in the early development of the hydroelectric power industry. In addition, any land-clearing or land-disturbing activity that occurs at the project has the potential to uncover previously unidentified archeological or historic properties; Article 405 includes measures for avoiding and mitigating effects on such [*33] properties.

COMPREHENSIVE DEVELOPMENT

Sections 4(e) and 10(a)(1) of the FPA n48 require the Commission, in acting on applications for license, to give equal consideration to the power development purposes and the purposes of energy conservation, protection, mitigation of damage to, and enhancement of fish and wildlife, the protection of recreational opportunities, and the preservation of other aspects of environmental quality. Any license issued shall be such as in the Commission's judgment will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for beneficial public uses. The decision to license this project, and the terms and conditions included herein, reflects such consideration.

-----Footnotes-----

n48 16 U.S.C. @@ 797(e) and 803(a)(1).

-----End Footnotes-----

As noted, Trout Unlimited opposes the application absent its recommended minimum flows to the project's bypassed reaches. Trout Unlimited's recommended flows are higher than any other minimum flows recommended in this proceeding [*34] and twice as high as the flows required in the final stage of the flow agreement (Article 104). n49 Trout Unlimited believes that flows should be required beyond that which is required for ensuring survival of the fishery. n50 However, while Trout Unlimited's recommended flows would produce a dramatically improved fishery in the project's bypassed reaches, n51 such flows would cut the project's energy production in half from that produced under the flow agreement, as required in Article 104. n52 In light of the benefits from issuing a subsequent license for Project No. 2275 (generating electricity from a renewable resource and providing recreational opportunities), we conclude that the benefits to be derived from Trout Unlimited's increase in minimum flows beyond those required under Article 104 are substantially outweighed by the heavy adverse impact on the project.

-----Footnotes-----

n49 See the final EA at pp. 31-33 and Table 5.

n50 If Trout Unlimited's minimum flows are required, Public Service would have to shut down both developments during the winter (id. at p. 65), and the project's power would cost \$ 191,000 a year more than alternative power (id. at Table 14). In its motion to intervene, Trout Unlimited proposed a minimum flow to the project's bypassed reaches of the median August flows or inflow to the reservoirs, whichever is less. It recognizes the significant adverse impacts of requiring such a year-round flow, but argues that there is no demonstrable need for the project. [*35]

n51 Id. at p. 39.

n52 Id. at Table 10.

-----End Footnotes-----

Under our approach to evaluating the economics of hydroelectric projects, as set forth in Mead Corp., n53 the Commission employs an analysis that uses current costs to compare the costs of the project to the cost of likely

alternative power, with no forecasts concerning potential future inflation, escalation, or deflation beyond the license issuance date.

-----Footnotes-----

n53 72 FERC P61,027 (1995).

-----End Footnotes-----

The purpose of our analysis is to provide a general estimate of the potential power benefits and the costs of a project and reasonable estimates of the cost of alternatives to project power. The estimate helps to support an informed decision concerning what is in the public interest with respect to a proposed license.

Under a new 30-year license, the Salida Project, as it operates now, would produce about 7.68 gigawatthours (GWh) of energy annually at a cost of about \$ 240,000 [*36] (31.2 mills/kWh). The current annual value of the project's power would be about \$ 205,000 (26.7 mills/kWh). We base this value on Public Service's current avoided energy cost of 16.2 mills/kWh and a capacity value of \$ 92.1/kW-year. n54

-----Footnotes-----

n54 Public Service's estimate of avoided energy and capacity costs was filed on March 9, 1994.

-----End Footnotes-----

To determine whether the project, as it now operates, is economically beneficial, we subtract the project cost from the value of the project power. We find that the project would not be economically beneficial, costing about \$ 35,000 annually (4.5 mills/kWh) more than the alternative.

As licensed with the conditions we have adopted, the annual cost of the project will be between \$ 278,000 (39.0 mills/kWh) n55 and \$ 305,000 n56 (49.8 mills/kWh), depending on whether minimum flows in the bypassed reaches are stepped-up after license year 10 under the flow agreement. The value of the project's power would be \$ 191,000 (26.8 mills/kWh) if the flows aren't stepped-up after license year 10 and [*37] \$ 166,000 (27.1 mills/kWh) if they are.

-----Footnotes-----

n55 This scenario assumes the initial instream flow would be adequate to establish a self-sustaining fishery, so that the flows are not stepped up during the license term. With these flows, the project would generate about 7.13 GWh annually.

n56 This scenario assumes all the possible agreed-to staged increases in flows would occur over the license period. In this case, Public Service would need to shut down the powerplants during the winter and winterize the powerplants for the last 20 years of a new license. The project would generate 7.13 GWh for years 1 to 10, 6.4 GWh for years 11 to 15, 5.8 GWh for years 16 to 20, and 5.46 GWh for years 21 to 30.

-----End Footnotes-----

Subtracting the project cost from the value of the project power, we find the project will not be economically beneficial: if the flows aren't stepped-up, power from the project will cost \$ 87,000 (12.2 mills/kWh) more than alternative power; if the flows increase over the license term, power from the project will cost \$ 139,000 [*38] (22.7 mills/kWh) more than alternative power. n57

-----Footnotes-----

n57 In light of the project's marginal economic picture, the Commission staff also examined the potential cost of decommissioning the project. The staff estimated that the project could be decommissioned, leaving the project structures intact, at an annual cost of about \$ 81,000. See Table 14 of the final EA. Decommissioning with removal of project structures would cost \$ 312,000 annually. *Id.* Trout Unlimited requests that we include a license article requiring Public Service to establish a project retirement fund. The Commission examines decommissioning issues on a case-by-case basis and considers such factors as whether the life of the project may end within the license term and whether the financial viability of the licensee indicates that the licensee would be unable to meet likely levels of expenditures without some form of advance planning. See the Commission's Policy Statement on Decommissioning at Relicensing, 60 FR 339, 346-347 (Jan. 4, 1995); 111 FERC Stats. & Regs., Regs. Preambles P 31,011 at pp. 31,233-34 (Dec. 14, 1994). In light of the flow agreement (which spans the 30-year term of the license), we do not believe that the project is likely to be decommissioned during the license term. But, if it is, we believe that Public Service, given its status as a public utility, would be financially capable of paying such decommissioning costs without advance planning.

-----End Footnotes-----

[*39]

In any event, it is Public Service that must make the business decision whether to pursue the license in view of what appear to be the net economic costs of the project. As we explained in *Mead*, project economics is only one of the many public interest factors we consider in determining whether or not, and under what conditions, to issue a license. n58 Based upon the record in this proceeding, we conclude that it is in the public interest to issue a subsequent license to this project, conditioned as appropriate under Section 10(a)(1) of the FPA, and leave to the licensee the decision whether to continue to operate the project in light of the economic analysis herein.

-----Footnotes-----

n58 In analyzing public interest factors, we take into consideration the fact that hydroelectric projects offer unique electric utility system operational benefits, and that projects may provide substantial benefits not directly related to utility operations, benefits that would be lost if a license were denied solely on economic grounds. See, e.g., *City of Augusta, et al.*, 72 FERC P61,114 n. 57 (1995).

-----End Footnotes-----

[*40]

LICENSE TERM

Section 15(e) of the FPA n59 specifies that any license shall be for a term which the Commission determines to be in the public interest, but not less than 30 years nor more than 50 years. The Commission's policy is to establish 30-year terms for projects with little or no proposed redevelopment, new construction, new capacity, or environmental mitigation and enhancement measures; 40-year terms for projects with a moderate amount of proposed redevelopment, new construction, new capacity, or mitigation and enhancement measures; and 50-year terms for projects with proposed extensive redevelopment, new construction, new capacity, or mitigation and enhancement measures.

-----Footnotes-----

n59 16 U.S.C. @ 808(e).

-----End Footnotes-----

This subsequent license does not authorize construction of new capacity or project redevelopment, but the environmental mitigation and enhancement costs of the subsequent license for the project could warrant a term longer than 30 years if minimum flows are stepped up after license [*41] year ten. However, because this is uncertain, the license will be for a term of 30 years effective the first day of the month in which the license is issued. Should the stepped-up flows be required, the licensee can at that time request that we amend its license to extend the license term. n60

-----Footnotes-----

n60 Public Service argues that its cost of relicensing the project, in addition to the costs of environmental mitigation measures, justifies a 50-year term for the new license. We consider relicensing costs in determining project economic benefits, but the relevant parameters that we bear on our determination of the term of the license are project redevelopment and environmental mitigation and enhancement costs.

-----End Footnotes-----

SUMMARY OF FINDINGS

Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the final EA. Issuance of this license is not a major federal action significantly affecting the quality of the human environment. [*42]

The Salida Hydroelectric Project will be safe if operated and maintained in accordance with the requirements of this license.

In light of all of the above, including our review of the environmental analysis of the proposed project, we conclude that issuing a subsequent license for the Salida Hydroelectric Project with the requirements included herein will be best adapted to a comprehensive plan for developing the South Arkansas River and Fooses Creek for beneficial public purposes.

The Commission orders:

(A) This license is issued to Public Service Company of Colorado (licensee) for a period of 30 years, effective the first day of the month in which this license is issued, to operate and maintain the Salida Hydroelectric Project No. 2275. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary generally shown by:

Exhibit	FERC Drawing No.	Showing
G-1	2275-1004	Vicinity Map
G-2	2275-1005	Water Conduits
G-3	2275-1006	Water Conduits
G-4	2275-1007	Property Details
G-5	2275-1008	Power line and Communications Circuit
G-6	2275-1009	Power line and Communications Circuit

[*43]

(2) Project works consisting of: The existing project consists of the Salida No. 1 and Salida No. 2 developments.

The Salida No. 1 development consists of: (a) an 11.8-foot-high, 50-foot-long, reinforced concrete gravity dam on the South Fork Arkansas River, impounding the 3-acre-foot Garfield reservoir; (b) a 26- to 24-inch-diameter, 4,806-foot-long, gravity pipeline, of riveted and welded steel, from Garfield dam to Fooses reservoir; (c) a 31-foot-high, 218-foot-long, earth and rock dam on Fooses Creek, impounding the 13-acre-foot Fooses reservoir; (d) a 30- to 28-inch-diameter, 8,080-foot-long penstock, extending from Fooses dam to the Salida No. 1 powerhouse; and (e) Powerhouse No. 1, of brick construction, containing one 1,100-horsepower turbine and one generator having a capacity of 750 kilowatts.

The Salida No. 2 development consists of: (a) a 15-foot-high, 250-foot-long earthfill dam with a concrete core wall on the South Fork, Arkansas River, impounding the 10-acre-foot forebay No. [*44] 2; (b) a 34- to 28-inch-diameter, 11,668-foot-long welded steel penstock, extending from the forebay to the Salida No. 2 powerhouse; and (c) Powerhouse No. 2, of brick construction, containing one 775-horsepower turbine unit and a generator with a capacity of 560 kilowatts.

The project works generally described above are more specifically described and shown in the following parts of the application for subsequent license, filed December 30, 1991:

Exhibit A: Section A(1), Description of Project and Mode of Operation.

Exhibit F:

Exhibit	FERC Drawing No.	Showing
F-1	2275-1001	Floor Plans and Elevations,

79 F.E.R.C. P61,148; 1997 FERC LEXIS 834, *44

Salida No. 1 and Salida No. 2

F-2 2275-1002 Profiles - Gravity Pipeline,
Pressure Pipeline Nos. 1 and 2

F-3 2275-1003 Reservoir Details

(3) All of the structures, fixtures, equipment, or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits A, F, and G described above are approved [*45] and made part of the license only to the extent that they show the general location and nature of the project works.

(D) Pursuant to Sections 4(e) and 10(a) of the Federal Power Act, as appropriate, and consistent with the above discussion of Articles 105 and 402, this license is subject to the conditions submitted by the United States Department of Agriculture, Forest Service, under Section 4(e), as those conditions are set forth in the Appendix to this order.

(E) The following sections of the Federal Power Act are waived and excluded from the license for this minor project: 4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the FPA that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(F) This license is subject to the articles set forth in Form L-16 (October 1975), entitled "Terms and Conditions of License for Constructed Minor Project Affecting Lands [*46] of the United States", 54 F.P.C. 1792, 1888-1896, and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges, as determined in accordance with the provisions of the Commission's regulations in effect from time to time, effective the first day of the month in which this order is issued, for the purposes of:

(a) Reimbursing the United States for the cost of administering Part I of the Federal Power Act. The authorized installed capacity for that purpose is 1,310 kilowatts. Under the regulations currently in effect, a project with an authorized installed capacity of less than or equal to 1,500 kilowatts is not assessed an administrative annual charge.

(b) Recompensing the United States for use, occupancy, and enjoyment of 33 acres of its lands, other than for transmission line right-of-way.

Article 301. Within 45 days of the issuance of the license, the licensee shall file a complete original set and two complete duplicate sets of aperture cards of all the approved drawings, and a third, partial duplicate set of aperture cards showing only the Exhibit G drawings. The set of originals must [*47] be reproduced on silver or gelatin 35 mm microfilm. The duplicate sets are copies of the originals made on diazo-type microfilm. All microfilm must be mounted on type D (3-1/4" x 7-3/8") aperture cards. The licensee shall submit

two copies of Form FERC-587 with aperture cards.

Prior to microfilming, the FERC Drawing Number shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number must be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC Exhibit (e.g., F-1, G-1, etc.), Drawing Title, and date of issuance of this license must be typed on the upper left corner of each aperture card.

The complete original set and one complete duplicate set of aperture cards, and one copy of the Form FERC-587, must be filed with the Secretary of the Commission, ATTN: Division of Licensing and Compliance/ERB. The second complete set of aperture cards shall be filed with the Commission's San Francisco Regional Office. The third, partial duplicate set of aperture cards (Exhibit G only) and the remaining copy of Form FERC-587 shall be filed with the Bureau of Land Management Office at the following [*48] address:

State Director
Colorado State Office
Bureau of Land Management
Branch of Realty Programs (CO-932)
ATTN: FERC Withdrawal Recordation
2850 Youngfield Street
Lakewood, CO 80215-7076

Article 401. The licensee shall operate the project in a run-of-river mode to minimize disturbance of sediments in the project reservoirs. The licensee shall at all times act to minimize the fluctuation of the project's reservoirs' surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream from the project's tailraces, approximate the sum of inflows to the respective reservoirs.

Run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee, and for short periods upon mutual agreement between the licensee and the U.S. Forest Service, the Colorado Division of Wildlife, and the U.S. Fish and Wildlife Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 402. The minimum flows required by Article 104 (in the Appendix) may be temporarily modified if required [*49] by operating emergencies beyond the control of the licensee, and for short periods upon agreement between the licensee and the U.S. Fish and Wildlife Service, the Colorado Division of Wildlife, and the U.S. Forest Service. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. The monitoring plan developed in accordance with Article 107 (in the Appendix) shall include installation of equipment to continuously monitor the minimum flows required in Article 104 (in the Appendix).

Article 404. The licensee shall conduct: (1) any maintenance and routine repair work on the project facilities that comprise the Salida Historic Hydroelectric District (District) in accordance with the Secretary of the Interior's Standards and Guidelines for Historic Preservation Work and

Standards for Rehabilitation; and (2) tours of the District facilities to parties interested in the history of the Salida area and early development of the hydroelectric industry.

If any physical modifications of project facilities in the District are proposed that are not routine maintenance or repair work, the licensee [*50] shall: (1) consult with the Colorado State Historic Preservation Officer (SHPO) and the Forest Service-Pike and San Isabel National Forests (FS); (2) prepare a cultural resources management plan based on the recommendations of the SHPO and FS and on the Secretary of the Interior's Guidelines for Archeology and Historic Preservation, to include as necessary documentation of the affected District facilities according to the documentation standards of the Historic American Engineering Record; and (3) file the plan for Commission approval, together with the written comments of the SHPO and the FS on the plan.

The Commission may require changes to the cultural resources management plan based on the filings. The licensee shall not implement a cultural resources management plan or begin any proposed modification of District facilities until informed by the Commission that the requirements of this article have been fulfilled.

Article 405. If archeological or historic sites are discovered during project operation or any future construction activities at the project, the licensee shall: (1) consult with the Colorado State Historic Preservation Officer (SHPO) and the Forest Service-Pike [*51] and San Isabel National Forests (FS); (2) prepare a cultural resources management plan and a schedule to evaluate the significance of the sites and to avoid or mitigate any impacts to any sites found eligible for inclusion in the National Register of Historic Places; (3) base the plan on the recommendations of the SHPO and the FS and on the Secretary of the Interior's Guidelines for Archeology and Historic Preservation; (4) file the plan for Commission approval, together with the written comments of the SHPO and the FS on the plan; and (5) take the necessary steps to protect the discovered sites from further impact until notified by the Commission that all of these requirements have been satisfied.

The Commission may require cultural resources survey and changes to the cultural resources management plan based on the filings. The licensee shall not implement a cultural resources management plan or begin any land-clearing or land-disturbing activities in the vicinity of any discovered sites until informed by the Commission that the requirements of this article have been fulfilled.

Article 406. Within 90 days of providing the funds specified in Article 106 (in the Appendix), the [*52] licensee shall file with the Commission documentation showing: (1) that the funds were paid to either the U.S. Forest Service or the Colorado Division of Wildlife; and (2) how the funds were used.

Article 407. The recreation plan developed in accordance with Article 112 (in the Appendix) shall include[O>d<O] measures for providing access for the disabled at the Salida No. 2 forebay for bank fishing.

Article 408. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior

Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance [*53] for, any interests that it has conveyed under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline; and (4) food plots and other [*54] wildlife enhancement. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering [*55] the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges or roads where all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee

shall file three copies of a report briefly describing for each conveyance made under this [*56] paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile (measured over project waters) from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit [*57] E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from project waters at normal surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 60 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) [*58] Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include the following covenants running with the land: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project; and (iii) the

grantee shall not unduly restrict public access to project waters.

(4) The Commission reserves the right [*59] to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article. for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the [*60] public lands and reservations of the United States included within the project boundary.

(G) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(H) This order is final unless a request for rehearing is filed within 30 days of the date of its issuance, pursuant to Section 313(a) of the Federal Power Act. The filing of a request for rehearing does not operate as a stay of the effective date of this license or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing of this order shall constitute acceptance of the license.

By the Commission.

APPENDIX:
Appendix

FOREST SERVICE SECTION 4(E) CONDITIONS

I. GENERAL

License articles contained in the Commission's Standard Form L- 16 (Terms and Conditions of License for Constructed Minor Project Affecting Lands of the United States, revised October 1975) issued by Order No. 540, dated October 31, 1975, cover general requirements that the Secretary of Agriculture, [*61] acting by and through the Forest Service, considers necessary for adequate protection and utilization of the land and resources of the San Isabel National Forest. For the purposes of section 4(e) of the Federal Power Act (16 U.S.C. 797(e)), the purposes for which National Forest System lands were created or acquired shall be the protection and utilization of those resources enumerated

in the Organic Administration Act of 1897 (30 Stat.11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved forest plans prepared in accordance with the National Forest Management Act. Therefore, pursuant to said section 4(e) of the Federal Power Act, the following conditions covering specific requirements for protection and utilization of National Forest System lands shall also be included in any license issued.

II. STANDARD FOREST SERVICE PROVISIONS

Condition [*62] No. 101 - Forest Service Approval of Final Design

Before any construction of the project occurs on National Forest System land, the licensee shall obtain the prior written approval of the Forest Service for all final design plans for project components which the Forest Service deems as affecting or potentially affecting National Forest System resources. The licensee shall follow the schedules and procedures for design review and approval specified in the FERC License. As part of such prior written approval, the Forest Service may require adjustments in final plans and facility locations to preclude or mitigate impacts and to assure that the project is compatible with on-the-ground conditions. Should such necessary adjustments be deemed by the Forest Service, the Commission, or the licensee to be a substantial change, the licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to section 4(e) of the Federal Power Act.

Condition No. 102 - Approval of Changes After Initial Construction

Notwithstanding [*63] any license authorization to make changes to the project, the licensee shall get written approval from the Forest Service prior to making any changes in the location of any constructed project features or facilities, or in the uses of project lands and waters, or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the Forest Service, and at least 60 days prior to initiating any such changes or departure, the licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The licensee shall file an exact copy of this report with the Forest Service at the same time it is filed with the Commission. This article does not relieve the licensee from the amendment or other requirements of Article 2 or Article 3 of this license.

Condition No. 103 - Consultation

Each year during the 60 days preceding the anniversary date of the license, the licensee shall consult with the Forest Service with regard to measures needed to ensure protection and development of the natural resource values of the project area. Within [*64] 60 days following such consultation, the Licensee shall file with the Commission evidence of the consultation with any recommendations made by the Forest Service. The Commission reserves the right, after notice and opportunity for hearing, to require changes in the project and its operation that may be necessary to accomplish natural resource protection.

III. SPECIAL CONDITIONS

Article 104. Instream Flow Conditions

The licensee shall provide the staged continuous bypass flows specified herein.

(A) Salida 1

(1) For a term of 10 years following issuance of the license, the Licensee shall provide a continuous bypass flow of 2.0 cfs downstream of Garfield Dam.

(2) At 10, 15, and 20 years following issuance of the license, the bypass flow downstream of Garfield Dam shall be increased to, but not exceed, 2.5, 3 and 3.4 cfs, respectively, unless it is determined, based on the results of monitoring studies to be performed by the licensee in consultation with the Forest Service and participating resource agencies as in Article 107 - Monitoring, that lesser flows are adequate to support commensurate progress in creating a sustainable fishery. At the same time and under the same procedures, [*65] bypass flows downstream of Fooses Dam shall be provided at 1, 2 and 2.4 cfs.

(B) Salida 2

(1) For a term of 10 years following issuance of the license, the licensee shall provide a continuous bypass flow of 3.0 cfs downstream of the Salida 2 Forebay Dam.

(2) At 10, 15, and 20 years following issuance of the license, the bypass flow downstream of Salida 2 Forebay Dam shall be increased to, but not exceed, 5, 6 and 6.9 cfs, respectively, unless it is determined, based on the results of monitoring studies to be performed by the licensee in consultation with the Forest Service and participating resource agencies as in Article 107 - Monitoring, that lesser flows are adequate to support commensurate progress in creating a sustainable fishery.

Article 105. Bypass Flow Implementation.

Within 120 days of the issuance of this license, the licensee shall file with the Commission, for approval, a plan, and schedule to modify any facilities needed to release the bypass flows specified in Article 101. If permanent monitoring equipment is not expected to be in place when the release structures are operational, the plan shall include interim measures to monitor flow releases.

The plan shall [*66] include, but not be limited to, the following: (1) a description of any modifications to project facilities needed to provide the specified bypass flows; (2) interim methods, if needed, that ensure monitoring of released flows; and (3) a schedule for implementing the plan.

The licensee shall prepare the plan after consulting with the U.S. Fish and Wildlife Service, the Colorado Division of Wildlife and the Forest Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies'

comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific information.

The Commission reserves the right to require changes in the plan. No ground-disturbing activities necessary to implement this plan shall begin until the licensee is notified by the Commission that the plan is approved. [*67] Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 106. Habitat Improvements.

Upon notification from the Forest Service that a stream improvement plan has been established, the licensee shall establish a stream improvement fund and contribute \$ 50,000 thereto in support of a program for the design, construction and maintenance of aquatic habitat improvements in the South Arkansas River in the project area. The stream improvement program will be conducted and maintained on National Forest System lands by the Forest Service. On all other lands, the stream improvement program will be conducted and maintained by the Colorado Division of Wildlife in conjunction with Trout Unlimited and other interested participants.

Article 107. Monitoring.

Within 120 days after issuance of the license, the licensee, in consultation with the Forest Service, Colorado Division of Wildlife, and the U.S. Fish and Wildlife Service shall prepare and file for Commission approval a plan for monitoring the effects of the stream improvements and minimum flows required under the license to establish a sustainable fishery. The licensee [*68] shall also solicit comments from Trout Unlimited. Such plan shall include: (1) a plan and schedule for installing mechanisms to monitor bypass flows downstream of Garfield Reservoir and downstream of Salida 2 Forebay Reservoir; (2) studies to be undertaken to monitor the development of a sustainable fishery; and (3) criteria for evaluating the effectiveness of measures undertaken in creating a sustainable fishery, including biomass on a comparable reach of stream, population characteristics, and other relevant factors, as related to appropriate standards and goals under the Pike and San Isabel National Forest Land and Resources Management Plan (dated October 18, 1984).

The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project specific information.

Article 108. Evaluation.

At nine, fourteen and nineteen years after issuance of the license, the licensee shall consult with the Forest Service, U.S. Fish and Wildlife Service and Colorado Division of Wildlife with respect to the [*69] progress made in creating a sustainable fishery and their recommendations for the operations, flows, gages and other monitoring at the Project beginning in the following year. The licensee shall also solicit comments from Trout Unlimited. The licensee shall: develop and circulate a draft plan for future Project

operation; provide agencies 60 days for comment, and file a final plan for Commission approval no later than 180 days prior to the end of that year. The licensee shall include with the plan documentation of consultation, copies of agencies' comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. If the licensee does not adopt an agency recommendation, the filing shall include the Licensee's reasons based on project specific information.

Article 109. Outside Funding.

The licensee shall cooperate with the Forest Service and other interested participants in identifying and pursuing sources of funding that may be or become available to enhance the operation of the Project as a source of renewable energy generation consistent with environmental [*70] values.

Article 110. Right to Rehearing

Any changes made by the Commission to any plan resulting from Articles 104-109 are to be reviewed by the licensee and the Forest Service to ensure the changes are within the scope and intent of the 1996 negotiated agreement. If either the licensee or the Forest Service find that the 1996 agreement (license articles 104-109) is substantially altered by such changes, the licensee and the Forest Service reserve the right to rehearing.

Article 111. Wetland Restoration

Within one year of issuance of this license, the licensee shall file with the Commission, for approval, a plan to restore the 0.34-acre wetland area upstream of Garfield dam that has been adversely affected by past dredging.

The plan shall include:

- (1) the measures described on pages 26 and 27 of the licensee's March 18, 1993 additional information filing;
- (2) a plan for monitoring the effectiveness of the measures to restore the wetland;
- (3) water quality protection, and soil erosion and sedimentation control measures;
- (4) criteria for determining when future dredging of Garfield reservoir is needed; and
- (5) a schedule for restoring the wetland and for filing the results [*71] of the monitoring program.

The licensee shall prepare the plan after consulting with the U.S. Fish and Wildlife Service, the Forest Service, and the Colorado Division of Wildlife. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the plan accommodates the agencies' comments. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the

plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing activities shall begin until the Commission notifies the licensee that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including changes required by the Commission.

Article 112. Recreation Plan

The licensee, within one year from the date of issuance of this license, shall file with the Commission for approval, a revised recreation plan [*72] for the Salida Project. The plan shall include, at a minimum, the following:

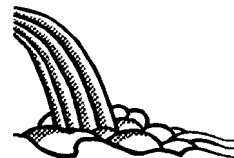
- (1) Additional designated public parking at project impoundments;
- (2) Provision of a unisex, one-vault toilet at Fooses reservoir; and
- (3) Painting the gatehouse at Fooses reservoir a color that better blends with the building and with the surrounding landscape.

The plan shall be prepared after consultation with: the Forest Service, the Colorado Division of Wildlife, and Colorado Trout Unlimited. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the consulted entities, and specific descriptions of how the entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No modification or enhancement activities covered by the plan shall begin until the licensee [*73] is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan including any changes required by the Commission.

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ENVIRONMENTAL "BASELINE" IN FERC RELICENSING

excl. part
May 1, 1997

I. Introduction

Cumulative impacts
part of part

This paper is intended to provide guidance to Hydropower Reform Coalition members and others on establishing the need for the Federal Energy Regulatory Commission (FERC) to evaluate the river environment that existed prior to dam construction in order to make an informed decision at relicensing that meets the legal standards of both the Federal Power Act (FPA) and the National Environmental Policy Act (NEPA). It is organized in three sections. The first section sets forth FERC's "baseline" policy as stated in its Declaratory Order in the Cushman proceeding, its supporting rationale, and the practical consequences of FERC's policy. The second section defines the issues encompassed by the term "baseline" to provide the context for further analysis. The third section identifies and explains the legal requirements of the FPA and NEPA that obligate FERC to analyze the pre-project environment¹ in relicensing proceedings and the reasons why that information is essential to an informed licensing decision.

II. FERC's "Baseline" Policy

FERC's orders in Public Service Co. of New Hampshire, 68 FERC ¶ 61,177 (1994), and City of Tacoma, 67 FERC ¶ 61,152 (1994) and 71 FERC ¶ 61,381 (1995), establish the Commission's "baseline" policy: For all relicensing proceedings under FPA, the appropriate "baseline" for determining environmental impacts, action alternatives, and protection, mitigation, and enhancement measures is the existing river environment with the project operating in its present mode. The Commission squarely rejected arguments that the FPA and/or NEPA compel use of a pre-project environmental "baseline." The Commission did acknowledge, however, that historic resource conditions may be relevant to assessing cumulative project impacts.

¹ The term "pre-project" environment does not refer to a single point in time. It covers the period from before significant human impact to the time of project construction. The inquiry into pre-project conditions should yield information about the natural river environment and significant non-project impacts that are essential to understanding cumulative impacts and to developing an effective restoration strategy, as explained in more detail in this paper.

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The practical consequences in relicensing of the Commission's "baseline" policy include:

- (1) an applicant is not obligated to examine pre-project environmental conditions when applying for a new license;
- (2) FERC will not require an applicant to mitigate during a subsequent license term for environmental damage related to project construction and operation previous license term;
- (3) FERC will consider pre-project conditions only in proceedings where it deems such information to be relevant to assessing continuing or cumulative impacts;
- (4) FERC's "balancing" of power and environmental values is, from the start, weighted heavily in favor of power production because significant project-related environmental degradation is excluded from consideration (existing river conditions are the "no action" alternative against which all alternatives are compared); and
- (5) protection, mitigation, and enhancement measures included in a subsequent license may be directed at "enhancing" aspects of the degraded ecosystem (e.g., improving warm-water fisheries in dams behind reservoirs), instead of restoring the ecological processes essential for river health.

Another consequence which flows logically from FERC's "baseline" policy is that an environmental impact statement (EIS) will not be required unless there are significant operational or structural changes proposed by the applicant.

III. Defining "Baseline"

There is no statutory obligation under either the FPA or NEPA for FERC to use an environmental "baseline" when licensing hydroelectric projects, nor is the term "baseline" defined in either statute. FERC uses the term to describe the point in time from which environmental analysis begins. This starting point is significant for two reasons. First, it determines the quantity or level of environmental impacts attributable to the project (*i.e.*, impacts are much greater when viewed from a pre-project perspective as opposed to a present-day perspective), and, consequently, the amount of mitigation that FERC requires.

For example, in the DEIS for the Cushman relicensing, FERC concludes that increasing the minimum instream flow from 30 cfs to 100 cfs, as proposed by the utility, would "enhance" salmon habitat. In fact, it would continue to limit salmon habitat, although to a lesser degree, because the average flow without the project would be 760 cfs. Thus, the current condition baseline turns continuing resource losses into resource "gains." Moreover, in some proceedings, FERC has used such "gains" to justify more degradation. For example, in the relicensing of the Leeburg-Walterville project, FERC

attempted to justify flooding wetlands by stating that the loss was offset by an increase in minimum flows that was still significantly below the flows that would exist without the project.

Second, it affects the type of protection, mitigation, and enhancement measures that will be used to offset project impacts. If measures are designed to improve the existing environment (e.g., enhancing reservoir fisheries and reservoir recreation), they may not restore the ecological health of the river. This is problematic not only because it misdirects mitigation efforts, but also because it invests resources in maintaining an artificial environment that people come to rely on, thus creating a disincentive for river restoration.

These critical issues are not addressed in FERC's explications of its baseline policy. (FERC inaccurately defines the issue as whether it will be required to rewrite history and make licensing decisions based on an environment that has not existed for 50 years). Focusing on these issues and defining accurately FERC's obligation to assess and use pre-project environmental conditions in relicensing requires an analysis of the relevant provisions of the FPA and NEPA. Specifically, we must identify which provisions require FERC to consider environmental conditions that existed prior to project construction, and for what purpose.

IV. The Statutory Provisions Requiring Analysis of the Pre-project Environment

A central purpose of both the FPA and NEPA is to ensure informed decisions about the best use of our rivers. Udall v. FPC, 387 U.S. 428, 450 (1967). A corollary of that requirement is that FERC must obtain and evaluate sufficient information from which informed decisions can be made. Information on all significant environmental impacts of a project, which necessitates an inquiry into the pre-project environment, is essential for informed decision-making. The specific statutory provisions in the FPA and NEPA that support this conclusion are discussed below. It is important to emphasize that each of these provisions is discussed separately to fully develop each basis for evaluating the pre-project environment. From a practical standpoint, however, these provisions stand collectively for the propositions that: (1) FERC must evaluate the pre-project environment in relicensing; and (2) the type and quantity of mitigation measures to be included in a new project license must be based on all project impacts since construction.

A. The Federal Power Act

1. Equal Consideration of Non-Power Values

The FPA, as amended by the Electric Consumers Protection Act (ECPA) in 1986, states that the Commission shall provide "equal consideration" to all public purposes served by the FPA, including the protection of fish, wildlife, recreation, and environmental quality, when licensing or relicensing a hydroelectric project." 16 U.S.C. § 803(a). The addition of the "equal consideration" requirement to §10(a) was intended to ensure that FERC gives "nondevelopmental values the same level of reflection as it does to power and other developmental objectives. In other words, it requires the thorough evaluation of

these values before FERC makes its licensing decision." Conference Report, No. 99-934, 99th Cong., 2nd. Sess. (1986) at 2538.

The question remains, however, what environmental information must be provided "equal consideration" by the Commission. Is it enough to consider just the existing environment, or must the Commission take into consideration how the project has affected the environment since construction and how it could be restored?

Implicit in FERC's "baseline" policy is the premise that environmental values were adequately considered and protected at the time the original licensing decision was made, and, consequently, there is no need to repeat that exercise. That premise is undercut by the fact that Congress passed ECPA in 1986 specifically because FERC had historically not given due consideration to environmental values when issuing hydropower licenses. Even if ECPA had never been passed, however, there is ample evidence in the legislative history of the FPA to support the conclusion that all environmental impacts of a project must be reevaluated during relicensing.

First, the legislative history regarding the FPA's 50-year cap on hydroelectric project licenses evinces a clear intent to ensure that the commitment of a river to power production be reevaluated anew at the time of relicensing. As succinctly stated by Theodore Roosevelt prior to passage of the FPA:

The public must retain the control of the great waterways. It is essential that any permit to obstruct them for reasons and on conditions that seem good at the moment should be subject to revision when changed conditions demand. . . . Provision should be made for the termination of the [license] at a definite time, leaving to future generations the power or authority to renew or extend the concession in accordance with the conditions which may prevail at the time.

(Quoted in) H.R. Rep. No. 507, 99th Cong., 2d Sess. 11 (1986) (emphasis added).

Consistent with Roosevelt's view, the federal courts have also construed the Federal Power Act to require a complete reevaluation of the harms and benefits of a project at relicensing. In Confederated Tribes and Bands of the Yakima Indian Nation v. FERC, 746 F.2d 466 (1984), the Ninth Circuit stated:

Relicensing . . . is more akin to an irreversible and irretrievable commitment of a public resource than a mere continuation of the status quo. (citation omitted). Simply because the same resource had been committed in the past does not make relicensing a phase in a continuous activity. Relicensing involves a new commitment of the resource

Id. at 476-77 (emphasis added).

The Commission has even acknowledged that relicensing involves a "full opportunity to reevaluate the best use of each project upon expiration of the [original] license." H.R. Rep. No. 1643, 90th Cong. 2d Sess., reprinted in 1968 U.S. Code Cong. &

Ad. News 3081, 3086 (letter from FPC Chairman Lee C. White).

Thus, the same licensing standard applies to both original licensing and relicensing proceedings. Yakima, 746 F.2d at 470.

The test is whether the project will be in the public interest. And that determination can be made only after an exploration of all issues relevant to the "public interest," including future power demand and supply, alternate sources of power, the public interest in preserving reaches of wild rivers and wilderness areas, the preservation of anadromous fish for commercial and recreational purposes, and the protection of wildlife.

Udall v. FPC, 387 U.S. 428, 450 (1967) (emphasis added).

This test cannot be met without evaluating how the project has impacted the environment and associated public benefits, and how those public benefits would be served by restoring a free-flowing river, or attributes of a free-flowing river. Information regarding pre-project conditions (*e.g.*, aerial photographs, maps, historical records) is essential for accurately predicting what the river would look like today without the project, and for identifying the public benefits that would be served by restoring the river to a more natural state. This is not equivalent to asking FERC to make licensing decisions based on an environment that has not existed for 50 years or to ignore the existence of the project, as it often asserts. Rather, it asks FERC to take highly relevant historic information into account when determining whether relicensing an existing project is in the public interest given today's public values.

Thus, FERC's current condition "baseline" results in unequal treatment of power and environmental values because it takes into account all power benefits of a project while ignoring many environmental harms and public benefits linked to environmental restoration. As established by the federal courts, relicensing involves a new decision on whether or not to dam a river to produce power which requires an analysis of all issues relevant to the public interest. By excluding from analysis a project's past and continuing environmental impacts and potential restoration measures, FERC's existing condition "baseline" is inconsistent with the FPA.

2. "Adequate and Equitable" Protection, Mitigation, and Enhancement

Section 10 of the FPA also requires that relicensing be conditioned upon the inclusion of "adequate and equitable" fish and wildlife protection, mitigation, and enhancement measures ("PM&E measures"). 16 U.S.C. §803(j). The terms "adequate" and "equitable" are not defined in the statute, but based on their plain meaning they would seem to require two things: (1) measures that would be effective at achieving the resource objective; and (2) measures that would yield resource gains that are commensurate with project impacts.

a. Effectiveness

Fish and wildlife cannot thrive without a healthy river environment. The scientific literature regarding river restoration establishes that river restoration must be achieved through reestablishing or replicating the natural river processes that maintain the river channel and provide habitat for fish and wildlife. For example, seasonal flow variations (high spring flows, low summer/fall flows) that are essential to meet the different life-history requirements of salmon and steelhead. The recently released report of the Independent Scientific Group, which studied the measures needed to restore salmon and steelhead in the Columbia River Basin, strongly endorses this approach.² Restoring or replicating natural processes cannot be accomplished without first understanding how the natural river system functions. "Until we understand the structure of undisturbed habitats that wild stocks developed within, and the sequence of [natural] changes that have occurred in those habitats, our present protection and enhancement efforts will lack both a rational context and effective direction."³

Thus, the essential first step in determining appropriate PM&E measures is to determine the historic conditions within which fish and wildlife evolved. Again, the goal is not to recreate a river environment that existed many years in the past (as FERC asserts), but to understand the key ecological conditions required for healthy, self-sustaining fish and wildlife populations, and to strive to restore the physical, chemical, and biological processes that create and maintain those conditions. Only then can effective PM&E measures be developed. An example of this approach is the evolving concept of "watershed analysis" which uses historical resource information to develop "reference conditions" (*i.e.*, the key ecological conditions essential to ecosystem health) to guide management decisions.

An argument often raised by licensees and implicit in FERC's "baseline" policy is that gathering information on pre-project resource conditions would be "too expensive" and that the information would be "unreliable." In reality, there is often a significant amount of reliable historic information available from various sources, including government reports, photographs, and local newspapers. Moreover, with today's technology, it is often possible to determine natural river features based on computer modeling. For example, in the relicensing of PacifiCorp's North Umpqua project in Oregon, a team of geomorphologists is using a model to provide a "natural river" template for determining the project's physical and biological impacts. In short, useful information on pre-project conditions can usually be obtained without great expense.

² Williams, R. et al. 1996. Return to the River: Restoration of Salmonid Fishes in the Columbia River Ecosystem.

³ Sedell, J.R. and K.J. Luchessa. 1981. Using the historical record as an aid to salmonid habitat enhancement. p. 210-223 in Acquisition and Utilization of Aquatic Habitat Inventory Information, Proceedings of a Symposium, Western Division, American Fisheries Society. N.B. Armantrout (ed.).

b. Quantity

The use of the terms "adequate and equitable" also implies that there should be a sufficient quantity of protection, mitigation, and enhancement measures. The key issue here is how "sufficiency" is determined. Under FERC's existing condition "baseline", the existing, degraded environment is used as the measure. Consequently, any action that improves upon the current, degraded conditions may be deemed "sufficient," and FERC's acceptance or rejection of a proposed action often turns on cost.

Measuring sufficiency using the existing, degraded environment contradicts the case law discussed above establishing that relicensing is a new commitment of the river which requires an inquiry into all relevant harms and benefits to the public related to the project. Continuing impacts caused by dam construction, such as inundated wildlife habitat, diminished flows, and blocked fish passage are relevant harms that must be evaluated during relicensing. The fact that they exist now does not mean that they must continue to exist in the future. This conclusion is buttressed by the legislative history of ECPA. Specifically, the House Report states that it was Congress's intent "to ensure that non-power values are, to the greatest extent possible, as healthy and abundant after licensing as before." H.R. Rep. No. 507, 99th Cong., 2d Sess. 30 (1986).⁴ Thus, it follows that the adequacy of protection, mitigation, and enhancement measures must be judged based on all project impacts, not just future impacts.

Evaluating what constitutes "adequate and equitable" protection, mitigation, and enhancement, therefore, requires a determination of what environmental harm has accrued since project construction and whether that harm will continue if the project is relicensed. If the pre-project environment is not assessed and losses are not recovered through the relicensing process, congressional intent would be frustrated, and the applicant would receive a windfall at the public's expense (*i.e.*, it would not be held accountable for any of the harm caused during construction or the original license term while having reaped the financial benefit of power generation over the original and new license terms).⁵ Such an outcome would be contrary to the public interest.

In sum, FERC's current condition "baseline" violates both the "equal consideration" and "adequate and equitable" fish and wildlife protection, mitigation, and enhancement provisions in the FPA.

B. The National Environmental Policy Act

⁴ FERC has acknowledged that the objective of mitigation is to "balance the project-caused resource loss with a roughly proportionate resource gain." Ohio Power, 71 FERC ¶ 61,092.

⁵ Of course, PM&E measures implemented during the original license term would appropriately be factored into the determination of "adequate and equitable" fish and wildlife PM&E measures for a new license.

1. "No Action" Alternative

NEPA requires FERC to consider the environmental consequences of a full range of alternative actions when licensing hydro projects, including the "no action" alternative. See 40 C.F.R. §1502.14. The "no action" alternative is the scenario against which the environmental impacts of each alternative being considered are compared.

The Council on Environmental Quality's (CEQ) guidance on this issue states that the "no action" alternative depends upon the proposal being evaluated. According to CEQ's guidance, there are two ways to interpret the "no action" alternative. First, if the proposed action involves ongoing programs or activities mandated by the legislature (e.g., updating land management plans), the "no action" alternative is appropriately interpreted as the status quo. Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,027 (1981), Answer to Question 3. Thus, if hydroelectric dam relicensing were considered an "ongoing activity", the river with the project operating under the terms of the existing license would be the "no action" alternative. Second, if a proposed project is at issue, the "no action" alternative is appropriately interpreted as not proceeding with the proposal. Id. Thus, if hydroelectric dam relicensing were considered to be a project proposal, not issuing a power license for the project would be the "no action" alternative.

The court's holding in Yakima – that relicensing is a new commitment of the river resource and not merely a continuation of the status quo – establishes that relicensing falls squarely under the second interpretation. The Yakima court reasoned that the FPA's 50-year license term limit, and the legislative history of the FPA, as amended by ECPA, clearly evince a congressional intent to provide an opportunity to completely reevaluate the best use of the river resource upon license expiration. Id. at 476. Thus, FERC's position, that the existing river environment with current project operations is the "no action" alternative, is inconsistent with CEQ policy, the intent behind the FPA, and the court's holding in Yakima.

The proper "no action" alternative is denial of a power license – a decision not to recommit the public river resource for power production. There are two possible outcomes if a power license is denied: removing the structures or leaving them in place without generating power. Of these two outcomes, project removal (*i.e.*, the river without the project) appears to be the appropriate "no action" alternative because only this alternative enables consideration of all possible environmental impacts associated with the two alternatives (*i.e.*, both structural and operational).

If, on the other hand, the river with the project structures remaining in place were used as the "no action" alternative, the elimination of the structural impacts (which are often the most destructive) would not be considered. Consequently, FERC's assessment of the environmental impacts of alternatives that would involve maintaining the project could be significantly less than the actual impacts. For example, blocked passage would not be considered an environmental impact that would have to be mitigated in relicensing. This approach would inappropriately bias the ultimate decision in favor of maintaining the

project, and would preclude consideration of all issues relevant to the public interest.

An understanding of what the river environment could be without the project requires first an understanding of the river environment prior to project construction. This does not mean that FERC should use the pre-project environment as the “no action” alternative, but that it must use the information on pre-project conditions to determine the environmental conditions that could exist today if the project were decommissioned and removed.⁶

2. Cumulative Impacts

NEPA requires FERC to evaluate during relicensing a project’s continuing and cumulative environmental effects. “Cumulative impacts” are defined as “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . .” 40 C.F.R. § 1508.7. “Impacts” or “effects” (which are synonymous under NEPA) include ecological consequences “such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems.” 40 C.F.R. § 1508.8(b).

Project construction and operation during the original license term constitute past and present actions that must be analyzed to ascertain the cumulative impacts of relicensing a hydroelectric project. Additionally, a complete cumulative impacts analysis must include other significant human impacts along the river, both pre- and post-project. For example, the cumulative effects of irrigation withdrawals and hydroelectric development have greatly diminished white sturgeon habitat in the Snake River.

Understanding how a project and other human impacts have affected the environment since construction requires first an understanding of the natural ecological conditions that were altered. FERC’s position, that it may consider the pre-project conditions “in appropriate cases” when evaluating cumulative impacts, is inconsistent with the mandatory nature of this obligation. FERC must evaluate the pre-project environment in every relicensing proceeding in order to assess accurately cumulative impacts associated with relicensing.

3. Analysis of Mitigation Measures

Finally, NEPA requires a thorough consideration of potential mitigation measures. See 40 C.F.R. §1502.14(f) and §1502.16(h). “Mitigation” includes “rectifying the impact by repairing, rehabilitating, or restoring the affected environment.” 40 C.F.R. § 1508.20(c). As discussed above in the context of the FPA, pre-project environmental conditions must be analyzed in order to consider and evaluate mitigation measures that

⁶ Even if the “no action” alternative could be defined as other than decommissioning and dam removal, that alternative must still be analyzed as a “reasonable alternative” to the applicant’s proposed operations See 40 C.F.R. §1502.16.

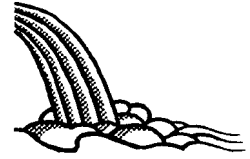
would prevent further environmental harm and restore degraded resources, consistent with NEPA policy objectives.

V. Conclusion

FERC's "baseline" position – that the existing environment should be used to assess an existing project's impacts – is inconsistent with both the FPA and NEPA. Under the FPA, pre-project conditions must be analyzed to ensure "equitable consideration" of non-power values, and to identify "adequate and equitable" protection, mitigation, and enhancement measures. Under NEPA, an assessment of pre-project environmental conditions is essential to: developing the "no action" alternative (dam decommissioning and project removal); evaluating continuing and cumulative impacts; and exploring a full range of mitigation options. Thus, without an analysis of the pre-project environment, the purpose of the FPA and NEPA – informed decisionmaking in the public interest – would be defeated.

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Policy on Applied Science in the FERC Relicensing Process

A. Standards for An Adequate Environmental Analysis Under NEPA and the FPA

- 1. Analyze project impacts on the full range of affected resources, including aquatic and terrestrial species, water flow, water levels, water quality, geology and soils, land use, socioeconomic, recreational, aesthetic, and cultural resources.**
- 2. Evaluate all direct, indirect and cumulative project impacts**
 - a. Direct** - direct impacts are an immediate consequence of the construction and operation of the project and often are continuing. Examples include reduced flows, blocked fish passage and flooded wildlife habitat.
 - b. Indirect** - indirect impacts are caused by the project but are the consequence of direct impacts. The conversion of desert land to agricultural land due to the availability of project electricity to pump irrigation water is one example. (*or* the impact on eagle/raptor populations from the loss of migratory fish as food source.)
 - c. Cumulative** - cumulative impacts are those caused by the project when added to the impacts of other past, present, and reasonably foreseeable future actions in the basin. For example, a project's effect on reducing wetland habitat must be analyzed in light of wetland losses caused by other activities such as road construction, residential development, and agriculture. Another example is a project's effect on water temperature in light of the temperature effects of other activities such as existing dams, thermal discharges from municipal water users, and logging in riparian zones.
- 3. Geographic scope of analysis must be basin-wide** -- a river is a continuum by nature: impacts that occur in the headwaters and tributaries can affect downstream reaches and vice versa. For example, agricultural practices upriver may cause nutrient loading which, in turn, may cause excessive algal and plant growth in the project reservoir. An example of a downriver impact that would have a profound effect upriver would be a dam blocking fish passage. Accordingly, it is not sufficient to analyze environmental impacts in the vicinity of the project; the analysis must encompass the entire basin, with the emphasis placed on the project area.
- 4. Temporal scope of analysis must include past impacts** -- providing "adequate and equitable" protection, mitigation and enhancement for fish and wildlife resources and determining license conditions that best serve the public interest fundamentally requires an

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Idaho Rivers United • Michigan Hydro Relicensing Coalition • Natural Heritage Institute • New England F.L.O.W.
New York Rivers United • River Alliance of Wisconsin • Trout Unlimited

understanding of how a hydroelectric project has altered the river and its biota over time. This knowledge is necessary to determine: (1) the environmental conditions to which native fish and wildlife have adapted; (2) how those conditions have been adversely affected by the project; and (3) the measures needed to restore those conditions to a more natural, healthy state. Moreover, determining an "adequate and equitable" level of protection, mitigation and enhancement is not possible without understanding the level of resource loss attributable to the project.

5. **The no-action alternative must be license denial, which must include analysis of the river without the project** – this alternative must be evaluated in every relicensing, and should be used as the basis for comparing the impacts of all alternatives considered. An understanding of river conditions without the project requires analyzing resource conditions along the river prior to project construction.
6. **Analyze all reasonable protection, mitigation and enhancement alternatives** -- examination of a full range of protection, mitigation and enhancement measures should include: dam decommissioning; "run-of-river" operations (*i.e.*, no peaking); minimum bypass flows; fish passage and entrainment protection; temperature control measures; erosion control measures; and land acquisition (both on and off- site) for wildlife habitat, water quality protection and recreation opportunities. What is "reasonable" must be determined in consideration of all project impacts and economic benefits since construction, not merely existing environmental conditions.
7. **Conclusions in an EA/EIS must be clearly supported by study results** -- conclusions regarding resource impacts under each alternative action must be supported by direct reference to study results. Impacts should be quantified where possible, and qualitative analyses must be of sufficient detail to allow for a meaningful comparative evaluation of each alternative (*i.e.*, it is not sufficient to state that several actions will increase the amount of rainbow trout spawning habitat; the relative amount of habitat gained must be discussed).
8. **Maintain consistency between impact analyses for different projects** -- too often, contradictory conclusions are reached in different EAs/EISs. Conclusions regarding resource impacts under similar environmental conditions should be consistent, and where there are unique conditions that lead to a seemingly contradictory conclusion, those conditions should be thoroughly explained.

B. Standards for Developing and Performing Studies¹

¹ B.1 and B.2 are guidelines for applicants (and their consultants) performing environmental analyses pursuant to FPA Section 16.8, or pursuant to FERC's Guidelines for the Applicant Prepared Environmental Analysis Process (Office of Hydropower Licensing, April 2,

1. **Provide opportunity for agency, tribe and public to identify resource issues that must be studied** — applicants should not determine unilaterally the information and issues that will be studied to support an application. Similar to the scoping phase of preparing an EIS under NEPA, the applicant should seek input from the resource agencies, tribes and public on the natural resource issues that must be studied prior to developing a study plan and commencing field work. Issues identification should be informed by desired future conditions.
2. **Establish a study team consisting of experts from agencies, tribes and NGOs to determine appropriate studies and methodologies** —the current FERC consultation regulations do not provide for adequate consultation over the selection and design of studies. Applicants should work with experts from the agencies, tribes and NGOs to determine appropriate studies to address information needs identified in the issue scoping phase. The study plan contained in the applicant's initial consultation document should be the work product of this collaborative effort.
3. **Design studies to determine project impacts and identify protection, mitigation and enhancement measures that will address those impacts, not just describe the existing environment** — a meaningful environmental analysis under NEPA, and the determination of "adequate and equitable" protection, mitigation, and enhancement measures under the FPA, cannot take place if there is insufficient information on a project's environmental impacts and how those impacts could be eliminated or mitigated. Thus, studies must be designed to provide that information.
4. **Qualitative data should be acceptable when other data is not available** — For some study areas, such as the past impacts of the project, precise data may be difficult to collect. This must not be a justification for not evaluating an issue. All relevant information should be considered, ranging from quantitative monitoring data to qualitative/anecdotal (e.g., "there used to be fish in this river").
5. **Document study method background** — Background on selected study methods must be consistently documented in all study plans, including: known errors and biases, precision and accuracy if relevant and recommended corrections (e.g., body size corrections when comparing mercury in a fish species between different lakes).
6. **Provide support documentation from scientific literature for methods employed** -- To reduce the likelihood of sub-standard or untested methods being employed, support documentation from the scientific literature on the method(s) being used must be a standard requirement for all study plans.

1996) or other cooperative relicensing process.

7. **Document coefficients selected for models** -- Study plans should clearly document coefficients selected for models, including the similarities and differences between the origin of the coefficients and the conditions to which they are being applied, and the range of conditions within which the coefficients are applicable. For example, are Habitat Suitability Index (HSI) curves derived from the summer being used inappropriately to predict winter conditions? were the HSI curves derived from small streams, but being inappropriately applied to big river systems?
8. **Clearly state assumptions** -- many studies require that certain assumptions be made to arrive at conclusions. For example, when determining an appropriate instream flow regime, certain assumptions are made about life stages of fish that are the most sensitive to variations in flow. If the study of flows is based on a faulty assumption (*e.g.*, that minimum flows during spawning are the limiting factor, when, in fact, adequate juvenile rearing flows are more crucial), then the study may be fundamentally flawed. This demonstrates the need to clearly identify all relevant assumptions so that study results can be validated.
9. **Conduct field test and/or sensitivity analysis in model selection** -- The selection of models should include field testing of model results and/or sensitivity analysis, particularly if the model(s) are going to be used to develop and compare alternatives.
10. **Validate study plans with independent, technically competent experts** -- Technically competent and experienced people, who represent other than the applicant's interest, should perform scoping of study plan and decision making models, *e.g.* flow or habitat models. If agency personnel are not trained or experienced in the methods being recommended, then an independent peer review by an expert should be required for studies on critical resource issues.
11. **Define study parameters in study plans** -- Studies designed for comparative purposes should define all study parameters (*e.g.*, sample sizes, controls, treatments) and statistical or other methods to be used in making the comparisons. *A posteriori* design or just "professional opinion" are unacceptable (see B.5 above). Comparative studies should also have statistically reliable methods for comparison.
12. **Provide standard checklist of acceptable study methods and protocols** -- FERC should strive for consistent professional quality and standards in study plans and their execution between different EISs/EAs. To this end, FERC should develop a standard checklist of studies and acceptable study protocols for fish, water quality, wetlands, terrestrial and aquatic species and ecosystems, wildlife, threatened and endangered species, land management, aesthetics, recreation and cumulative effects, *etc.*

C. Selection of Consultants

Study plan scoping team selects and oversees consultant(s) -- To increase the objectivity of selected consultants, the study plan scoping team--not the applicant unilaterally--should be responsible for review of consultant qualifications, their selection and general oversight (see B.10).

D. Study Conclusions and Results

- 1. Provide complete access to data in reasonable format and time frame** -- For example, underlying data and assumptions used in economic models, basin wide water use plans *etc.*, should be readily available to all parties as soon as they become available. Study results and conclusions based on confidential information should be disregarded.
- 2. Resource experts from agencies, tribes and NGOs should participate in data analysis and interpretation** -- To ensure objective evaluation of study data, the applicant or applicant's consultant should provide data and assumptions used to analyze data to resource agencies, tribes and NGOs. Applicants should meet with experts to discuss how data were analyzed and the rationale for conclusions drawn prior to finalizing a study and using results in an application and/or an EA/EIS.
- 3. Develop and provide matrix of positive and negative effects** -- A summary matrix showing the positive and negative effects of hydropower generation for all resource issues should be included in the application for purposes of selecting alternatives. The matrix should be developed and approved by the team of resource experts that analyzed and interpreted the study data.

E. Post License Studies and Monitoring

- 1. Design pre-license studies to facilitate post-licensing monitoring** -- Pre-license study plans should be of adequate design to facilitate meaningful post license comparison studies to determine if mitigation and enhancement measures are effective.
- 2. Establish mitigation goals and monitoring program to determine if goals are being met** -
- The application should describe with specificity (quantify if possible) the resource goals that the applicant seeks attain with each proposed mitigation measure. The applicant should establish methods and a plan for monitoring the effectiveness of protection mitigation and enhancement measures. The monitoring plan should be approved by the study plan team.

354 F.2d 608 printed in FULL format.

SCENIC HUDSON PRESERVATION CONFERENCE, Town of Cortlandt, Town of Putnam Valley and
Town of Yorktown, Petitioners, v. FEDERAL POWER COMMISSION, Respondent, and Consolidated
Edison Company of New York, Inc., Intervener

No. 106, Docket No. 29853

UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

354 F.2d 608; 1 ERC (BNA) 1084; 1 ELR 20292

October 8, 1965, Argued

December 29, 1965, Decided

JUDGES: Lumbard, Chief Judge and Waterman and
Hays, Circuit Judges.

OPINIONBY: HAYS

OPINION: [*611] HAYS, Circuit Judge:

In this proceeding the petitioners are the Scenic Hudson Preservation Conference, an unincorporated association consisting of a number of non-profit, conservationist organizations, and the Towns of Cortlandt, Putnam Valley and Yorktown. Petitioners ask us, pursuant to § 313(b) of the Federal Power Act, 16 U.S.C. § 8251(b), to set aside three orders of the respondent, the Federal Power Commission: n1

(a) An order of March 9, 1965 granting a license to the intervener, the Consolidated Edison Company of New York, Inc., to construct a pumped storage hydroelectric project on the west side of the Hudson River at Storm King Mountain in Cornwall, New York;

(b) An order of May 6, 1965 denying petitioners' application for a rehearing of the March 9 order, and for the reopening of the proceeding to permit the introduction of additional evidence;

(c) An order of May 6, 1965 denying joint motions filed by the petitioners to expand the scope of supplemental hearings to include consideration of the practicality and cost of underground transmission lines, and of the feasibility of any type of fish protection device.

n1 At oral argument petitioners made a motion to enlarge the record by including in it the supplemental hearings conducted before a Trial Examiner of the Federal Power Commission in May 1965.

These hearings were limited to consideration of the routes of overhead transmission facilities and the design of fish protection devices. Petitioners allege that the May hearings divulge information which should have been developed and considered by the Commission at the time the license was granted. We are not being asked to review the October 4, 1965 order, setting forth the Commission's determination of the questions presented at the May hearings, but rather to consider evidence compiled at the May hearings as a convenient source of information from which inferences can be drawn about the completeness of the March 9 record. For this limited purpose we have granted petitioners' motion.

A pumped storage plant generates electric energy for use during peak load periods, n2 using hydroelectric units driven by water from a headwater pool or reservoir. The contemplated Storm King project would be the largest of its kind in the world. Consolidated Edison has estimated its cost, including transmission facilities, at \$162,000,000. The project would consist of three major components, a storage reservoir, a powerhouse, and transmission lines. The storage reservoir, n3 located over a thousand feet above the powerhouse, is to be connected to the powerhouse, located on the river front, by a tunnel 40 feet in diameter. The powerhouse, which is both a pumping and generating station, would be 800 feet long and contain eight pump generators. n4

n2 Capacity for peak load periods is that part of a system's generating equipment which is operated intermittently for short periods during the hours of highest daily, weekly, or seasonal kilowatt demand.

n3 The project's reservoir would contain a surface area of 240 acres and a usable capacity of 25,000 acre-feet. A part of the space which it would occupy is now occupied by a reservoir providing part of the water supply for the Village of Cornwall. Another area consisting of approximately 70 acres of property within the Black Rock Forest, a private forest reserve of Harvard University, would also be inundated by the proposed reservoir. Consolidated Edison has offered appropriate compensation for the acreage which would be used.

n4 According to plans presented to the Federal Power Commission three pumping generator units would be installed and go into operation in mid-1967 and the remaining five in 1968.

Transmission lines would run under the Hudson to the east bank and then underground for 1.6 miles to a switching station which Consolidated Edison would build at Nelsonville in the Town of Philipstown. Thereafter, overhead transmission lines would be placed on towers 100 to 150 feet high and these would require a path up to 125 feet wide n5 [*612] through Westchester and Putnam Counties for a distance of some 25 miles until they reached Consolidated Edison's main connections with New York City. n6

n5 However, the path might be even wider at corners, transportation points, access points, or points of an unusual character.

n6 As has already been noted we are not now concerned with the order of October 4, 1965 in which the Commission established the exact route of the transmission lines and the width of the right-of-way.

During slack periods Consolidated Edison's conventional steam plants in New York City would provide electric power for the pumps at Storm King to force water up the mountain, through the tunnel, and into the upper reservoir. In peak periods water would be released to rush down the mountain and power the generators. Three kilowatts of power generated in New York City would be necessary to obtain two kilowatts from the Cornwall installation. When pumping the powerhouse would draw approximately 1,080,000 cubic feet of water per minute from the Hudson, and when generating would discharge up to 1,620,000 cubic feet of water per minute into the river. The installation would have a capacity of 2,000,000 kilowatts, but would be so constructed as to be capable of enlargement to a total of 3,000,000 kilowatts. The water in the upper reser-

voir may be regarded as the equivalent of stored electric energy; in effect, Consolidated Edison wishes to create a huge storage battery at Cornwall. See Federal Power Commission, National Power Survey 120-21 (1964).

The Storm King project has aroused grave concern among conservationist groups, adversely affected municipalities and various state and federal legislative units and administrative agencies. n7

n7 For bills introduced in Congress for the purpose of preserving the Hudson River and adjacent areas see House Introduction No. H.R. 3012, 3918; Senate Introduction No. S. 1386. Hearings were held on May 10 and 11, 1965 before the House of Representatives Subcommittee on Fisheries and Wildlife Conservation. House of Representatives, 89th Cong., 1st Sess., on Hudson River Spawning Grounds.

The New York Joint Legislative Committee on Natural Resources held hearings on November 19 and 20, 1964. See Preliminary Report on the Joint Legislative Committee on Natural Resources, On the Hudson River Valley and the Consolidated Edison Company Storm King Mountain Project (issued February 16, 1965) (hereinafter cited "Preliminary Report").

The Fish and Wildlife Service of the Department of the Interior and the New York State Conservation Department have expressed concern about the effect of the project on the fish life of the Hudson. See Part IV *infra*.

Numerous conservationist groups have interested themselves in the project, and many of them filed formal petitions to intervene before the Commission.

To be licensed by the Commission a prospective project must meet the statutory test of being "best adapted to a comprehensive plan for improving or developing a waterway," Federal Power Act § 10(a), 16 U.S.C. § 803(a). In framing the issue before it, the Federal Power Commission properly noted:

"We must compare the Cornwall project with any alternatives that are available. If on this record Con Edison has available an alternative source for meeting its power needs which is better adapted to the development of the Hudson River for all beneficial uses, including scenic beauty, this application should be denied."

If the Commission is properly to discharge its duty in this regard, the record on which it bases its determination must be complete. The petitioners and the public at large have a right to demand this completeness. It is our view, and we find, that the Commission has failed to compile a record which is sufficient to support its decision. The Commission has ignored certain relevant factors and failed to make a thorough study of possible alternatives to the Storm King project. While the courts have no authority to concern themselves with the policies of the Commission, it is their duty to see to it that the Commission's decisions receive that careful consideration which the statute contemplates. See *Michigan Consolidated Gas [*613] Co. v. Federal Power Comm.*, 108 U.S.App.D.C. 409, 283 F.2d 204, 226, cert. denied, *Panhandle Eastern Pipe Line Co. v. Michigan Consol. Gas Co.*, 364 U.S. 913, 81 S. Ct. 276, 5 L. Ed. 2d 227 (1960). Petitioners' application, pursuant to § 313 (b), 16 U.S.C. § 825l(b), to adduce additional evidence is granted. n8 We set aside the three orders of the Commission to which the petition is addressed and remand the case for further proceedings in accordance with this opinion.

n8 The hearings to which the third order refers have already been held; however, the relief petitioners seek is provided by our determination as to the second order.

I.

The Storm King project is to be located in an area of unique beauty and major historical significance. The highlands and gorge of the Hudson offer one of the finest pieces of river scenery in the world. The great German traveler Baedeker called it "finer than the Rhine." Petitioners' contention that the Commission must take these factors into consideration in evaluating the Storm King project is justified by the history of the Federal Power Act.

The Federal Water Power Act of 1920, 41 Stat. 1063 (1920) (now Federal Power Act, 16 U.S.C. § 791a et seq.), was the outgrowth of a widely supported effort on the part of conservationists to secure the enactment of a complete scheme of national regulation which would promote the comprehensive development of the nation's water resources. See *Federal Power Comm. v. Union Electric Co.*, 381 U.S. 90, 98-99, 85 S. Ct. 1253, 14 L. Ed. 2d 239 (1965); *First Iowa Hydro-Electric Coop. v. Federal Power Comm.*, 328 U.S. 152, 180, 66 S. Ct. 906, 90 L. Ed. 1143 (1946). See generally Cushman, *The Independent Regulatory Commission* 275-283 (1941);

Pinchot, *The Long Struggle for Effective Federal Water Power Legislation*, 14 *Geo. Wash. L. Rev.* 9 (1945). n9 It "was passed for the purpose of developing and preserving to the people the water power resources of the country." *United States ex rel. Chapman v. Federal Power Comm.*, 191 F.2d 796, 800 (4th Cir. 1951), aff'd, 345 U.S. 153, 73 S. Ct. 609, 97 L. Ed. 918 (1953).

n9 The Supreme Court has noted that:

"The movement toward the enactment of the Act in 1920 may be said to have taken its keynote from President Roosevelt's veto of a bill which would have turned over to private interests important power sites on the Rainy River." *Federal Power Comm. v. Union Electric Co.*, 381 U.S. 90, 98-99 n. 11, 85 S. Ct. 1253, 1258, 14 L. Ed. 2d 239 (1965).

President Roosevelt's veto message read:

"We are now at the beginning of great development in water power. Its use through electrical transmission is entering more and more largely into every element of the daily life of the people. Already the evils of monopoly are becoming manifest; already the experience of the past shows the necessity of caution in making unrestricted grants of this great power." 42 Cong. Rec. 4698 (1908).

See also President Roosevelt's veto of the James River bill, H.R. 17767, 60th Cong., 2d Sess. (1909), veto message, 43 Cong. Rec. 978 (1909); President Roosevelt's letter appointing the Inland Waterways Commission, 42 Cong. Rec. 6968 (1908), which read in part:

"Works designed to control our water-ways have thus far usually been undertaken for a single purpose, such as the improvement of navigation, the development of power, the irrigation of arid lands, the protection of lowlands from floods, or to supply water for domestic and manufacturing purposes. While the rights of the people to these and similar uses of water must be respected, the time has come for merging local projects and uses of the inland waters in a comprehensive plan designed for the benefit of the entire country. Such a plan should consider and include all the uses to which streams may be put, and should bring together and coordinate the points of view of all users of waters.

* * *

"[The plans of the Commission should be formulated] in the light of the widest knowledge of the country and the people, and from the most diverse points of view."

Congress gave the Federal Power Commission sweeping authority and a specific planning responsibility. *First Iowa Hydro-Electric Coop. v. Federal* [*614] *Power Comm.*, 328 U.S. 152, 180-181, 66 S. Ct. 906, 919, 90 L. Ed. 1143 (1946) ("instead of the piecemeal, restrictive, negative approach of the River and Harbor Acts and other federal laws previously enacted"); *National Hells Canyon Ass'n v. Federal Power Comm.*, 99 U.S.App.D.C. 149, 237 F.2d 777 (1956), cert. denied, 353 U.S. 924, 77 S. Ct. 681, 1 L. Ed. 2d 720, rehearing denied, 353 U.S. 978, 77 S. Ct. 1054, 1 L. Ed. 2d 1139 (1957).

Section 10(a) of the Federal Power Act, 16 U.S.C. § 803(a), reads:

"§ 803. Conditions of license generally.

All licenses issued under sections 792, 793, 795-818, and 820-823 of this title shall be on the following conditions:

* * *

(a) That the project adopted, * * * shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, and for other beneficial public uses, including recreational purposes; and if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval." (Emphasis added.)

"Recreational purposes" are expressly included among the beneficial public uses to which the statute refers. The phrase undoubtedly encompasses the conservation of natural resources, the maintenance of natural beauty, and the preservation of historic sites. n10 See *Namekagon Hydro Co. v. Federal Power Comm.*, 216 F.2d 509, 511-512 (7th Cir. 1954). All of these "beneficial uses," the Supreme Court has observed, "while unregulated, might well be contradictory rather than harmonious." *Federal Power Comm. v. Union Electric Co.*, 381 U.S. 90, 98, 85 S. Ct. 1253, 1258, 14 L. Ed. 2d 239 (1965). In licensing a project, it is the duty of the Federal Power Commission properly to weigh each factor.

n10 The clear intention of Congress to emphasize "recreational purposes" is indicated by the fact that subsection (a) was amended in 1935 by substituting the present language "plan for improving or developing * * * including recreational purposes" for "scheme of improvement and utilization for the purposes of navigation, of water-power development, and of other beneficial public uses." Senate Rep.No.621, 74th Cong., 1st Sess., page 45 stated that the amendment was intended to add "an express provision that the Commission may include consideration of recreational purposes."

In recent years the Commission has placed increasing emphasis on the right of the public to "out-door recreational resources." 1964 F.P.C. Report 69. Regulations issued in 1963, for the first time, required the inclusion of a recreation plan as part of a license application. F.P.C. Order No. 260-A, amending § 4.41 of Regulations under Federal Power Act, issued April 18, 1963, 29 F.P.C. 777, 28 Fed.Reg. 4092. The Commission has recognized generally that members of the public have rights in our recreational, historic and scenic resources under the *Federal Power Act*. *Namekagon Hydro Co.*, 12 F.P.C. 203, 206 (1954) ("the Commission realizes that in many cases where unique and most special types of recreation are encountered a dollar evaluation is inadequate as the public interest must be considered and it cannot be evaluated adequately only in dollars and cents"). In affirming *Namekagon* the Seventh Circuit upheld the Commission's denial of a license, to an otherwise economically feasible project, because fishing, canoeing and the scenic attraction of a "beautiful stretch of water" were threatened. *Namekagon Hydro Co. v. Federal Power Comm.*, 216 F.2d 509, 511-512 (7th Cir. 1954).

Commissioner Ross said in his dissent in the present case: "It appears obvious that had this area of the 'Hudson [*615] Highlands' been declared a State or National park, that is, had the people in the area already spoken, we probably would have listened and might well have refused to license it."

II.

Respondent argues that "petitioners do not have standing to obtain review" because they "make no claim of any personal economic injury resulting from the Commission's action."

Section 313(b) of the Federal Power Act, 16 U.S.C. § 825l(b), reads:

"(b) Any party to a proceeding under this chapter aggrieved by an order issued by the Commission in such

proceeding may obtain a review of such order in the United States Court of Appeals for any circuit wherein the licensee or public utility to which the order relates is located * * *."

The Commission takes a narrow view of the meaning of "aggrieved party" under the Act. The Supreme Court has observed that the law of standing is a "complicated specialty of federal jurisdiction, the solution of whose problems is in any event more or less determined by the specific circumstances of individual situations * * *." *United States ex rel. Chapman v. Federal Power Comm.*, 345 U.S. 153, 156, 73 S. Ct. 609, 612, 97 L. Ed. 918 (1953). Although a "case" or "controversy" which is otherwise lacking cannot be created by statute, a statute may create new interests or rights and thus give standing to one who would otherwise be barred by the lack of a "case" or "controversy." The "case" or "controversy" requirement of Article III, § 2 of the Constitution does not require that an "aggrieved" or "adversely affected" party have a personal economic interest. See *State of Washington Dept. of Game v. Federal Power Comm.*, 207 F.2d 391 (9th Cir. 1953), cert. denied, 347 U.S. 936, 74 S. Ct. 626, 98 L. Ed. 1087 (1954); *Reade v. Ewing*, 205 F.2d 630 (2d Cir. 1953); cf. *Scripps-Howard Radio, Inc. v. Federal Communications Comm.*, 316 U.S. 4, 62 S. Ct. 875, 86 L. Ed. 1229 (1942); *Federal Communications Comm. v. Sanders Bros. Radio Station*, 309 U.S. 470, 642, 60 S. Ct. 693, 84 L. Ed. 869 (1940); *International Union of Electrical, Radio and Machine Workers v. Underwood Corp.*, 219 F.2d 100, 103 (2d Cir. 1955); *Associated Industries, Inc. v. Ickes*, 134 F.2d 694 (2d Cir.), vacated as moot, 320 U.S. 707, 64 S. Ct. 74, 88 L. Ed. 414 (1943); Jaffe, *Standing to Secure Judicial Review: Private Actions*, 75 Harv.L.Rev. 255 (1961). Even in cases involving original standing to sue, the Supreme Court has not made economic injury a prerequisite where the plaintiffs have shown a direct personal interest. See, e.g., *School District of Abington Township v. Schempp*, 374 U.S. 203, 83 S. Ct. 1560, 10 L. Ed. 2d 844 (1963); *Engel v. Vitale*, 370 U.S. 421, 82 S. Ct. 1261, 8 L. Ed. 2d 601 (1962); *Zorach v. Clauson*, 343 U.S. 306, 72 S. Ct. 679, 96 L. Ed. 954 (1952).

In *State of Washington Dept. of Game v. Federal Power Comm.*, 207 F.2d 391, 395 n. 11 (9th Cir. 1953), cert. denied, 347 U.S. 936, 74 S. Ct. 626, 98 L. Ed. 1087 (1954), the Washington State Sportsmen's Council, Inc., a non-profit organization of residents, the State of Washington, Department of Game, and the State of Washington, Department of Fisheries, opposed the construction of a dam because it threatened to destroy fish. The Federal Power Commission granted the

license; the interveners applied for a rehearing which the Commission denied. Petitioners asked for review under § 313(b) and the court upheld their standing, noting:

"All are 'parties aggrieved' since they claim that the Cowlitz Project will destroy fish in [sic] which they, among others, are interested in protecting."

The Federal Power Act seeks to protect non-economic as well as economic interests. n11 Indeed, the Commission recognized this in framing the issue in this very case:

"The project is to be physically located in a general area of our nation [*616] steeped in the history of the American Revolution and of the colonial period. It is also a general area of great scenic beauty. The principal issue which must be decided is whether the project's effect on the scenic, historical and recreational values of the area are such that we should deny the application."

n11 See discussion in Part I, *supra*.

In order to insure that the Federal Power Commission will adequately protect the public interest in the aesthetic, conservational, and recreational aspects of power development, those who by their activities and conduct have exhibited a special interest in such areas, must be held to be included in the class of "aggrieved" parties under § 313(b). We hold that the Federal Power Act gives petitioners a legal right to protect their special interests. See *State of Washington Dept. of Game v. Federal Power Comm.*, *supra*.

At an earlier point in these proceedings the Commission apparently accepted this view. Consolidated Edison strongly objected to the petitioners' standing, but the Commission did not deny their right to file an application for a rehearing under § 313(a) of the Act which also speaks in terms of "aggrieved parties." n12

n12 Federal Power Act § 313(a), 16 U.S.C. § 825l(a), reads:

"§ 825 l. Rehearings; court review of orders

(a) Any person, State, municipality, or State commission aggrieved by an order issued by the Commission in a proceeding under this chapter to which such person, State, municipality, or State commission is a party may apply for a rehearing within thirty days after the issuance of such order."

Moreover, petitioners have sufficient economic interest to establish their standing. The New York-New Jersey Trail Conference, one of the two conservation groups that organized Scenic Hudson, has some seventeen miles of trailways in the area of Storm King Mountain. Portions of these trails would be inundated by the construction of the project's reservoir.

The primary transmission lines are an integral part of the Storm King project. See Federal Power Act § 3(11), 16 U.S.C. § 796(11). n13 The towns that are competitors with Scenic Hudson have standing because the transmission lines would cause a decrease in the proprietary value of publicly held land, reduce tax revenues collected from privately held land, and significantly interfere with long-range community planning. See *City of Pittsburgh v. Federal Power Comm.*, 99 U.S.App.D.C. 113, 237 F.2d 741, 748 (1956). Yorktown, for example, fears that the transmission lines would run over municipal land selected for a school site, greatly decreasing its value and interfering with school construction. Putnam Valley faces similar interference with local planning and a substantial decrease in land tax revenues. n14

n13 Federal Power Act § 3(11), 16 U.S.C. § 796(11) reads:

"'Project' means complete unit of improvement or development, consisting of a power house, all water conduits, all dams and appurtenant works and structures (including navigation structures) which are a part of said unit, and all storage, diverting, or forebay reservoirs directly connected therewith, the primary line or lines transmitting power therefrom to the point of junction with the distribution system or with the interconnected primary transmission system, all miscellaneous structures used and useful in connection with said unit or any part thereof, and all water-rights, rights-of-way, ditches, dams, reservoirs, lands, or interest in lands the use and occupancy of which are necessary or appropriate in the maintenance and operation of such unit." (Emphasis added.)

n14 Permitting the Commission, for reasons of convenience and practicality, to limit the licensing proceeding and to hold for later determination the route of transmission lines, does not divest the petitioning towns of their standing. If we accepted the Commission's contrary argument we would be required to withdraw from the towns their right to challenge the entire integrated project.

Although the order of October 4, 1965 is not before us for review, we note that the Commission has conceded in its Supplemental Brief that Putnam Valley is in the same position as before the order and that the transmission route chosen "might be sufficient to cause aggrievement" to petitioner, Yorktown.

[*617] We see no justification for the Commission's fear that our determination will encourage "literally thousands" to intervene and seek review in future proceedings. We rejected a similar contention in *Associated Industries, Inc. v. Ickes*, 134 F.2d 694, 707 (2d Cir.), vacated as moot, 320 U.S. 707, 64 S. Ct. 74, 88 L. Ed. 414 (1943), noting that "no such horrendous possibilities" exist. Our experience with public actions confirms the view that the expense and vexation of legal proceedings is not lightly undertaken.

In any case, the Federal Power Act creates no absolute right of intervention; § 308(a), 16 U.S.C. § 825g(a), reads:

"In any proceeding before it, the Commission, in accordance with such rules and regulations as it may prescribe, may admit as a party any interested State, State commission, municipality, or any representative of interested consumers or security holders, or any competitor of a party to such proceeding, or any other person whose participation in the proceeding may be in the public interest."

Since the right to seek review under § 313(a) and (b) is limited to a "party" to the Commission proceeding, the Commission has ample authority reasonably to limit those eligible to intervene or to seek review. See *Alston Coal Co. v. Federal Power Comm.*, 137 F.2d 740, 742 (10th Cir. 1943). Representation of common interests by an organization such as Scenic Hudson serves to limit the number of those who might otherwise apply for intervention and serves to expedite the administrative process.

III.

The Federal Power Act § 313(b), 16 U.S.C. § 825l(b), reads in part:

"(b) If any party shall apply to the court for leave to adduce additional evidence, and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for failure to adduce such evidence in the proceedings before the Commission, the court may order such additional evidence to be taken before the Commission and to be

adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper."

The Commission in its opinion recognized that in connection with granting a license to Consolidated Edison it "must compare the Cornwall project with any alternatives that are available." There is no doubt that the Commission is under a statutory duty to give full consideration to alternative plans. See *Michigan Consolidated Gas Co. v. Federal Power Comm.*, 108 U.S.App.D.C. 409, 283 F.2d 204, 224-226, cert. denied, *Eastern Pipe Line Co. v. Michigan Consol. Gas Co.*, 364 U.S. 913, 81 S. Ct. 276, 5 L. Ed. 2d 227 (1960); *City of Pittsburgh v. Federal Power Comm.*, 99 U.S.App.D.C. 113, 237 F.2d 741 (1956).

In *City of Pittsburgh*, three months after the hearings were closed, the petitioners attempted to present to the Commission memoranda supporting an alternative suggestion. The District of Columbia Circuit set aside the Commission's order and remanded the case with directions to reopen the record. It found that the Commission had improperly rejected as "untimely" evidence concerning the proposed alternative. The court stated that:

"The existence of a more desirable alternative is one of the factors which enters into a determination of whether a particular proposal would serve the public convenience and necessity. That the Commission has no authority to command the alternative does not mean that it cannot reject the [original] proposal." *City of Pittsburgh v. Federal Power* [*618] *Comm.*, 99 U.S.App.D.C. 113, 237 F.2d 741, 751 n. 28 (1956).

In the present case, the Commission heard oral argument on November 17, 1964, on the various exceptions to the Examiner's report. On January 7, 1965 the testimony of Mr. Alexander Lurkis, as to the feasibility of an alternative to the project, the use of gas turbines, was offered to the Commission by Hilltop Cooperative of Queens, a taxpayer and consumer group. The petition to intervene and present this new evidence was rejected on January 13, 1965 as not "timely." It was more than two months after the offer of this testimony, on March 9, 1965, that the Commission issued a license to Consolidated Edison. When Mr. Lurkis's testimony was subsequently reoffered by the petitioners on April 8, 1965, it was rejected because it represented "at best" a "disagreement between experts." On the other hand, we have found in the record no meaningful evidence which contradicts the proffered testimony supporting the gas turbine alternative.

Mr. Lurkis is a consulting engineer of thirty-nine

years experience. He has served as Chief Engineer of the New York City Bureau of Gas and Electric, in charge of a staff of 400, and as Senior Engineer of the New York City Transit Authority, where he supervised the design and construction of power plants. n15 The New York Joint Legislative Committee on Natural Resources, n16 after holding hearings on the Storm King project on November 19 and 20, 1964, summarized Mr. Lurkis's testimony as follows:

"Mr. Alexander Lurkis * * * presented a detailed proposal for using gas turbines. This, he claimed, would meet the alleged peaking need of Con Ed and result in a saving for its customers of \$132,000,000. The Committee has learned that similar gas turbine installations are now in use or proposed for use by a number of progressive electric utilities throughout the nation. In addition to meeting the alleged peak power needs and saving money for the ratepayer, the gas turbines proposed by Mr. Lurkis would have the following advantages:

1) Permit the company greater flexibility in meeting the power needs of its service area. Admittedly, technological developments in power production are changing and improving this field at such a rapid rate that it may well be entirely revolutionized in 10 to 15 years. There are obvious advantages in the gas turbine installations. Small installations can be added as needed to meet demand. This, in contrast to a single, giant, permanent installation such as Con Ed proposes at Storm King Mountain, which would tie the technology and investment of one company to a method of power production that might be obsolete in a few years.

2) Keep the power production facilities within New York City. This would not only avoid the desecration of the Hudson Gorge and Highlands, but, also would eliminate the great swathe of destruction down through Putnam and Westchester Counties and their beautiful suburban communities." Preliminary Report at 6.

n15 Mr. Lurkis has made numerous studies of utility adequacy including a survey of "blackouts" in New York during 1959 and 1961, which resulted in revisions of the Consolidated Edison system. He is a member of many professional associations and has published numerous articles and presented many papers on electrical engineering subjects.

n16 A total of 107 witnesses were heard; the large majority objected to the project.

The Committee report, issued on February 16, 1965, three weeks before the license to Consolidated Edison was granted, concluded:

"The whole situation involved in the Consolidated Edison Storm King [*619] Mountain project, and the protection of the Hudson River and its shores, requires further and extensive study and investigation.

* * *

This Committee goes on record as opposing Con Ed's application until there has been adequate study of the points indicated in this report." Preliminary Report at 8.

Mr. Lurkis's analysis was based on an intensive study of the Consolidated Edison system, and of its peaking needs projected year by year over a fifteen year period. He was prepared to make an economic comparison of a gas turbine system (including capital and fuel operating costs) and the Storm King pumped storage plant. Moreover, he was prepared to answer Consolidated Edison's objections to gas turbines by indicating:

(1) that gas turbines could meet Consolidated Edison's reserve needs;

(2) that the blackouts of 1959 and 1961 were caused by breakdowns in distribution, not by a lack of power;

(3) that gas turbines would avoid the hazards of weather damage to high transmission lines involved in the Storm King project;

(4) that since 3 kilowatts of power must be generated by steam plants in New York City in order to get 2 kilowatts of power from the Storm King project, gas turbines would be even more useful than the project in reducing air pollution;

(5) that noise from the turbines would be at acceptable industrial levels.

Other benefits envisioned from gas turbines were higher reliability, increased system flexibility, and possible savings in transmission line investment. n17

n17 Citing *Federal Power Comm. v. Transcontinental Gas Pipe Line Corp.*, 365 U.S. 1, 81 S. Ct. 435, 5 L. Ed. 2d 377 (1961) the Commission asserts that "serious policy questions" would be raised by the use of gas, for the generation of electrical energy. But the serious questions alluded to do not excuse the Commission's failure to develop and hear pertinent evidence on the

alternative. As to the use of gas, the Supreme Court held in *Transcontinental* that "a flexible balancing process, in the course of which all factors are weighed prior to final determination," is needed in each case. *Id.* at 23, 81 S. Ct. at 447.

Aside from self-serving general statements by officials of Consolidated Edison, the only testimony in the record bearing on the gas turbine alternative was offered by Ellery R. Fosdick. Fosdick's hastily prepared presentation considered turbines driven by steam and liquid fuel as well as gas; his direct testimony occupied less than ten pages of the record. n18 Fosdick's testimony was too scanty to meet the requirement of a full consideration of alternatives. Indeed, under the circumstances, we must conclude that there was no significant attempt to develop evidence as to the gas turbine alternative; at least, there is no such evidence in the record.

n18 Fosdick conceded that he had no firsthand knowledge of the Consolidated Edison system or its requirements. He had been unable to make a study of the economics of alternative methods of generating peaking power, nor had he made an examination of New York City power needs. His testimony on air pollution, which was favorable to Consolidated Edison, was addressed to a question on the "burning of kerosene" and not of natural gas, a non-pollutant.

The Commission argues that petitioners made "no attempt to secure additional testimony." Yet the record indicates that more than two months before the license was granted the Commission summarily rejected the offer of Mr. Lurkis's testimony.

It is not our present function to evaluate this evidence. Our focus is upon the action of the Commission. The fact that Lurkis's testimony was originally offered by a non-petitioner, Hilltop Cooperative, is irrelevant. A party acting as a "private attorney general" can raise issues that are not personal to it. See *Associated Industries, Inc. v. Ickes*, 134 F.2d 694, 705 (2d Cir.), vacated as moot, 320 U.S. 707, 64 S. Ct. 74, 88 [*620] L. Ed. 414 (1943); Jaffe, *Standing to Secure Judicial Review: Private Actions*, 75 *Harv.L.Rev.* 255, 283 (1961) ("the right to attack an order resting on a record made by others, or no record at all, could be valuable").

Especially in a case of this type, where public interest and concern is so great, the Commission's refusal to receive the Lurkis testimony, as well as proffered information on fish protection devices and underground transmission facilities, n19 exhibits a disregard of the statute

and of judicial mandates instructing the Commission to probe all feasible alternatives. *Michigan Consolidated Gas Co. v. Federal Power Comm.*, 108 U.S.App.D.C. 409, 283 F.2d 204, 224, 226, cert. denied, 364 U.S. 913, 81 S. Ct. 276, 5 L. Ed. 2d 227 (1960); *City of Pittsburgh v. Federal Power Comm.*, 99 U.S.App.D.C. 113, 237 F.2d 741 (1956).

n19 See Part IV infra.

IV.

The Federal Power Commission argues that having intervened "petitioners cannot impose an affirmative burden on the Commission." But, as we have pointed out, Congress gave the Federal Power Commission a specific planning responsibility. See Federal Power Act § 10(a), 16 U.S.C. § 803(a). The totality of a project's immediate and long-range effects, and not merely the engineering and navigation aspects, are to be considered in a licensing proceeding. As Commissioner Ross said in his dissent:

"I do feel the public is entitled to know on the record that no stone has been left unturned. How much better it would be if the public is clearly advised under oath and cross examination that there truly is no alternative? The thread running through this case has been that the applicant is entitled to a license upon making a prima facie case. My own personal regulatory philosophy compels me to reject this approach. This Commission of its own motion, should always seek to insure that a full and adequate record is presented to it. A regulatory commission can insure continuing confidence in its decisions only when it has used its staff and its own expertise in manner not possible for the uninformed and poorly financed public. With our intimate knowledge of other systems and to a lesser extent of their plans, it should be possible to resolve all doubts as to alternative sources. This may have been done but the record doesn't speak. Let it do so."

In this case, as in many others, the Commission has claimed to be the representative of the public interest. This role does not permit it to act as an umpire blandly calling balls and strikes for adversaries appearing before it; the right of the public must receive active and affirmative protection at the hands of the Commission.

This court cannot and should not attempt to substitute its judgment for that of the Commission. But we must decide whether the Commission has correctly discharged its duties, including the proper fulfillment of

its planning function in deciding that the "licensing of the project would be in the overall public interest." The Commission must see to it that the record is complete. The Commission has an affirmative duty to inquire into and consider all relevant facts. See *Michigan Consolidated Gas Co. v. Federal Power Comm.*, 108 U.S.App.D.C. 409, 283 F.2d 204, 224, 226, cert. denied, 364 U.S. 913, 81 S. Ct. 276, 5 L. Ed. 2d 227 (1960); *Isbrandtsen Co. v. United States*, 96 F. Supp. 883, 892 (S.D.N.Y.1951), aff'd by an equally divided court, *A/S J. Ludwig Mowinckels Rederi v. Isbrandtsen Co.*, 342 U.S. 950, 72 S. Ct. 623, 96 L. Ed. 706 (1952); Friendly, *The Federal Administrative Agencies* 144 (1962); Landis, *The Administrative Process* 36-46 (1938); cf. *City of Pittsburgh v. Federal Power Comm.*, 99 U.S.App.D.C. 113, 237 F.2d 741 (1956).

[*621] In *Michigan Consolidated Gas Co. v. Federal Power Comm.*, *supra*, 283 F.2d at 224, the Court of Appeals of the District of Columbia, in criticizing the Federal Power Commission for refusing to consider an alternative and for failing to take the initiative in seeking information, observed:

"Even assuming that under the Commission's rules Panhandle's rejection of the settlement rendered the proposal ineffective as a settlement, it could not, and we believe should not, have precluded the Commission from considering the proposal on its merits. Indeed, the proposal appears prima facie to have merit enough to have required the Commission at some stage of the proceeding to consider it on its own initiative as an alternative to total abandonment." (Emphasis added.)

On rehearing the court added:

"In viewing the public interest, the Commission's vision is not to be limited to the horizons of the private parties to the proceeding.

Where, as here, a regulatory agency has ignored factors which are relevant to the public interest, the scope of judicial review is sufficiently broad to order their consideration. These limits are not to be confused with the narrower ones governing review of an agency's conclusions reached upon proper consideration of the relevant factors." *Id.* at 226.

Judge Frank, in response to a submission similar to the one made here, said:

"This is a somewhat surprising contention, to be contrasted with the following views of Commissioner Aitchison of the Interstate Commerce Commission con-

cerning the obligations of administrative agencies: '* * * The agency does not do its duty when it merely decides upon a poor or nonrepresentative record. As the sole representative of the public, which is a third party in these proceedings, the agency owes the duty to investigate all the pertinent facts, and to see that they are adduced when the parties have not put them in * * *. The agency must always act upon the record made, and if that is not sufficient, it should see the record is supplemented before it acts. It must always preserve the elements of fair play, but it is not fair play for it to create an injustice, instead of remedying one, by omitting to inform itself and by acting ignorantly when intelligent action is possible * * *.'"

Isbrandtsen Co. v. United States, 96 F. Supp. 883, 892 (S.D.N.Y.1951), affirmed by an equally divided court, *A/S J. Ludwig Mowinckels Rederi v. Isbrandtsen Co.*, 342 U.S. 950, 72 S. Ct. 623, 96 L. Ed. 706 (1952). And Dean Landis said:

"For [the administrative] process to be successful in a particular field, it is imperative that controversies be decided as 'rightly' as possible, independently of the formal record the parties themselves produce. The ultimate test of the administrative is the policy that it formulates; not the fairness as between the parties of the disposition of a controversy on a record of their own making." Landis, *The Administrative Process* 39 (1938).

In addition to the Commission's failure to receive or develop evidence concerning the gas turbine alternative, there are other instances where the Commission should have acted affirmatively in order to make a complete record.

The Commission neither investigated the use of interconnected power as a possible alternative to the Storm King project, nor required Consolidated Edison to supply such information. The record sets forth Consolidated Edison's interconnection with a vast network of other utilities, but the Commission dismissed this alternative by noting that "Con Edison is relying fully upon such interconnections in estimating its future available capacity." However, only ten [*622] pages later in its opinion the Commission conceded:

"Of significant importance, in our opinion, is the absence in the record, or the inadequacy, of information in regard to Con Edison's future interconnection plans; its plans, if any, for upgrading existing transmission lines to higher voltages; and of its existing transmission line grid in this general area and its future plans."

Moreover, in its October 4, 1965 order, the Commission in explaining how Consolidated Edison would be able to send "substantial amounts" of Storm King power to upstate New York and New England power companies, each December, said:

"ample spinning reserve would be available during the winter from the interconnected companies in New Jersey and Pennsylvania, including the 'mine-mouth' plants. Thus, even at times of the greatest diversion of Cornwall power, Con Edison would have other power sources immediately available to it for its peak requirements."

If interconnecting power can replace the Storm King project in December, why was it not considered as a permanent alternative?

Commissioner Ross in his dissent said: "In my opinion, the only true alternative that would likely be as economic as the proposed project would be purchased peaking power. There are two possibly differing sources; one would be purchasing pumped storage or normal hydro peaking which may be in the process of development in New England; or secondly, purchasing steam peaking power from new large scale thermal stations in Pennsylvania or in Appalachia."

There is no evidence in the record to indicate that either the Commission or Consolidated Edison ever seriously considered this alternative. n20 Nor is there any evidence that a combination of devices, for example, gas turbine and interconnections, were considered. Indeed, the Commission stated in its brief that it is "of doubtful relevance to the present case whether there are practical alternatives to an appropriate use of water power by which Con Ed could meet its anticipated needs for peaking power with generally comparable economy." The failure of the Commission to inform itself of these alternatives cannot be reconciled with its planning responsibility under the Federal Power Act.

n20 At page 39 of the record Mr. M. L. Waring, senior vice-president of Consolidated Edison, described the interconnection system but failed to answer the question: "Would this not be an economical substitute for the pumped storage project?" In later testimony to a similar question he responded: "Yes, [other sources of power] are available, but not in sufficient quantity."

But there was no evidence introduced as to the amount of power available.

In its March 9 opinion the Commission postponed a decision on the transmission route to be chosen until the May 1965 hearings were completed. Inquiry into the cost of putting lines underground was precluded because the May hearings were limited to the question of overhead transmission routes. The petitioners' April 26, 1965 motion to enlarge the scope of the May hearing was denied. The Commission insisted that the question of underground costs had been "extensively considered." We find almost nothing in the record to support this statement. n21

n21 The Commission contends that petitioners failed to raise the issue of underground transmission line costs, and the bearing of these costs on the licensing of the project, in their Application for Rehearing. But in listing Commission errors, petitioners said:

"finally it excluded from the consideration of * * * where to put the transmission lines the deeper questions of * * * what the cost would be of putting additional portions of the transmission lines underground."

The Philipstown Citizens Association, in its Application for Rehearing, specifically urged that the "Commission committed error in excluding further consideration of underground transmission at the remand hearings which started on May 4, 1965."

As we said earlier, the petitioners may raise issues which are not personal to them.

[*623] Consolidated Edison estimated the cost of underground transmission at seven to twelve times that of overhead lines. n22 These estimates were questioned by the Commission's own staff, which pointed out that Consolidated Edison's estimates incorrectly assumed that the underground route would be the same as the overhead; in fact, an underground route along the New York Central right-of-way would be clearly less costly than the estimate, since there are no large differences of elevation requiring special pumping facilities and no new cross-country right-of-way would be necessary. Moreover, the staff noted that the estimates were based on Consolidated Edison's experience in New York, where excavation and other costs are higher. The

Examiner noted the staff's reservations in his opinion, but since no alternative figures had been presented, he accepted those submitted by Consolidated Edison, as did the Commission. n23

n22 Compare Federal Power Commission, National Power Survey 156 (1964). ("Efforts are frequently made to require utilities to place transmission circuits underground. In some circumstances buried cables are advantageous, but the usual cost is 5 to 10 times that of overhead circuits.")

n23 The Commission did state the underground costs would be prohibitive "except for short distances," but no substantiation of this position was offered nor was a definition of short distance given.

Consolidated Edison witnesses testified that the Storm King project would result in annual savings of \$12,000,000 over a steam plant of equivalent capacity. Given these savings, the Commission should at least have inquired into the capital and annual cost of running segments of the transmission line underground in those areas where the overhead structures would cause the most serious scenic damage. We find no indication that the Commission seriously weighed the aesthetic advantages of underground transmission lines against the economic disadvantages. n24

n24 Commissioner Ross remarked that "the tactics of [Consolidated Edison] were obviously dictated by the precedential effect of underground transmission." See testimony of senior vice-president Waring. "There are thousands of miles of transmission and distribution lines elsewhere in our territory and in the State of New York, where there is just as much or more reason to put the transmission lines underground as there is here."

This approach is unacceptable. Each case must be judged on its own merits. The area involved here is an area of "unique beauty," as Commissioner Ross noted in his dissenting opinion.

At the time of its original hearings, there was sufficient evidence before the Commission concerning the danger to fish to warrant further inquiry. The evidence included a letter from Kenneth Holum, Assistant Secretary of the Department of the Interior, and a statement made for the record by Robert A. Cook, on behalf of the New York State Water Resources Commission in which Mr. Cook said: "The possibility still exists that extensive losses of eggs and/or young of valuable species might occur after

installation of the proposed screening devices."

Just after the Commission closed its proceedings in November the hearings held by the New York State Legislative Committee on Natural Resources alerted many fisherman groups to the threat posed by the Storm King project. On December 24 and 30, January 8, and February 3 each of four groups, concerned with fishing, petitioned for the right to intervene and present evidence. They wished to show that the major spawning grounds for the distinct race of Hudson River striped bass was in the immediate vicinity of the Storm King project and not "much farther upstream" as inferred by Dr. Perlmutter, the one expert witness called by Consolidated Edison; to attempt to prove that, contrary to the impression given by Dr. Perlmutter, bass eggs and larvae float in the water, at the [*624] mercy of currents; that due to the location of the spawning ground and the Hudson's tidal flow, the eggs and larvae would be directly subject to the influence of the plant and would be threatened with destruction; that "no screening device presently feasible would adequately protect these early stages of fish life" and that their loss would ultimately destroy the economically valuable fisheries. Their evidence also indicated that in the case of shad, the young migrate from their spawning grounds, down past Cornwall, and being smaller than the meshes of the contemplated fish screens, would be subject to the hazards already described. n25 The Commission rejected all these petitions as "untimely," and seemingly placing great reliance on the testimony of Dr. Perlmutter, concluded:

"The project will not adversely affect the fish resources of the Hudson River provided adequate protective facilities are installed."

n25 The Committee concluded:

"The Hudson River is a spawning ground for shad and striped bass. A multi-million dollar fishing industry, both commercial and sport, has been built on this process of nature. * * * The Joint Legislative Committee * * goes on record as being unalterably opposed to the granting of Con Ed's application, until such time as there is definite, impartial and conclusive proof that the project will not have an adverse effect on the fish life and spawning process upon which the fishing industry depends for its livelihood." Preliminary Report 7.

Although an opportunity was made available at the May hearings for petitioners to submit evidence on

protective designs, the question of the adequacy of any protective design was inexplicably excluded by the Commission.

Recent events illustrate other deficiencies in the Commission's record. In hearings before the House Subcommittee on Fisheries and Wildlife Studying the Hudson River Spawning Grounds, 89th Cong. 1st Sess., May 10, 11, 1965, Mr. James McBroom, representing the Department of the Interior, stated:

"Practical screening methods are known which could prevent young-of-the-year striped bass and shad from being caught up in the [Storm King] project's pumps, but practical means of protection of eggs and larvae stages have yet to be devised. Furthermore the location of the proposed plant appears from available evidence to be at or very near the crucial spot as to potential for harm to the overall production of eggs and larvae of the Hudson River striped bass. The cumulative effect of unmitigated loss of eggs and larvae of striped bass by this power project could have a serious effect on the Hudson River striped bass fishery and the dependent fisheries around Long Island and offshore."

Mr. E. L. Cheatum, representing the New York State Conservation Department, gave similar testimony. At the May hearings the testimony of Mr. Walburg and Mr. Wagner, witnesses for the Department of Interior, and Dr. Raney and Mr. Massmann, witnesses for Scenic Hudson, was substantially to the same effect. Indeed, the Commission in its October 4 order acknowledged that the protective device to which it had previously referred favorably (March 9 order) "may not be adequate to provide the protection required" (October 4 order).

On remand, the Commission should take the whole fisheries question into consideration before deciding whether the Storm King project is to be licensed.

The Commission should reexamine all questions on which we have found the record insufficient and all related matters. The Commission's renewed proceedings must include as a basic concern the preservation of natural beauty and of national historic shrines, keeping in mind that, in our affluent society, the cost of a project is only one of several factors to be considered. The record as it comes to us fails markedly to make out a case for the Storm King project on, among other matters, costs, public convenience and necessity, and absence [*625] of reasonable alternatives. Of course, the Commission should make every effort to expedite the new proceedings.

Petitioners' application, pursuant to Federal Power

Act § 313(b), 16 U.S.C. § 825l (b), to adduce additional evidence concerning alternatives to the Storm King project and the cost and practicality of underground transmission facilities is granted.

The licensing order of March 9 and the two orders of May 6 are set aside, and the case remanded for further proceedings.

Tab 18

DECLARATION OF FRANCIS CHAPMAN

I, Francis Chapman, declare as follows:

1. I have been a staff Energy Analyst at the Environmental Defense Fund in Oakland, California for the past 7 years. My expertise is in modeling electrical utilities' systems. I have a Bachelor of Arts degree in Computer Science from the University of California at San Diego.

2. This analysis calculates a rate-of-return on investment for the owner of the Kern 3 hydroelectric project under various proposed section 4(e) relicensing conditions. The main purpose is to analyze two proposals for supplemental whitewater and minimum instream flows, the American Whitewater Association/Friends of the River (AWA/FOR) proposal outlined in a letter to the United States Forest Service (USFS) Sequoia National Forest Supervisor, dated July 24th, 1998, and the USFS Revised KR-3 4(e) conditions (Revised USFS 4(e)) dated September 11, 1998.

3. I obtained most of my data concerning the project from the FERC "Environmental Assessment for Hydropower License" (FERC-EA).

4. I used United States Geological Service measurements of the North Fork Kern river flow at the Kernville gauging station (#11187000) during the same ten-year interval, 1975-1984, that FERC used for its analysis. This source provides mean daily flow in cubic-feet-per-second (cfs) for each day of the ten year period. The Kernville gauging station is situated just below the Kern 3 powerhouse.

5. I used the values provided in the FERC-EA report as a basis for deriving a rate-of-return for the proposals. See Table 1.

6. For the AWA/FOR proposal, I estimated the costs of comparative analysis of the "fitness" of individual fish and populations to be equal to the costs of monitoring temperature provided in the FERC-EA, \$10,000 per event. This doubles the costs of 4(e) condition 5 in the AWA/FOR proposal.

7. All of the proposals I evaluated include some increase in minimum instream flows (MIFS). I included the estimates of energy and capacity loss derived for the MIFS included as condition 3 in the FERC-EA¹ in all proposals.

¹ FERC-EA Measure 3 proposed an additional 30 to 40 cfs in the bypassed reach during summer months.

8. I also included the required minimum diversion flow of 35² cfs (hatchery flow) in all proposals. Since all proposals had these elements in common I first netted out both the FERC-EA MIFS and the hatchery flow requirements from the USGS flow record. Then, applied the supplemental whitewater flow schedules to the remaining flow to project the energy generation under different proposals.³ I included the FERC-EA values for energy and capacity loss as a result of the MIFS in calculating values for the AWA/FOR and USFS Revised 4(e) proposals.

9. Applying the rules on a daily basis for all ten years generated different net impacts for each of the ten years of data, I averaged the results to arrive at a representative single year value for each proposal.

10. Using the flow schedule from FERC-EA measure 6-b as a benchmark for my energy and capacity loss model, I calculated an energy loss of 133,119 MWh per year, and a loss of 4.89 MW of dependable capacity. These values are respectively 0.9% and 2.9% lower than the results provided in the FERC-EA, and are within 1.3% of the energy valuation (\$3,037,000 in our model vs. \$3,076,000 in FERC-EA). See Table 2, Rate-of-return calculation.

11. For comparison, the historical rate-of-return on utility investments in California has averaged about 11-12%, and the California Public Utilities Commission (CPUC) historically allowed returns on investments in energy-efficiency and demand-side management measures of about 15%.

12. It is my opinion that the Revised USFS 4(e) conditions offer minimal incremental whitewater recreation flows while offering a generous rate-of-return for the licensee. The analysis shows that the Revised USFS 4(e) supplemental whitewater flow proposal results in a net increase of 1.4 boating days per year (+2%) during the affected part of the year (April 1 - Aug 15), while the AWA/FOR proposal results in a net increase of 16.2 boating days per year (+24%) during the same interval. A "boating day" is defined as having flows sufficient for whitewater recreation, a minimum of 700 cfs.

² From the FERC-EA, 35 cfs are to be diverted for the California Department of Fish and Game hatchery whose intake is located just below the Kern 3 Powerhouse. This diversion requirement supersedes the MIFS.

³ As an example, on Friday the 11th of July, 1975, the measured flow was 1000 cfs. Using the rules proposed in the USFS revised 4(e) conditions the river would retain 380 cfs in the bypassed reach, a non-boatable flow, while using the rules in the AWA/FOR July 1998 proposal the flow in the bypassed reach would be 965 cfs. Sufficient for whitewater recreation. The following day, Saturday the 12th, 1975, the river flow of 1020 cfs would result in a boatable flow of 720 cfs under the USFS revised 4 (e) proposal, and a flow of 985 cfs under the AWA/FOR July 1998 proposal.

13. The value for capacity in the FERC-EA is high when compared to values used in current CPUC filings. If the October 1998 avoided cost capacity value of 4.93 \$/kW-yr⁴ (dollars per kilowatt-year) is used, lowering the capacity value attributed to all proposals, the rates of return decrease. See Table 3.

⁴ From "Compliance filing of Southern California Edison Company (U338-E), monthly report on avoided-cost energy pricing effective October 1st, 1998 through October 31, 1998, in compliance with D.97-05-021", filed by SCE before the CPUC.

Table 1. FERC-EA Assumptions

<u>One-time costs</u>	
Net investment	\$5,135,000
<u>Annual costs</u>	
Annual (O&M)	\$1,331,000
Discount rate	12.0 percent
Period of analysis	30 years
Term of financing	30 years
<u>Power value</u>	
Alternative energy value	18.91 mills/kWh
Capacity value	\$109/kW-yr
Maximum capacity	36.8 MW
Maximum diversion flow	620 cfs
Minimum generating flow	35 cfs

Table 2. Rate-of-return calculation

One-time investment	\$5,135,000 (1995\$)
Additional capital costs	
(USFS Revised 4(e), AWA/FOR)	\$3,454,000 (1995\$)
Additional annual O&M costs	
USFS Revised 4(e)	\$ 8,100 (1995\$)
AWA/FOR	\$10,600 (1995\$)

Results:

Annual energy loss	
<u>MIFS*</u>	<u>4,876 MWh</u>
USFS Revised 4(e)	2,505 MWh
AWA/FOR	57,553 MWh
FERC-EA 6-b benchmark	133,119 MWh
Dependable capacity loss	
<u>MIFS*</u>	<u>0.83 MW</u>
USFS Revised 4(e)	0.57 MW
AWA/FOR	2.59 MW
FERC-EA 6-b benchmark	4.77 MW

* - energy and capacity losses from MIFS are taken from FERC-EA and are added to all proposal's energy and capacity losses to calculate total proposal losses

Lost power value	
USFS Revised 4(e)	\$ 140,800 (1995\$)
AWA/FOR	\$1,197,400 (1995\$)
Rate-of-return	
No-action	62.6 %
USFS Revised 4(e)	35.1 %
AWA/FOR	20.3 %
Edison proposal with FERC/USFS modifications (FERC-EA)	32.3 %

Table 3. Rate-of-return using \$4.93/kW-yr capacity value

No-action	47.0 %
USFS Revised 4(e)	26.4 %
AWA/FOR	14.0 %
Edison proposal with FERC/USFS modifications (FERC-EA)	24.8 %

Dated: October 29, 1998

By: _____
Francis Chapman

HYDROPOWER REFORM COALITION

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Compendium of Hydropower Project Settlement Agreements

In order to assist in the process of negotiating settlements, this compendium of settlement provisions is made available to familiarize you with the kinds of provisions that have been included in prior settlements and the specific language that parties have negotiated. The Hydropower Reform Coalition has reviewed all recent relicensing settlement agreements, and has culled from them provisions that may prove useful in fashioning provisions in future settlement agreements. Although most of the agreements were developed while projects were going through the relicensing process with Federal Energy Regulatory Commission (FERC), the agreements are reached outside of FERC's official proceeding.

The document is organized in two general sections, General and Administrative Provisions and Conservation Provisions, which are further arranged into some 50 categories to reflect the varied types of agreement provisions. In some cases where a provision is applicable to more than one subject heading, the entire provision does not appear under the subsequent subject headings, but instead there appears a reference to where the full provision may be found. In addition, each provision is identified by the project name and number, and the page number and date of the settlement agreement that contains the provision. It may be useful to consult the entire settlement agreement for the context of the particular provision.

It should be noted that the language of the provisions is most often the result of compromise between parties with different and conflicting interests and goals in relicensing, and therefore may not reflect the optimum language for a particular perspective. In addition, most projects and related settlement negotiations will have their own complexities that may need to be addressed with language specific to the situation. Thus, it will rarely be wise simply to repeat the identical language found herein in your own settlement agreements. You should also consult an attorney if one familiar with FERC procedures is available to you.

Lastly, it is important to note that this document in no way suggests that settlement agreements are best for everyone in every case. There are times when it is in the best interest of stakeholders to walk away from a settlement and pursue their interests in other arenas. Determining one's best alternative to a negotiated agreement (BATNA) is a relative and subjective undertaking which cannot be generically addressed. However, it is always important to consider one's BATNA when entering into any negotiation.

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I. GENERAL AND ADMINISTRATIVE PROVISIONS

A. JURISDICTION

Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995) Project No. 2645 (New York)

p. 1

I. Introduction

The purpose of this document is to highlight, summarize and document the areas of agreement that exist as the result of comprehensive settlement discussions between the signators with regard to the operation and maintenance of the Beaver River Project (Federal Energy Regulatory Commission (FERC) Project No. 2645). This document is intended as a Settlement Offer. As such, it is a summary of all the areas of agreement and is not meant to replace the detailed license application exhibits, studies, reports, meeting minutes and other consultation records that have been and will be developed for the project and submitted to the consulted resource agencies and FERC.

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995 Project Nos. 2569, 2538 (New York)

p. 1

I. Introduction

The purpose of this Settlement Offer is to document the areas of agreement that exist as the result of comprehensive settlement discussions between the signatories with regard to the relicensing of the Black River Project (FERC No. 2569) and the Beebee Island Project (FERC No. 2538). As such, it is a summary of all areas of agreement emanating from the detailed license application exhibits, studies, reports, meeting minutes and other consultation records that have been and will be developed for the projects and submitted to the consulted resource agencies and FERC.

The goal of this Settlement is to provide for power generation plus the long-term protection of, mitigation for damage to, and enhancement of the Black River's fish and wildlife resources as affected by the hydropower developments at the Black River and Beebee Island Projects. The Settlement will enhance opportunities for recreational and other river uses by reducing non-natural fluctuations in impoundments and riverine reaches affected by the developments in both Projects. Finally, the Settlement will include provisions for monitoring, enforcement and updating or revisitation of agreements.

This Settlement Offer provides the terms and conditions for the resolution of the operations, fisheries, wildlife, water quality, lands management and ownership, recreation and aesthetics issues raised by the signatories regarding the issuance of new licenses for the Black River and Beebee-Island Hydroelectric Projects, these being all the issues presently addressed.

The Black River Project, which is licensed to, owned, operated and maintained by Niagara Mohawk Power Corporation (NMPC) consists of the Herrings, Deferiet, Kamargo, Black River and Sewalls Developments. The Beebee Island Project, which is owned by and licensed to Beebee Island Corporation (BIC) but operated and maintained by NMPC pursuant to

contractual agreement with BIC, consists of just the Beebee Island Development. BIC is partly owned by NMPC.

All 6 developments are located on the Black River in New York State. The Herrings Development, the furthest upstream, is located 27.5 miles from Lake Ontario and the Beebee Island Project, the most downstream, is located 9.5 miles from Lake Ontario. The developments are in the Villages of Black River and Deferiet, Towns of Champion, Wilna, Rutland and Leray and in the City of Watertown in Jefferson County, New York.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 1

1.0 Jurisdiction

1. This OFFER OF SETTLEMENT ("SETTLEMENT") is entered into voluntarily by and between the "parties," Consumers Power Company ("CPCo"), the licensee applying for new licenses for 11 FERC-licensed hydroelectric projects and the United States Department of Agriculture Forest Service ("USFS"), the United States Department of Interior Fish and Wildlife Service ("USF&WS"), the Michigan Department of Natural Resources ("MDNR"), the United States Department of Interior National Park Service ("NPS"), and the Michigan State Historic Preservation Officer ("SHPO") pursuant to Federal Energy Regulatory Commission ("FERC") rule, 18 CFR Section 385.602. The "resource agencies" are defined as USFS, USF&WS and the MDNR. This Settlement concerns the resolution of project operation, fish passage, project boundaries, land management, water quality, downstream fish protection, historical and archeological resource management, soil erosion control, threatened, endangered and sensitive species management and establishment of retirement funds for the hydroelectric projects and other matters.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994. Project No. 2323 (Massachusetts)**

Fact Sheet

New England Power (NEP) Company's Deerfield River Project includes 8 developments and 15 generating units which currently produce 85 MW of capacity and approximately 290,000 MW of hydroelectric energy annually. It is situated on the Deerfield River in southern Vermont and western Massachusetts. The Deerfield River has a drainage area of 665 square miles and is approximately 66 miles long. NEP has 16,667 acres of land within its project boundary.

The Deerfield River Project is being relicensed by the Federal Energy Regulatory Commission. Since the beginning of the relicensing process in 1987, NEP has participated in hundreds of meetings with individuals, elected officials, resource agencies and intervenors in an effort to relicense its project. In the past 5 years, resource agencies, regional planning commissions, intervenor groups and others have worked to describe comprehensive plans and data needs pertinent to settlement of the Deerfield River Project license. The Appalachian Mountain Club, American Rivers, Conservation Law Foundation, Deerfield River Compact, New England FLOW, Trout Unlimited and key Federal, Massachusetts and Vermont resource agencies

have, with NEP, developed a concept for balancing resource values on the Deerfield River. That concept has evolved into an agreement which has the following elements:

- The unifying objective of the settlement negotiation has been to maximize the most beneficial mitigation and enhancement package for the whole watershed from the headwaters in Vermont to the confluence with the Connecticut River in Massachusetts.
- The settlement negotiation has sought to balance competing interest groups' desires, regulatory restrictions, natural resource protection needs and generation.
- The major resource agencies from the Federal government, Massachusetts and Vermont were invited and attended negotiations on downstream flow and reservoir management issues to provide guidance relative to regulatory requirements and agency management objectives.
- The estimated value (40 year NPV) of the settlement negotiation package is estimated to be approximately \$27.4 million. Conservation easements on approximately 18,350 acres convey additional value, not included in the above estimate. Specific values of enhancements discussed are estimated as follows:

Reservoir management restrictions and fishery flows: \$20.7 million.

Capital facilities for fish passage and flow control: \$3.2 million.

Whitewater boating flows: \$1.9 million.

Recreational facilities: \$1.3 million.

Recreational enhancement fund for MA and VT: \$100 thousand.

Wildlife enhancement: \$193 thousand.

Conservation restrictions and public access on 15,736 acres in VT and 2,619 acres in MA:

Value not appraised. Map attached.

Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)

p. 1-6

This Agreement is made and entered into this ____ day of _____ 1987, between and among Public Utility District No. 1 of Chelan County, Washington (Chelan), Puget Sound Power & Light Company (Puget), the National Marine Fisheries Service in its own capacity and as delegate for the United States Department of Commerce, the State of Washington acting by and through the Washington Department of Game, the State of Oregon acting by and through the Oregon Department of Fish and Wildlife, the Confederated Tribes and Bands of the Yakima Indian Nation, the Confederated Tribes of the Colville Indian Reservation, the Confederated Tribes of the Umatilla Indian Reservation and the National Wildlife Federation (hereinafter collectively referred to as "Fisheries Agencies and Tribes") (hereinafter each of the above entities may be referred to individually as a "Party" or collectively as the "Parties").

A. Scope and Duration

1. General Scope.

This Agreement establishes all of Chelan's obligations with respect to development, installation, and operation of juvenile downstream migrant bypass facilities, juvenile fish passage through spill, hatchery compensation for fish losses, and fish ladder operation for at least the Initial Period (see subsections A. 3 and A. 5). The preceding anadromous fish measures, when carried out pursuant to this Agreement, shall be conclusively considered to fulfill Chelan's

obligation to protect, mitigate and compensate for the fish resource at least during the Initial Period. This Agreement establishes the Fishery Agencies and Tribes' obligations in support of this settlement, including the expeditious issuance of a new license by the Federal Energy Regulatory Commission ("FERC") for the Rock Island Project for a term of forty years and with respect to actions necessary to facilitate the performance of Chelan's obligations under this Agreement. This Agreement also requires effectiveness evaluation programs for measures identified herein and establishes procedures for coordination between Chelan and the Fisheries Agencies and Tribes.

3. Term.

The term of this Agreement shall commence on the date of execution by all Parties and shall continue for the term of the new license to be issued for the Rock Island Project in the remanded licensing proceeding, plus the term(s) of any annual license(s) which may be issued after the foregoing new license has expired. That portion of the term commencing with the filing of this Agreement with the FERC for approval and extending for thirteen years thereafter shall be referred to throughout this Agreement as the "Initial Period."

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 1

The purpose of this document is to highlight, summarize and document the areas of agreement that exist between the signators with regard to the prospective operation and maintenance of the Salmon River Project (FERC Project No. 11408). This document is intended as a summary of all areas of agreement and it is not meant to replace the detailed license application exhibits, studies, reports, meeting minutes and other consultation records that have been and will be developed for the project and submitted to consulted resource agencies and the FERC. The Salmon River Project consists of the Bennetts Bridge and Lighthouse Hill. Developments located in the Towns of Redfield and Orwell, Oswego County, New York. The Bennetts Bridge and Lighthouse Hill powerhouses are located 18 and 17 miles from the confluence of the Salmon River and Lake Ontario, respectively.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 1-2

In accordance with Rule 602 of the Federal Energy Regulatory Commission's (FERC) Rules of Practice and Procedure, 18 C.F.R. Section 385.602, the City of Seattle, City Light Department (City or Applicant); the U.S. Department of the Interior, National Park Service (NPS), Fish and Wildlife Service (FWS) and Bureau of Indian Affairs (BIA); the U.S. Department of Agriculture, Forest Service (USFS); the U.S. Department of Commerce, National Marine Fisheries Service (NMFS); the Upper Skagit Tribe, Sauk-Suiattle Tribe, and Swinomish Indian Tribal Community (Tribes); the Washington Department of Fisheries (WDF); the Washington Department of Wildlife (WDW); and the North Cascades Conservation Council (NCCC) (collectively referred to as the "Intervenors" or "Parties" when acting jointly with the City) hereby submit this Offer of Settlement for the City's Skagit River Hydroelectric Project No. 553 (Project).

The Offer of Settlement summarizes the terms and provisions of the Settlement Agreements between the City and the Intervenor in the following subject areas: Fisheries; Wildlife; Recreation and Aesthetics; Erosion Control; Cultural Resources (Archaeological and Historic Resources); and Traditional Cultural Properties.

These Settlement Agreements resolve all issues for the period specified in each agreement, related to the effects of the Project, as currently constructed, upon the subject areas identified above. The Parties intend that the Settlement Agreements shall remain in effect for the duration of the term of the new license period for the Project, including the term(s) of any annual license(s) issued thereafter. However, certain specific provisions contained in these Agreements have been negotiated based upon an assumed 30-year license period. If the FERC issues a license for longer than a 30-year period, the Parties have agreed in making this Offer Of Settlement that it shall give rise to a right of the Parties to initiate a proceeding before the FERC between the 25th and 30th year of the license to reopen the provisions which were specifically based upon a 30-year license period. The City agrees that it shall not oppose initiation of such a proceeding; the Parties, may, however, differ in their respective positions in such a proceeding.

The Parties request that the FERC approve the terms and provisions of the Settlement Agreements and dismiss the proceedings under Docket No. EL 78-36, pursuant to Rule 602, upon certification by the Chief Administrative Law Judge, as appropriate.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 8

2.2. Jurisdiction

2.2.1 This Offer Of Settlement (Settlement) is entered into by tile Parties for the Projects, pursuant to FERC rule, 18 CFR Section 385.602. This Settlement concerns the resolution of project operation, upstream fish passage, project boundaries. land management, water quality, downstream fish protection, historical and archeological resource management, woody debris management, threatened, endangered and sensitive species management and future dam responsibility for the Projects and other matters.

B. EFFECT OF SETTLEMENT

SUGGESTED DRAFT "EFFECT AND ENFORCEMENT" LANGUAGE FOR SETTLEMENTS

(The language directly below largely tracks the language of the Consumers Power and Menominee settlements, which have served as models for other settlements as well. Modifications have been made to emphasize elements important to conservation intervenors. Each Settlement, however, is likely to require individual tailoring to meet the specific circumstances of the particular case, and in any event will require negotiation with parties that may have different views of these provisions.)

1. This Settlement Agreement constitutes a negotiated settlement of all issues in the above-captioned proceeding, and each provision represents consideration for all other provisions

and is a necessary part of the entire settlement. All parties agree that the Settlement Agreement fairly, reasonably, and appropriately balances the public interest issues at stake in this proceeding. The parties further agree that this Settlement Agreement shall not serve as precedent or as an admission with regard to any issue resolved in the Settlement Agreement.

2. This Settlement Agreement become effective upon issuance by FERC of a final order accepting this Settlement without modification or condition and issuing a license in accordance with this Settlement Agreement. If FERC issues a final order accepting the Settlement with modifications or conditions, this Settlement Agreement shall be considered modified to conform to the terms of that order unless at least one party indicates to the other parties in writing within thirty (30) days after the issuance of the final order its objection to the modifications, changes, or conditions. Thereafter, the parties will negotiate for a period of up to ninety (90) days to resolve the issues raised by the modifications and amend the Settlement to conform to the FERC final order. If agreement cannot be reached within ninety (90) days, the objecting party may withdraw from the Settlement by notifying the other parties in writing within ten (10) days of the termination of the ninety (90) day period, and the Settlement will terminate as to all parties and have no further force or effect. The requirement that the parties negotiate for a Period of ninety (90) days shall not preclude any party from seeking rehearing of the FERC modifications under 18 C.F.R. S 385.713. The petition for rehearing shall be withdrawn if the parties subsequently agree to modify the Settlement Agreement. The terms of this Settlement Agreement shall continue in effect, subject to FERC's reserved authority under the new license to require modifications, until the earlier of the expiration of a new license (and the term of any annual license) issued by FERC or the effective date of any FERC order approving surrender of a project under the Federal Power Act.

3. This Settlement Agreement shall be enforceable in its entirety in the courts of the State of _____. In the event that FERC issues a final license order that does not include all of the terms and conditions of this Settlement Agreement because FERC had determined that it has no jurisdiction over these conditions, the Parties agree that they will be bound by the conditions of the entire Settlement, including those deleted by FERC. If FERC does not issue a final license order containing the precise language of the Settlement Agreement and instead attempts to paraphrase or abbreviate the language of the Settlement Agreement, the language of the Settlement Agreement shall control in any enforcement action in the courts of the State of _____.

Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)

p. 1 - 6

2. Application to Administrative and Legal Proceedings.

a. It is the intent of the Parties that this Agreement shall be the basis for (1) the dismissal of the Mid-Columbia proceeding, Docket No. E-9569 et al., insofar as that proceeding pertains to the Rock Island Project, (2) the prompt issuance of a new forty year license for the Rock Island Project consistent with the decision of the court in Yakima Indian Nation v. FERC, 747 F.2d 466 (9th Cir. 1984), and (3) compliance by Chelan at the Rock Island Project with the 1984 Columbia River Basin Fish and Wildlife Program adopted by the Northwest Power Planning Council.

b. This Agreement shall be incorporated into the new license for the Rock Island Project and enforceable by FERC as a special article thereof.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission: Project No. 432 (Tennessee)**

p. 3-4

Following the conclusion of the evidentiary hearings, Carolina Power and Membership Corporation negotiated a settlement agreement which resolved the issues between them and filed it on September 17, 1993. The settlement includes a power coordination agreement and an interchange agreement. Membership Corporation would withdraw its competing license application in Project No. 2749 and its alternative request for antitrust license conditions in any new license issued to Carolina Power if the settlement were approved by the Commission and the Rural Electrification Administration. The Chief Judge certified the settlement agreement to the Commission on October 26, 1993. On April 19, 1994, the Commission issued an order modifying and conditionally accepting the settlement agreement. On May 11, 1994, Carolina Power and Membership Corporation filed an amendment to the power coordination agreement addressing the modifications contained in the Commission's April 19, 1994 order. On June 29, 1994, the Commission issued a letter order accepting the amended power coordination agreement. The amended power coordination agreement became effective on September 1, 1994. As provided in the settlement agreement between Carolina Power and Membership Corporation, Membership Corporation's license application for the Walters Hydroelectric Project, in Project No. 2748, was considered withdrawn upon the approval of the settlement agreement and the power coordination agreements becoming effective. Accordingly, we will consider September 1, 1994, to be the date of Membership Corporation's request to withdraw its application, with that request taking effect fifteen days later on September 16, 1994. After the withdrawal of Membership Corporation's application, Carolina Power's license application for the Walters Hydroelectric Project No. 432 is now unopposed.

Carolina Power, North Carolina, Tennessee Wildlife, and the mission staff conducted negotiations to establish terms and conditions for a new license for the Walters Hydroelectric project. These negotiations resulted in a settlement agreement which was filed on February 16, 1994. This agreement is in the form of proposed articles for the new license and resolves a variety of issues, including recreation, water quality, the project operational regime, and historical and cultural sources. The Chief Judge certified this settlement agreement the Commission on March 21, 1994. It is referred to below as "the 1994 settlement" or simply as "the settlement."

(F) The Commission approves and adopts as a part of this license, with the modifications thereto set forth in this order, the February 16, 1994 settlement among Carolina Power & Light Company, North Carolina Department of Environment, Health, and Natural Resources, and the Tennessee Wildlife Resources Agency. Approval of this settlement does not constitute approval of, or precedent regarding, any principle of issue in this proceeding.

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 1

Introduction

The purpose of this document is to highlight, summarize and document the areas of agreement that exist as the result of comprehensive settlement discussions between the signators with regard to the operation and maintenance of the Beaver River Project (Federal Energy Regulatory Commission (FERC) Project No. 2645). This document is intended as a Settlement Offer. As such, it is a summary of the areas of agreement and is not meant to replace the detailed license application exhibits, studies, reports, meeting minutes and other consultation records that have been and will be developed for the project and submitted to the consulted resource agencies and FERC.

p. 15-17

I. Coverage

This Settlement Offer provides the terms and conditions for the resolution of the fisheries, fish entrainment and passage, wildlife, water quality, lands management and ownership, recreation and aesthetics issues by the signators regarding the issuance of a new license for the Beaver River Project, these being all the issues presently addressed.

J. General Provisions

1. Niagara Mohawk agrees to implement the various obligations and requirements set forth herein. Resource agencies and other signators agree to support a new 30-year license for the Beaver River Project, incorporating and implementing the provisions contained herein. This support shall include reasonable efforts to expedite the National Environmental Policy Act (NEPA) process. For those issues addressed herein, the signators agree not to propose, support or communicate to FERC or any other federal or state resource agency with jurisdiction directly related to the relicensing process any comments, certificate or license conditions other than ones consistent with the terms of this Settlement Offer. However, this Settlement Offer shall not be interpreted to restrict any signator's participation or comments in the future relicensing of this project. Further, this section shall not be read to predetermine the outcome of the NEPA analysis. If such NEPA analysis leads to addition of any license conditions inconsistent with those contained herein, the signators recognize that such addition would trigger the rights of the signators to withdraw from the Settlement Offer pursuant to Paragraph K. 1.

2. The signators agree that this Settlement Offer fairly and appropriately balances the environmental, recreational, fishery, energy and other uses and interests served by the Beaver River. The signators further agree that this balance is specific to the Beaver River Project. No signator shall be deemed, by virtue of execution of this Settlement Offer, to have established precedent, or admitted or consented to any approach, methodology, or principle except as expressly provided for herein. In the event that this Settlement Offer is approved by the NYSDEC and/or FERC, such approval shall not be deemed precedential or controlling regarding any particular issue or contention in any other proceeding.

3. This Settlement Offer shall become effective upon the later of: (1) final 401 water quality certificate issuance by NYSDEC, or (2) issuance of a new license, consistent with this Settlement, by FERC and acceptance of same by Niagara Mohawk. If a 401 water quality certification or FERC license is issued that results in certificate or FERC license terms inconsistent with the terms of the Settlement Offer, any signator may withdraw pursuant to Paragraph K. 1 of this Settlement Offer. The Settlement Offer, including all mitigative measures and annual contributions to the Beaver River fund, shall remain in effect for the term of the new license and for any annual license issued subsequent thereto, subjected to authority reserved by FERC in the new license to require modifications.

4. The signators have entered into the negotiations and discussions leading to this Settlement Offer with the explicit understanding that all offers of settlement and the discussions

relating thereto are privileged, shall not prejudice the position of any signator participant talking part in such discussions and negotiations, and are not to be otherwise used in any manner in connection with these or any other proceedings.

5. The Settlement Offer shall apply to, and be binding on, the signators and their successors and assigns, but only with regard to the above captioned proceedings and then only if the Settlement Offer is made effective as provided herein. No change in corporate status of Niagara Mohawk shall in any way alter Niagara Mohawk's responsibilities under the Settlement Offer. Each signatory to the Settlement Offer certifies that he or she is authorized to execute the Settlement Offer and legally bind the party he or she represents.

K. Approval of Settlement

1. The signators have entered into and jointly submit this Settlement Offer with the express conditions that NYSDEC approves and accepts all provisions herein and either issues or waives a 401 water quality certification and that FERC approves and accepts all provisions herein and issues a new project license for the Beaver River Project consistent with the terms of this Settlement Offer. In the event that either NYSDEC and/or FERC changes, conditions or modifies any provisions contained here in any NYSDEC issued 401 water quality certification or FERC order issuing a new license, whether through its own action or through incorporation of conditions of a 401 water quality certification, the Settlement Offer shall be considered modified to conform to the FERC order unless any signator to the Settlement Offer within 60 days of NYSDEC's or FERC's action provides written notice by certified mail to the other signators that it objects to the modification, change or condition. The signators shall then commence negotiations for a period of up to 60 days to resolve the issue and modify the Settlement Offer, as needed. If agreement cannot be reached, then the objecting party may withdraw from the Settlement Offer, without incurring any obligations or benefitting from rights associated with the Settlement Offer. In the event that the Settlement Offer is withdrawn, it shall not constitute a part of the record of ongoing proceedings.

2. In the event that FERC issues a final order that does not include conditions consistent with Paragraphs X.A, X.B and Attachment 2 of this Settlement Offer and regardless of whether this Settlement is withdrawn from by a party other than Niagara Mohawk, NYSDEC or USFWS, Niagara Mohawk agrees that it will comply with and implement the terms of Paragraphs X.A and X.B and Attachment 2 as long as the Beaver River Project receives a new license with operational terms and conditions and financial impacts consistent with the Settlement Offer as filed.

3. In the event that FERC rejects or modifies any of the provisions of this Settlement Offer, then the rest of the agreement shall remain in effect.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 14-15

H. General Provisions

1. Licensees agree to implement the various obligations and requirements set forth herein. Resource agencies and other signatories agree to support a new 30 year license for the Black River and Beebee Island Projects, incorporating and implementing the provisions contained herein. This support shall include reasonable efforts to expedite the National Environmental Policy Act) process. For those issues addressed herein, the signatories agree not to propose, support or otherwise communicate to FERC or any other federal or state resource agency with jurisdiction directly related to the relicensing process any comments, certificate or license.

conditions other than ones consistent with the terms of this Settlement Offer. However, this Settlement Offer shall not be interpreted to restrict any signatory's participation or comments in future relicensing of this project. Further, this section shall not be read to predetermine the outcome of the NEPA analysis.

If such NEPA analysis leads to addition of any license conditions inconsistent with those contained herein, the signatories recognize that such addition would trigger the rights of the signatories to modify or withdraw from the Settlement Offer pursuant to Paragraph IX.I.1.

2. The signatories agree that this Settlement Offer fairly and appropriately considers the environmental, recreational, fishery, energy and other uses and interests on the Black River. The signatories further agree that this agreement is specific to the Black River and Beebee Island Projects. No signatory shall be deemed, by virtue of execution of this Settlement Offer, to have established precedent, or admitted or consented to any approach, methodology, or principle except as expressly provided for herein. In the event that this Settlement Offer is approved by the NYSDEC and/or FERC, such approval shall not be deemed precedential or controlling regarding any particular issue or contention in any other proceeding.

3. If a 401 water quality certification or FERC license is issued that results in certificate or FERC license terms inconsistent with the terms of the Settlement Offer, any signatory may withdraw pursuant to Section IX.I.1 of this Settlement Offer. The Settlement Offer, including all mitigative measures and annual contributions to the Black River Fund as specified in Attachment 1, shall remain in effect for the term of the new license and for any annual license issued subsequent thereto, subject to authority reserved by FERC in the new license to require modifications.

4. The signatories have entered into the negotiations and discussions leading to this Settlement Offer with the explicit understanding that all offers of settlement and the discussions relating thereto are privileged, shall not prejudice the position of any signatory participant taking part in such discussions and negotiations, and are not to be otherwise used in any manner in connection with these or any other proceedings.

5. The Settlement Offer shall apply to, and be binding on, the signatories and their successors and assigns, but only with regard to the above-captioned proceeding and then only if the Settlement Offer is made effective as provided herein. No change in corporate status of either or both licensees shall in any way alter licensees' responsibilities under the Settlement Offer. Each signatory to the Settlement Offer certifies that he or she is authorized to execute the Settlement and legally bind the party he or she represents.

I. Approval of Settlement

1. The signatories have entered into and jointly submit this Settlement Offer with the express conditions that NYSDEC approves and accepts all provisions herein and either issues or waives § 401 water quality certifications and that FERC approves and accepts all provisions herein and issues new project licenses for the Black River and Beebee Island Projects consistent with the terms of the Settlement Offer. In the event that either NYSDEC and/or FERC changes, conditions or modifies any provision contained herein in any NYSDEC issued § 401 water quality certifications or FERC orders issuing new licenses, whether through its own action or through incorporation of conditions of § 401 water quality certifications, the Settlement Offer shall be considered modified to conform to the FERC orders unless any signatory to the Settlement Offer within 30 days of NYSDEC's or FERC's action provides written notice by certified mail to the other signatories that it objects to the modification, change or condition. The signatories shall then commence negotiations for a period of up to 90 days to resolve the issue and modify the Settlement Offer, as needed. If agreement cannot be reached, then the objecting party may

withdraw from the Settlement Offer, without incurring any obligations or benefitting from rights associated with the Settlement Offer. In the event that the Settlement Offer is withdrawn, it shall not constitute a part of the record of ongoing proceedings.

2. In the event that FERC issues final orders that do not include conditions consistent with Paragraphs IX.A, IX.B and Attachments 1 and 2 of this Settlement Offer and regardless of whether this Settlement is withdrawn from by a party other than licensees, NYSDEC, USFWS or NPS, licensees agree that they will comply with and implement the terms of Paragraphs IX.A and IX.8 and Attachments 1 and 2 as long as the Black River and Beebee Island Projects receive new FERC licenses with operational terms and conditions and financial impacts consistent with the Settlement Offer as filed.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 1-4

2.0 Effect of Offer of Settlement

2.1 This Settlement is made upon the express understanding that it constitutes a negotiated settlement of issues in the above-captioned proceedings, and no party to the Settlement shall be deemed to have approved, admitted, accepted, agreed to or otherwise consented to any operation, management, valuation or other principle underlying or supposed to underlie any of the matters herein, except as expressly provided herein. Further, the parties agree that this Settlement shall not be used as a precedent or as an admission with regard to any issue dealt with in the Settlement.

2.2 For those issues addressed in this Settlement, parties other than the USFS agree not to propose, mandate, support or otherwise communicate to FERC any license condition other than those provided for herein, except as provided for in Paragraph 9.3. The USFS agrees not to propose, support or otherwise communicate to the FERC any license condition other than those provided for herein except to the extent that its analysis under the National Environmental Policy Act of 1969 ("NEPA") results in mandatory license conditions pursuant to S 4(e) of the Federal Power Act. This section shall not be read to predetermine the outcome of the required NEPA analysis. However, if such NEPA analysis leads to the addition of any license conditions beyond those contained herein, the parties recognize that such an addition would trigger the rights of the parties to withdraw from this agreement pursuant to Paragraph 2.3.

2.3 This Settlement shall become effective upon issuance by FERC of "final" orders accepting this Settlement without modification or condition and issuing licenses in accordance with the Settlement for the 11 hydro electric projects dealt with herein. If FERC issues orders accepting the Settlement with modifications or conditions, this Settlement shall be considered modified to conform to the terms of those orders unless at least one party indicates to the other parties in writing within 30 days after the issuance of such orders its objection to the orders and its withdrawal from the Settlement. If any party so withdraws, this Settlement shall cease to have any force or effect except for Paragraph 2.1. If this Settlement is modified to conform to the terms of FERC orders, as discussed above, it shall become effective once those orders become "final" as of the date rehearing is denied, or if rehearing is not applied for, the date on which the right to seek rehearing expires. The terms of this Agreement shall continue in effect, subject to the FERC's reserved authority under the licenses to require modifications, until the earlier of the expiration of a new license (plus the term of any annual license) issued by the FERC or the

effective date of any FERC order approving surrender of a project under Section 6 of the Federal Power Act.

2.4 It is a fundamental assumption of CPCo that the amounts to be expended, as a result of this Settlement, balance economics and environmental stewardship and that rate-recovery of those amounts will not be denied by the Michigan Public Service Commission ("MPSC") or, where appropriate, by FERC. All parties concur that the Settlement fairly and appropriately addresses the environmental and natural resource issues covered by this Settlement and associated with the relicensing of CPCo's 11 hydroelectric projects by FERC. The resource agencies will, if requested, support this Settlement before the MPSC and FERC as fairly and appropriately addressing environmental and natural resource issues.

2.5 CPCO shall prepare a draft schedule for implementing the studies, plans and actions called for in this Settlement. The schedule shall specify dates for initiation, progress reporting and completion for each study, plan, or action and shall include milestones for major activities. A draft schedule shall be submitted to the resource agencies for review in accordance with Section 13 not later than 90 days after execution of this Settlement by the parties.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. 3-6

A. The Parties have entered into this Settlement with the intent that all issues identified by the Parties to date associated with issuance of a new license for the Project involving fisheries, fish passage, wildlife, water quality, lands management and control, recreation and aesthetics are resolved to the satisfaction of the Parties.

B. NEP agrees to implement the various obligations and requirements set forth herein. The Resource Agencies and the Intervenor agree to support a new 40 year license for the Project incorporating and implementing the provisions contained herein. This support shall include reasonable efforts to expedite the National Environmental Policy Act (NEPA) process. For those issues addressed herein the Parties agree not to propose, support, or otherwise communicate to FERC or any other Resource Agency with jurisdiction directly related to the relicensing process any comments or license conditions other than ones consistent with the terms of this Agreement. However, this Agreement shall not be interpreted to restrict any Party's participation or comments in future relicensing of this Project. Further, this section shall not be read to predetermine the outcome of the NEPA analysis. If such NEPA analysis leads to addition of any license conditions inconsistent with those contained herein, the Parties recognize that such addition would trigger the rights of the Parties to withdraw from the Settlement pursuant to Paragraph VII.A.

C. The Parties agree that this Settlement fairly and appropriately balances the environmental, recreational, fishery, energy and other uses and interests served by the Deerfield River. The Parties further agree that this balance is specific to the Deerfield River Project. No Party shall be deemed, by virtue of participation in this Settlement, to have established precedent, or admitted or consented to any approach, methodology, or principle except as expressly provided for herein. In the event that this Settlement is approved by the FERC, such approval shall not be deemed precedential or controlling regarding any particular issue or contention in any other proceeding.

D. Nothing in this Settlement shall preclude the Resource Agencies from complying with their obligations under the National Environmental Policy Act, the Clean Water Act, the Endangered Species Act, the Federal Power Act, the Fish and Wildlife Coordination Act or any

other applicable state or federal laws. However, by entering into this Agreement the Resource Agencies represent that they believe their statutory obligations are, or can be, met consistent with this Agreement.

E. This Settlement shall become effective upon the later of: a) issuance of a new license, consistent with this Settlement, by FERC; or b) the expiration of any appeal period for §401 Water Quality Certifications issued by Vermont and Massachusetts. If Water Quality Certification is issued by either state that results in license terms inconsistent with the terms of the Settlement, any Party may withdraw pursuant to Section V of this Agreement. The Settlement shall remain in effect for the term of the new license and for any annual license issued subsequent thereto subject to Authority reserved by FERC in the new license to require modifications.

F. The Parties have entered into the negotiations and discussions leading to this Settlement with the explicit understanding that all offers of settlement and the discussions relating thereto are privileged, shall not prejudice the position of any Party or participant taking part in such discussions and negotiations, and are not to be used in any manner in connection with these or any other proceedings.

G. The Settlement shall apply to, and be binding on, the Parties and their successors and assigns, but only with regard to the above-captioned proceeding and then only if the Settlement is made effective as provided herein. No change in corporate status of NEP shall in any way after NEP's responsibilities under the Settlement. Each signatory to the Settlement certifies that he or she is authorized to execute the Settlement and legally bind the party he or she represents.

H. By entering into this Settlement, the Intervenors and Resource Agencies shall not be considered to have accepted any legal liability for the operation of the NEP Project.

I. Nothing in this Settlement shall be construed as binding the USFWS or NPS to expend in any one fiscal year any sum in excess of appropriations made by Congress or administratively allocated for the purpose of this Settlement for the fiscal year, or to involve the USFWS or NPS in any contract or other obligation for the future expenditure of money in excess of such appropriations or allocations.

J. With respect to EPA, nothing in this Agreement, including without limitation Sections II.B and D., shall be interpreted to preclude or otherwise limit EPA from complying with its obligations under the Clean Water Act, Clean Air Act, and National Environmental Policy Act, or other federal statutes. EPA support for the terms of this Agreement is based on its knowledge and understanding of the facts at the time of this Agreement's execution. Nothing herein shall preclude EPA from fully and objectively considering all public comments received in any regulatory process related to the Project, from conducting an independent review of the Project under applicable federal statutes, or from providing comments to FERC.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

p. 1-2

The parties are Consumers Power Company; The Detroit Edison Company; Frank J. Kelley, ex rel., the State of Michigan ("AG"); Michigan Department of Natural Resources ("MDNR"); the United States Department of Interior ("DOI"), on behalf of the Fish and Wildlife Service ("USFWS") and, as Trustee for Indian tribes, bands or communities with reserved treaty rights in the Michigan waters of Lake Michigan; the Michigan United Conservation Clubs ("MUCC") Grand Traverse Band of Ottawa and Chippewa Indians ("GTB"); Little River Band of Ottawa Indians ("LRB"); Little Traverse Bay Bands of Ottawa Indians ("LTBB"); and the

National Wildlife Federation ("NWF") and their respective successors and assigns. MDNR, DOI, MUCC, AG, GTB, LRB, LTBB and NWF are periodically herein referred to as the "Intervenors." The FERC Agreement includes Appendices A 2 and B hereto which are incorporated by reference and made part of this FERC Agreement.

The parties executed the State Agreement contemporaneously with this FERC Agreement. Both documents are necessary elements of the settlement of the proceedings discussed above, and neither shall become effective unless and until both become effective.

p. 10-18

B. EFFECTIVE DATE

This FERC Agreement will be effective on the first day of the first month following the date of the last Regulatory Approval described in Section IV.C. becoming final and no longer subject to judicial review, or as soon thereafter as the State Agreement becomes effective. This FERC Agreement will not become effective unless and until the State Agreement becomes effective.

C. REGULATORY APPROVALS

Before execution or within a reasonable period after execution Consumers Power Company and The Detroit Edison Company will be obligated to seek certain formal approvals from the Michigan Public Service Commission (MPSC) and FERC. Unless waived by Consumers Power Company or The Detroit Edison Company, all of the following approvals or agency actions are required from the agency noted for the Settlement to become effective. It is understood that rate recovery may be sought by either company in a single issue rate filing or in a general rate case.

1. The MPSC approves each of the following:

For Consumers Power Company

- a. The capitalization as a Regulatory Asset by Consumers Power Company (recoverable over 10 years) of the payments, the book value of lands, the reasonable and prudent estimated land transfer costs (including internal costs of the company) and the reasonable and prudent estimated capital costs of the projects described in Section I of this FERC Agreement and Section III of the State Agreement.

- b. The appropriateness of recovery as an Operation and Maintenance Expense of the
For The Detroit Edison Company

exp

- a. At Detroit Edison's option, the continuation of existing rate treatment, the
prudent estimated land transfer costs and the cost of the acquisition and/or improvement of access or other facilities, as described in Section III of the State Agreement.

capitalizati

- b. The recovery through rates of all, or designated portions of, the applicable O&M or other expense items as are requested by Detroit Edison, of the payments described in Sections II and III of this FERC Agreement and Sections II and V of the State Agreement.

For Both Consumers Power Company and The Detroit Edison Company

- a. The prudence of Consumers Power Company and The Detroit Edison Company in entering into the Settlement and recovering the \$2.5 million base payment described in Section II.A. of the State Agreement. (The prudence of future payments in excess of \$2.5 million called for by the State Agreement will be subject to review by MPSC when made and recovery sought; however, the effectiveness of the Settlement shall not be conditioned upon such incremental MPSC approval).
- b. Any rate adjustments made by Consumers Power Company and The Detroit Edison Company reflecting the initial cost adjustments resulting from the FERC Agreement or

the State Agreement (including those cost adjustments associated with removal of transferred lands from rate base).

2. The FERC approves this FERC Agreement as resolving all issues before it in the Ludington proceedings and makes appropriate and necessary license changes. Except for the special procedures described below, if FERC issues orders accepting such settlement provisions with modifications or conditions or asserts and exercises jurisdiction over the other provisions of the State Agreement, then the Settlement shall be considered modified to conform to the terms of those orders unless at least one party indicates to the other parties in writing within 30 days after the issuance of such orders its objection to the orders and its withdrawal from the Settlement. If any party so withdraws, the Settlement shall cease to have any force or effect. In the event that the resolution in the State Agreement of the issue of future damages is not acceptable to the FERC, and the FERC asserts jurisdiction, then the State and such other parties as choose to participate may join in an appeal of that issue without voiding this Agreement or the State Agreement.
3. The MDNR or agency having jurisdiction issues a NPDES permit for the maximum period allowed by law, in form and substance the same as Permit Number MI 0035912 issued on May 20, 1988 (except for the effective date) , but without those portions of Parts I.A.4., I.A.5, and I.A.6. pertaining to release of turbine generating water that were challenged by Consumers Power Company in its Petition for Contested Case Hearing dated June 3, 1988, and the time for legal review of such permit expires without challenge by any party to this Agreement or the State Agreement with respect to such permit or any of the conditions of such permit. Consumers Power Company reserves the right to object to any subsequent attempts to impose any previously challenged conditions and to any attempts by third parties to do so. The parties (other than the AG, State of Michigan or the MDNR) will agree not to propose for inclusion in any NPDES permit for the LPSP conditions substantially similar to Parts I.A.4., I.A.5. or I.A.6. in Permit Number MI0035912, except that this Agreement and the State Agreement shall expire on the expiration date of the current LPSP FERC license.

D. NON-PRECEDENTIAL AND NON-PREJUDICIAL NATURE OF THE SETTLEMENT

Unless and until it becomes effective, the FERC Agreement shall have no prejudicial effect on any party beyond the obligations under the FERC Agreement for parties to support or not oppose various regulatory approval filings. Upon its effectiveness the FERC Agreement shall not have precedential effect in other cases and shall not establish any legally binding principles regarding fish valuation, modification of project operation to protect fish, land valuations, the legal jurisdiction of any regulatory agency affected by this FERC Agreement, the type of proceedings chosen for regulatory approvals, the support or non-objections to regulatory approval or the rate-making treatment approved or utilized for such cost recovery. To the extent that parties are bound by this Agreement, so shall their successors and assigns be bound.

E. COVERED MATTERS

The matters resolved by this FERC Agreement are all issues currently pending in Consumers Power Company and The Detroit Edison Company (Ludington Pumped Storage Project), Project No. 2680 including the August 11, 1987 FERC Order Modifying Mitigative Plan for Turbine Mortality. The matters resolved include:

1. The mitigation and abatement of fish mortality resulting from the operation of the LPSP including a) proper implementation and maintenance of identified measures to abate fish

mortality; and b) establishment of a program to monitor, assess, optimize and improve the fish mortality abatement potential of any technological or operational modification employed to mitigate mortality;

2. The establishment of a schedule to identify and evaluate new technologies or operational changes to further reduce unavoidable future mortality;

3. The establishment of a program to identify, evaluate and deploy real time fish population monitoring technologies and the development of models predictive of fish populations;

4. The establishment and enhancement of public recreational and angler access facilities.

F. TERM OF FERC AGREEMENT

The parties agree that the undertakings of Consumers Power Company and Detroit Edison Company set forth herein and the resolution of the matters addressed herein apply only to the present term of the FERC license.

G. WITHDRAWAL OF LAWSUITS, COMPLAINTS AND OTHER PENDING LEGAL ACTIONS

Within a reasonable period of time after the effective date of the Settlement, the parties shall make all necessary legal and other required filings for every pending legal or administrative matter they have initiated against each other concerning LPSP operations and damage to fishery resources. It is intended that each action be resolved as set forth in the Settlement. Intervenor, request(s) for hearing and request(s) for production of an environmental impact statement will be withdrawn by the intervenors contemporaneous with the filing of the FERC Agreement but without prejudice to renewal of such requests if the Settlement is not accepted or made effective.

H. OBLIGATION TO SUPPORT REGULATORY FILINGS MDNR, DOI, MUCC, NWF, GTB, LRB, and LTBB will be obligated to state for the record their support of Consumers Power Company's and The Detroit Edison Company's efforts to obtain the regulatory approvals described in Section IV.C. hereinabove, upon the written request of Consumers Power Company or The Detroit Edison Company.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 1-2

These Settlement Agreements resolve all issues for the period specified in each agreement, related to the effects of the Project, as currently constructed, upon the subject areas identified above. The Parties intend that the Settlement Agreements shall remain in effect for the duration of the term of the new license period for the Project, including the term(s) of any annual license(s) issued thereafter. However, certain specific provisions contained in these Agreements have been negotiated based upon an assumed 30-year license period. If the FERC issues a license for longer than a 30-year period, the Parties have agreed in making this Offer Of Settlement that it shall give rise to a right of the Parties to initiate a proceeding before the FERC between the 25th and 30th year of the license to reopen the provisions which were specifically based upon a 30-year license period. The City agrees that it shall not oppose initiation of such a proceeding; the Parties, may, however, differ in their respective positions in such a proceeding.

The Parties request that the FERC approve the terms and provisions of the Settlement Agreements and dismiss the proceedings under Docket No. EL 78-36, pursuant to Rule 602, upon certification by the Chief Administrative Law Judge, as appropriate.

The Parties have agreed that each Settlement Agreement shall constitute a unit. The Parties also request that the FERC accept and approve the Settlement Agreements as a package. Any material modification of the terms of a Settlement Agreement, approval of less than the entire Agreement, or the addition of any material terms to a Settlement Agreement will make the Agreement voidable at the option of any Party. The City and the other Parties reserve the right to appeal the issuance of a license if unacceptable provisions are added.

p. 5-6

B. PROVISIONS APPLICABLE TO ALL AGREEMENTS

1. General Provisions

The attached Settlement Agreements on fisheries, wildlife, recreation and aesthetics, erosion control, cultural resources and traditional cultural properties all contain similar generally applicable provisions. These general provisions include:

- Statements of purpose and intent. It is the intent of the Parties that all issues concerning environmental impacts from the relicensing of the Project, as currently constructed, are satisfactorily resolved by these Agreements.

- Obligations of the Parties. The City commits itself to implementation of the terms of the various Agreements. The Intervenors are committed to support a new Project license incorporating the provisions of the various Agreements, to support reasonable efforts to expedite the related NEPA process, and to file comments supporting the measures defined by the Settlement Agreements as the preferred action for the purpose of the Project's EA or EIS. The Parties are committed to cooperating in the implementation of the Agreements, including the submittal of this agreed upon Offer of Settlement. The Parties agree to cooperate in conducting and participating in studies and other actions provided for in the Agreements and to provide assistance in obtaining any approvals or permits which may be required for the implementation of the Agreements.

- Effective date and duration. The Agreements take effect upon the effective date of the license issued by FERC consistent with the Agreements and remain in effect through the new license period and the term of any subsequent annual licenses. The Agreements have a uniform provision for reopening and reconsideration of the substantive terms in the event of changed circumstances.

- Monetary issues and implementation. Monies to be expended by the City under the Agreements are to be adjusted for inflation pursuant to a uniform procedure. The City will facilitate annual meetings among all Parties to discuss implementation issues relative to all Project mitigation and enhancement plans. These meetings will provide a forum for resolution of interplan implementation issues.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 8-10

2.3. Effect of Offer of Settlement

2.3.1 This Settlement is made upon the express understanding that it constitutes a negotiated Settlement of issues in the above-captioned proceedings, and no party to the Settlement shall be deemed to have approved, admitted, accepted, agreed to or otherwise consented to any operation, management, valuation or other principle underlying or supposed to underlie any of the matters herein, except as expressly provided herein. Further, the Parties agree that this Settlement

shall not be used as a precedent or as an admission with regard to any issue dealt with in the Settlement.

2.3.2 For those issues addressed in this Settlement, the Parties agree not to propose, mandate, support or otherwise communicate to FERC any license condition other than those provided for herein, or oppose FERC license articles which incorporate the provisions described in this Settlement, except as provided for in Section 18 of the Federal Power Act Secretary of DOI prescription authority.

2.3.3 This Settlement shall become effective upon issuance by FERC of final orders accepting this Settlement without modification or condition and issuing licenses in accordance with the Settlement for the Projects dealt with herein. If FERC issues final orders accepting the Settlement with modifications or conditions, this Settlement shall be considered modified to conform to the terms of those orders unless at least one party indicates to the other Parties in writing within 30 days after the issuance of such orders its objection to the modification, change or condition. The Parties shall then commence negotiations for a period of up to 90 days to resolve the issue(s) and modify the Settlement as needed. If agreement cannot be reached at the end of the ninety (90) day period, the objecting party may withdraw from the Settlement by notifying the Parties in writing within 10 days. If WE or any one of the Resource Agencies withdraws, this Settlement shall cease to have any force or effect except for Paragraph 2.3. 1. If this Settlement is modified to conform to the terms of FERC orders, as discussed above, it shall become effective once those orders become final as of the date rehearing is denied, or if rehearing is not applied for, the date on which the right to seek rehearing expires. The above shall not preclude a party from seeking Rehearing on the modifications or conditions pursuant to 18 C.F.R 385.713 within the prescribed time limits. The Request for Rehearing shall be withdrawn if the party subsequently reaches agreement on modifying the Settlement. The terms of this Settlement shall continue in effect, subject to the FERC's reserved authority under the licenses to require modifications, until the earlier of the expiration of a new license (plus the term of any annual license) issued by the FERC or the effective date of any FERC order approving surrender of a project under Section 6 of the Federal Power Act.

2.3.4 In the event that FERC issues final license orders that do not include all of the conditions of this Settlement because FERC has determined it lacks jurisdiction over these issues, the Parties agree that they will be bound by the conditions of the entire Settlement which is enforceable as a whole in state court.

2.3.5 The withdrawal of a party other than WE and the Resource Agencies does not terminate the effect of this Settlement on the other Parties.

2.3.6 All Parties concur that the Settlement fairly and appropriately addresses the environmental and natural resource issues associated with the relicensing of the Projects by FERC. The Parties will, if requested, support this Settlement as fairly and appropriately addressing environmental and natural resource issues before, but not limited to, the Michigan Public Service Commission (MPSC), Public Service Commission of Wisconsin (PSCW) and FERC.

2.3.7 WE can at its discretion add or modify any of the Projects' generating capacity without affecting the provisions of this Settlement following the applicable FERC regulations and rules.

2.3.8 The Parties recognize the importance of the upcoming licensing of the Sturgeon Falls Project (FERC No. 2720) which must be operated consistent with the provisions of this Settlement and shall take all appropriate steps to ensure this action.

2.3.9 WE shall prepare a draft schedule for implementing the studies, plans and actions called for in this Settlement. The schedule shall specify dates for initiation, progress reporting and completion for each study, plan, or action and shall include milestones for major activities. A

draft schedule shall be submitted to the Team and ex-officio advisory members for review in accordance with Paragraph 9.0 not later than 120 days after execution of this Settlement by the Parties.

C. ENFORCEMENT

Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995) Project No. 2645 (New York)

p. 13

C. Enforceability

This Settlement Offer shall be considered a Memorandum of Understanding between the signators, which shall be enforceable by any party to the extent that this Settlement Offer is accepted and approved by the NYSDEC and/or FERC and incorporated into the terms and conditions of any 401 water quality certificate issued by NYSDEC or any new license issued by

FERC for the Beaver River Project No. 2645.

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995 Project Nos. 2569, 2538 (New York)

p. 12

C. Enforceability

This Settlement Offer shall be enforceable by any party to the extent that this Settlement Offer is accepted and approved by the NYSDEC and/or FERC and incorporated into the terms

and conditions of any § 401 water quality certificate issued by NYSDEC or any new license issued by FERC for the Black River Hydroelectric Project (FERC No. 2569) and Beebee Island Hydroelectric Project (FERC No. 2538).

Consumers Power Company Settlement, November 11, 1992 Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 23

10.4 CPCo shall not be responsible for any enforcement activities related to Federal laws or regulations on the National Forest land within the project boundary, except as required by the FERC under the provisions of the Federal Power Act.

Salmon River Project Settlement Offer, December 9, 1993 Project No. 11408 (New York)

p. 6

B. Enforceability

This Offer of Settlement shall be considered a Memorandum of Understanding between DEC and Niagara Mohawk, which shall be enforceable by either party to the extent that this

settlement offer is accepted and approved by FERC and incorporated into the terms and conditions of any federal license issued for the Salmon River hydropower project.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 9

2.3.4 In the event that FERC issues final license orders that do not include all of the conditions of this Settlement because FERC has determined it lacks jurisdiction over these issues, the Parties agree that they will be bound by the conditions of the entire Settlement which is enforceable as a whole in state court.

2.3 Effect of Offer of Settlement

2.3.1 This Settlement is made upon the express understanding that it constitutes a negotiated Settlement of issues in the above-captioned proceedings, and no party to the Settlement shall be deemed to have approved, admitted, accepted, agreed to or otherwise consented to any operation, management, valuation or other principle underlying or supposed to underlie any of the matters herein, except as expressly provided herein. Further, the Parties agree that this Settlement shall not be used as a precedent or as an admission with regard to any issue dealt with in the Settlement.

2.3.2 For those issues addressed in this Settlement, the Parties agree not to propose, mandate, support or otherwise communicate to FERC any license condition other than those provided for herein, or oppose FERC license articles which incorporate the provisions described in this Settlement, except as provided for in Section 18 of the Federal Power Act Secretary of DOI prescription authority.

2.3.3 This Settlement shall become effective upon issuance by FERC of final orders accepting this Settlement without modification or condition and issuing licenses in accordance with the Settlement for the Projects dealt with herein. If FERC issues final orders accepting the Settlement with modifications or conditions, this Settlement shall be considered modified to conform to the terms of those orders unless at least one party indicates to the other Parties in writing within 30 days after the issuance of such orders its objection to the modification, change or condition. The Parties shall then commence negotiations for a period of up to 90 days to resolve the issue(s) and modify the Settlement as needed. If agreement cannot be reached at the end of the ninety (90) day period, the objecting party may withdraw from the Settlement by notifying the Parties in writing within 10 days. If WE or any one of the Resource Agencies withdraws, this Settlement shall cease to have any force or effect except for Paragraph 2.3. 1. If this Settlement is modified to conform to the terms of FERC orders, as discussed above, it shall become effective once those orders become final as of the date rehearing is denied, or if rehearing is not applied for, the date on which the right to seek rehearing expires. The above shall not preclude a party from seeking Rehearing on the modifications or conditions pursuant to 18 C.F.R. 385.713 within the prescribed time limits. The Request for Rehearing shall be withdrawn if the party subsequently reaches agreement on modifying the Settlement. The terms of this Settlement shall continue in effect, subject to the FERC's reserved authority under the licenses to require modifications, until the earlier of the expiration of a new license (plus the term of any annual license) issued by the FERC or the effective date of any FERC order approving surrender of a project under Section 6 of the Federal Power Act.

2.3.4 In the event that FERC issues final license orders that do not include all of the conditions of this Settlement because FERC has determined it lacks jurisdiction over these issues,

General and Administrative Provisions: Enforcement (cont'd)

the Parties agree that they will be bound by the conditions of the entire Settlement which is enforceable as a whole in state court.

2.3.5 The withdrawal of a party other than WE and the Resource Agencies does not terminate the effect of this Settlement on the other Parties.

2.3.6 All Parties concur that the Settlement fairly and appropriately addresses the environmental and natural resource issues associated with the relicensing of the Projects by FERC. The Parties will, if requested, support this Settlement as fairly and appropriately addressing environmental and natural resource issues before, but not limited to, the Michigan Public Service Commission (MPSC), Public Service Commission of Wisconsin (PSCW) and FERC.

2.3.7 WE can at its discretion add or modify any of the Projects' generating capacity without affecting the provisions of this Settlement following the applicable FERC regulations and rules.

2.3.8 The Parties recognize the importance of the upcoming licensing of the Sturgeon Falls Project (FERC No. 2720) which must be operated consistent with the provisions of this Settlement and shall take all appropriate steps to ensure this action.

2.3.9 WE shall prepare a draft schedule for implementing the studies, plans and actions called for in this Settlement. The schedule shall specify dates for initiation, progress reporting and completion for each study, plan, or action and shall include milestones for major activities. A draft schedule shall be submitted to the Team and ex-officio advisory members for review in accordance with Paragraph 9.0 not later than 120 days after execution of this Settlement by the Parties.

Ludington Pumped Storage Project Settlement Agreement, February 27, 1995 Project No. 2680 (Michigan)

p. 15

D. NON-PRECEDENTIAL AND NON-PREJUDICIAL NATURE OF THE SETTLEMENT

Unless and until it becomes effective, the FERC Agreement shall have no prejudicial effect on any party beyond the obligations under the FERC Agreement for parties to support or not oppose various regulatory approval filings. Upon its effectiveness the FERC Agreement shall not have precedential effect in other cases and shall not establish any legally binding principles regarding fish valuation, modification of project operation to protect fish, land valuations, the legal jurisdiction of any regulatory agency affected by this FERC Agreement, the type of proceedings chosen for regulatory approvals, the support or non-objections to regulatory approval or the rate-making treatment approved or utilized for such cost recovery. To the extent that parties are bound by this Agreement, so shall their successors and assigns be bound.

D. PARTIES BOUND

Black River Project and Beebee Island Project Settlement Offer, September 14 1995 Project Nos. 2569, 2538 (New York)

p. 13

G. Binding Effect

Nothing in this Settlement Offer shall be construed as binding the USFWS or the NPS to expend in any one fiscal year any sum in excess of appropriations made by Congress or administratively allocated for the purpose of this Settlement Offer for the fiscal year, or to involve the USFWS or the NPS in any contract or other obligation for the future expenditure of money in excess of such appropriations or allocations.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 4-5

3.0 Parties Bound

3.1 This Settlement shall apply to, and be binding on, the parties and their successors and assigns. However, no party shall be bound by any part of this Settlement except with regard to the above-captioned licensing proceedings and then only if the Settlement is approved and made effective as provided for in Paragraph 2.3. No change in corporate status of CPCo shall in any way alter CPCo's responsibilities under this Settlement. Each signatory to this Settlement certifies that he or she is authorized to execute this Settlement and legally bind the party he or she represents.

3.2 If the Michigan Water Resources Commission (WRC) fails to issue for each project, within 90 days from the signing of this Settlement, a water quality certificate that is in conformance with the water quality terms [Sections 6, 8, 15 (as it pertains to Sections 6, 8, 16 and Appendix C), 16 and Appendix C] and the operation conditions (Sections 17 through 36 inclusive) of this Settlement, any party may withdraw from this Settlement and need not comply with its terms. The parties shall have up to 30 days from the date of certificate issuance (or up to 30 days after the end of the 90-day period if fewer than 11 certificates are issued) to withdraw from this Settlement. If the WRC issues water quality certificates in conformance with the above listed sections of this Settlement, for all projects, CPCo agrees not to contest the issuance of the certificates for those projects.

3.3 Funds allocated by CPCo for capital costs (costs for study, planning, design, construction and pre-operational testing), except for downstream fish protection, can be utilized by CPCo for other capital costs covered by this Settlement after consulting with the resource agencies (and with the SHPO regarding funds provided for in Paragraph 7.1) and approval from FERC. Unexpended funds not needed for the implementation of this Settlement may be retained by CPCo after consulting with the resource agencies and approval from FERC.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 10-12

2.4. Parties Bound

2.4.1 This Settlement shall apply to, and be binding on, the Parties and their successors and assigns. However, no party shall be bound by any part of this Settlement except with regard to the above-captioned licensing proceedings and then only if the Settlement is approved and made effective as provided for in Paragraphs 2.3.3 and 2.3.4. No change in the status of any party shall in any way alter any party's responsibilities under this Settlement. Each signatory to this Settlement certifies that he or she is authorized to execute this Settlement and legally bind the party he or she represents.

2.4.2 If the MDEQ fails to issue for each project, within 180 days from the signing of this Settlement, a water quality certificate that is in conformance with Paragraphs 3.0 and 4.0 of this Settlement as applicable to the protection of designation uses and compliance with numerical water quality standards of the State of Michigan, any party may withdraw from this Settlement and need not comply with its terms. The Parties shall have up to 30 days from the date of certificate issuance [or up to 30 days after the end of the 180-day period if fewer than eight (8) certificates are issued], to withdraw from this Settlement. If MDEQ issues water quality certificates in conformance with the above listed sections of this Settlement for all Projects, WE agrees not to contest the issuance of the certificates for those Projects. If MDEQ issues water quality certificates with terms and conditions not contained in the certificates agreed to within this Settlement, WE reserves the right to oppose these added terms and conditions.

2.4.3 If the MDEQ fails to issue for each project, within 180 days from the signing of this Settlement, a Coastal Zone Consistency Determination that is in conformance with the Settlement conditions of Paragraphs 3.0 and 4.0, any party may withdraw from this Settlement and need not comply with its terms. The Parties shall have up to 30 days from the date of determination issuance [or up to 30 days after the end of the 180-day period if fewer than eight (8) determinations are issued], to withdraw from this Settlement. If the MDEQ issues the Coastal Zone Consistency Determination in conformance with the above listed sections of this Settlement for all Projects, agrees not to contest the issuance of the determinations for those Projects.

2.4.4 If WDOA fails to issue a Coastal Zone Consistency Determination for each project within 120 days from the signing of this Settlement that is in conformance with the Settlement conditions, any party may withdraw from this Settlement and need not comply with its terms. The Parties shall have up to 30 days from the date of determination issuance (or up to 30 days after the end of the 120-day period if fewer than eight determinations are issued), to withdraw from this Settlement. If WDOA issues the Coastal Zone Consistency Determination in conformance with the above listed sections of this Settlement for all Projects, WE agrees not to contest the issuance of the determinations for those Projects.

E. SUPPORT OF SETTLEMENT

D. NON-PRECEDENTIAL AND NON-PREJUDICIAL NATURE OF THE SETTLEMENT

Unless and until it becomes effective, the FERC Agreement shall have no prejudicial effect on any party beyond the obligations under the FERC Agreement for parties to support or not oppose various regulatory approval filings. Upon its effectiveness the FERC Agreement shall not have precedential effect in other cases and shall not establish any legally binding principles regarding fish valuation, modification of project operation to protect fish, land valuations, the legal jurisdiction of any regulatory agency affected by this FERC Agreement, the type of proceedings chosen for regulatory approvals, the support or non-objections to regulatory approval or the rate-making treatment approved or utilized for such cost recovery. To the extent that parties are bound by this Agreement, so shall their successors and assigns be bound.

H. OBLIGATION TO SUPPORT REGULATORY FILINGS MDNR, DOI, MUCC, NW_F, GTB, LRB, and LTBB will be obligated to state for the record their support of Consumers Power Company's and The Detroit Edison Company's efforts to obtain the regulatory approvals described in Section IV.C. hereinabove, upon the written request of Consumers Power Company or The Detroit Edison Company.

APPENDIX F

In support of this Motion the parties state and stipulate as follows:

1. These cases arise from the efforts of the Michigan Department of Natural Resources (IIMDNRII) and the Michigan Natural Resources Commission (collectively "the State") to advance certain claims for damages and for declaratory relief against Consumers Power Company and The Detroit Edison Company. The State's claims concern fish mortality associated with the operation of the Ludington Pumped Storage Plant (IILPSPII) located on the shore of Lake Michigan in Ludington.

2. The underlying actions were commenced in the Ingham County Circuit Courts on September 3, 1986. On that same date, the Plaintiffs in the action below also filed a Complaint before the Federal Energy Regulatory Commission ("FERC") which sought certain operational and/or structural modifications of the LPSP.

3. By order dated November 8, 1994, this Court granted the parties' motion to hold these appeals in abeyance pending finalization of a settlement and directed the clerk to remove this case from the December 1994 session calendar.

4. A settlement agreement has now been reached by the parties which resolves all matters in the Michigan courts, all matters before FERC (in a separate "FERC Agreement"), and will also resolve an administrative contested-case proceeding pending before the Natural Resources Commission.

5. In settlement of all matters that are the subject of these appeals, the parties have executed a document entitled "Ludington Pumped Storage Agreement -- Courts and Non-FERC Agencies, 11 (hereinafter referred to as the "State Agreement"). The State Agreement provides, inter alia for the following:

a) The establishment of the Great Lakes Fisheries Trust which will provide funding for projects directed at enhancing, propagating, protecting and replacing Great Lakes fishery resources;

b) The establishment of the Scientific Advisory Team for the purpose of implementing, evaluating and overseeing the scientific activities established or authorized by the State Agreement;

c) The transfer of 15,638 acres of lands having identified fisheries value to the State of Michigan;

d) The transfer of 10,836 acres of lands to the Great Lakes Fisheries Trust;

e) The transfer of 186 acres of lands to Indian tribes;

f) The acquisition and/or development of eight (8) recreational access projects in Southeastern Michigan;

g) The enhancement of recreational access facilities at Pentwater and White Lake on Lake Michigan;

h) The cash payment to the Great Lakes Fisheries Trust of \$5,000,000 in partial payment of past damages; and

i) The payment of approximately \$2.5 million per year to the Great Lakes Fisheries Trust, in future damages for unavoidable fish mortality.

6. In order to implement the State Agreement, resolve all claims, provide for orderly administration of the settlement, and to facilitate future consensual dispute resolution, the parties shall upon remand, move the trial court pursuant to MCR 2.206 (A) (1) to add as parties plaintiff, the Michigan United Conservation Clubs, the National Wildlife Federation, the Grand Traverse Band of Ottawa and Chippewa Indians, the Little River Band of Ottawa Indians and the Little Traverse Bay Bands of Ottawa Indians.

7. The State Agreement is expressly contingent upon obtaining all regulatory approvals of all elements of the overall settlement including the separate FERC Agreement providing for the abatement of fish mortality resulting from the operation of the LPSP. The necessary approvals to effectuate the State Agreement (unless waived by the Defendants below) are:

- a) FERC approval of the FERC Agreement;
- b) Entry of the State Agreement by the Ingham Circuit Court upon remand;
- c) Approval of related rate matters by the Michigan Public Service Commission; and
- d) Modification of a National Pollution Discharge Elimination System permit by Department of Natural Resources.

8. Because of the contingent nature of the State Agreement, the parties agree it is necessary and, as part request that the Michigan Supreme Court retain the parties agree it is necessary and, as part of this motion, request that the Michigan Supreme Court retain its jurisdiction over this case during the pendency of the remand proceedings so that in the event the requisite approvals are not obtained and the State Agreement is not effectuated, the appeals may be reactivated and this case placed on the next available session calendar. The parties will use their best efforts to promptly obtain all the requisite approvals.

F. DISPUTE RESOLUTION

Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995) Project No. 2645 (New York)

p. 17-18

L. Dispute Resolution

In the event that any dispute arises over compliance with the terms and conditions of this Settlement Offer, the signatory agree to engage in good faith negotiations for a period of at least 60 days, if necessary, in an effort to resolve the dispute, said negotiations to be initiated and facilitated by NYSDEC. A minimum of two meetings shall be held to attempt to resolve the dispute during the 60-day negotiating period, if necessary. In the event that resolution cannot be reached within the 60-day negotiating period, the dispute may be referred to FERC pursuant to FERC's Rules of Practice and Procedure (18 CFR 385, et seq.).

Notwithstanding any other provision of this Settlement Offer, any signatory may seek relief in any appropriate forum for noncompliance with this Settlement Offer by any signatory hereto.

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995 Project Nos. 2569, 2538 (New York)

p. 15

J. Dispute Resolution

In the event that any dispute arises with the terms and conditions of this Settlement Offer, the signatories agree to engage in good faith negotiations for a period of at least 90 days, if necessary, in an effort to resolve the dispute, said negotiations to be initiated by the aggrieved party. A minimum of two meetings shall be held to attempt to resolve the dispute during the 90-day period, if necessary. In the event that resolution cannot be reached within the 90-day

negotiating period, the dispute may be referred to FERC pursuant to FERC's Rules of Practice and Procedure (18 CFR 385, et seq.).

Notwithstanding any other provision of this Settlement Offer, any signatory may seek relief in any appropriate forum for noncompliance with this Settlement Offer by any signatory hereto.

Consumers Power Company Settlement, November 11, 1992**Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)****p. 30-31****14.0 Disputes**

14.1 Any dispute that arises under this Settlement shall, in the first instance, be the subject of informal negotiations between CPCo and the resource agencies. The MMAC shall engage in a period of negotiations not to exceed seven (7) working days from the date of written notice by any team member that a dispute has arisen unless extended by agreement. If the MMAC is unable to resolve the dispute, CPCo shall, at the end of the period of negotiations, refer the matter to the Steering Committee for a period of negotiations not to exceed seven (7) working days from the date of the referral, unless extended by agreement. At the end of this negotiation period, the resource agencies shall provide to CPCo a written statement setting forth their proposed resolution of the dispute. Within seven (7) working days of receiving the resource agencies Proposed resolution, CPCo shall indicate to the resource agencies in writing whether or not it accepts the proposed resolution. During this informal dispute resolution period, any Steering Committee member may request the FERC Director of the Office of Hydropower Licensing (OHL) or the Director's designee, to participate in the negotiations to assist in resolving the dispute.

14.2 If CPCo rejects the resource agencies proposed resolution, any Steering Committee member may refer the dispute to FERC for expedited dispute resolution except as provided for in this Section. All disputes taken to FERC under this Section shall be governed by FERC's Rules of Practice and Procedures, 18 CFR Part 385. If CPCo rejects the proposed resolution of any dispute regarding water quality limits pursuant to Paragraphs 6.5 through 6.7, any Steering Committee member may refer the dispute to the WRC for expedited dispute resolution. All disputes taken to the WRC shall be governed by Michigan Administrative Code R 323.1025 or, if applicable, R323.1021.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994, Project No. 2323 (Massachusetts)****p. 22-23****B. Dispute Resolution**

In the event that any dispute arises over compliance with the terms and conditions of this Settlement, the Parties agree to engage in good faith negotiations for a period of at least 60 days, if necessary, in an effort to resolve the dispute. A minimum of two meetings shall be held to attempt to resolve the dispute during the 60-day period, if necessary. In the event that resolution cannot be reached within the 60-day negotiating period, the dispute may be referred to FERC pursuant to FERC's Rules of Practice and Procedure (18 CFR 385, et. seq.).

Notwithstanding any other provision of this Settlement, any Party may seek relief in any appropriate forum for noncompliance with this Settlement by any Party hereto.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

p. 10

A. DISPUTE RESOLUTION

All disputes arising under this Agreement (including those of the Scientific Advisory Team) will be subject to dispute resolution procedures as described in Appendix B. All disputes arising under the State Agreement will be subject to the dispute resolution procedures in that State Agreement.

Appendix B

Dispute Resolution Procedures

Any dispute that arises under the FERC Agreement to which this is an appendix shall, in the first instance, be the subject of informal negotiations among the parties to the Agreement. The parties shall engage in a period of negotiations not to exceed fourteen (14) days from the date of written notice by any party or parties that a dispute has arisen unless extended by agreement. If the parties are unable to resolve the dispute within fourteen (14) days of the close of negotiations, a majority of the parties shall provide to the disputing party or parties, a written statement setting forth their proposed resolution of the dispute. Within seven (7) days of receiving the proposed resolution of a majority of the parties, the disputing party or parties shall indicate to the majority parties, in writing, whether the disputing party or parties reject the proposed resolution. During this informal dispute resolution period, any party may request the FERC Director of the office of Hydropower Licensing (OHL) or the Director's designee, to participate in the negotiations to assist in resolving the dispute.

If a disputing party or parties reject the proposed resolution of the majority parties, the disputing party or parties shall have twenty-eight (28) days after receipt of proposed resolution to refer the dispute to FERC for expedited dispute resolution, if the dispute involves any matter other than compensation for fish mortality. All disputes taken to FERC under this Section shall be governed by FERC's Rules of Practice and Procedures, 18 CFR Part 385; the proposed resolution of the majority parties and produced in the dispute resolution process may be presented to FERC. If a disputing party or parties does not refer a dispute to the FERC within the 28-day period, the majority proposed resolution will become binding on all parties and effective upon receipt of all necessary governmental permits and authorizations.

p. 20-21

A. DISPUTE RESOLUTION PROCEDURES

All disputes arising under this State Agreement (including those of the Scientific Advisory Team) will be subject to dispute resolution procedures as described herein except that decisions of the Board of Trustees pursuant to their powers under the Declaration of Trust in Appendix E shall be final and shall not be subject to dispute resolution under the terms of this State Agreement. All disputes arising under the FERC Agreement will be subject to the dispute resolution procedures therein.

1. Informal Procedure

Any dispute that arises under this State Agreement shall, in the first instance, be the subject of informal negotiations among the parties. The parties shall engage in a period of negotiations not to exceed fourteen (14) days from the date of written notice by any party or parties that a dispute has arisen, unless extended by agreement. Such written notice shall be served upon all parties and upon the United States Department of Interior. If the parties are

unable to resolve the dispute within fourteen (14) days of the close of negotiations, a majority of the parties shall provide to the disputing party or parties a written statement setting forth their proposed resolution of the dispute.

Within seven (7) days of receiving the proposed resolution of a majority of the parties, the disputing party or parties shall indicate to the majority parties, in writing, whether the disputing party or parties reject the proposed resolution. In addition to the parties, a representative of the United States Department of Interior may participate in informal dispute resolution to the same extent as any party.

2. Formal Procedure

If a disputing party or parties reject the proposed resolution of any dispute, the parties may, at their discretion, refer the proposed resolution of the majority parties to the Ingham County Circuit Court within twenty-eight (28) days after receipt of the proposed resolution. If no referral is made within the twenty-eight (28) day period, the majority proposed resolution will become binding on all parties. The United States Department of Interior may move to intervene in the state court proceeding pursuant to MCR 2.209(A)(2) for the purpose of participating as a party in formal dispute resolution. In such event, the parties shall stipulate to such intervention.

3. Procedure Governed by Michigan Court Rules

The dispute resolution procedures under this section are to be governed by the Michigan Rules of Court.

**Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)**

p. 6-8

6. Resolution of Disputes.

a. Any dispute between the Parties concerning compliance with this Agreement shall be referred to the Rock Island Coordinating Committee (the "Committee") for consideration. The Committee shall convene as soon as practicable following issuance of a written request by any Party. All decisions of the Committee must be by consensus of all Committee representatives. In the event the Committee cannot resolve the dispute within fifteen days after its first meeting on said dispute, the Committee will give notice of its failure to resolve the dispute to all Parties. Thereafter, if the dispute qualifies under subsection A.6b, any Party may request the FERC to refer the dispute to the presiding judge in the Mid-Columbia proceeding for expedited review in accordance with the procedures set forth in this subsection A.6. Any issue in dispute that is not subject to the expedited review process may be referred to the FERC's Rules of Practice and Procedure.

b. The expedited review process specified in this subsection A.6 shall be utilized, unless otherwise agreed pursuant to subsection A.6e, to resolve any issue(s) in dispute between the Parties that arises under this Agreement where the amount in controversy is less than \$325,000. For the purpose of this subsection the amount in controversy shall be determined by calculating the annual cost of the Fishery Agencies and Tribes' proposal for resolution of the dispute and subtracting from that amount the calculated annual cost of Chelan's proposal for resolution of the dispute.

c. Under the expedited review process, each Party that desires to present an initial position statement to the judge within twenty days of mailing of notice by a Party that expedited review is requested. Responsive statements shall be filed and served within forty days of the mailing of said notice. The judge shall set a date for submission of any briefing, affidavits or other

written evidence and a further date for hearing of oral evidence and argument. Except by agreement of all Parties involved in the dispute, the hearing shall be held not later than seventy days after the date of mailing of the requesting Party's notice or as soon thereafter as the judge shall be available. The hearing shall be held in Seattle, Portland or any other location agreed upon by the Parties and the judge. The judge shall decide all matters presented within fifteen days of the hearing or as soon thereafter as possible.

d. All decisions of the judge under the expedited review process shall be effective upon issuance and pending appeal, if any. Nothing in this subsection A.6 shall limit or restrict the right of any Party to petition the FERC to review any decision of the judge. All such appeals shall be in accordance with the FERC's Rules of Practice and Procedure.

e. The Parties may agree to refer any issue subject to expedited review to a third party other than the presiding judge in the Mid-Columbia proceeding for processing pursuant to this subsection or as otherwise agreed by the Parties. Any third party determination under this subsection shall be effective upon issuance and shall be subject to de novo FERC review.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 54

9.3. Dispute Resolution

9.3.1 In the event that a dispute arises with the terms and conditions of this Settlement, the Team agrees to engage in good faith negotiations for a period of at least 90 days. The negotiations shall be initiated by either the Chair or the aggrieved voting Team member. In the event that resolution cannot be reached by the Team, it shall engage the services of a third party arbitrator/facilitator or other agreed upon entity. The Team and facilitator shall agree on the schedule for achieving a resolution under this process. All voting Team members shall share in the cost of the arbitrator/facilitator, with the total cost and distribution agreed upon by the Team prior to initiating the process and shall be defined in the By-laws.

9.3.2 If the independent third party arbitrator/facilitator process is unsuccessful, the Team will refer the dispute to FERC for resolution.

G. COMPLIANCE

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)

p. 13

F. Compliance With The Law

Nothing in this Settlement Offer shall preclude FERC, any resource agency or the licensees from complying with their obligations or exercising their responsibilities under the National Environmental Policy Act, the Clean Water Act, the Endangered Species Act, the Federal Power Act as amended by the Electric Consumers Protection Act, the Fish and Wildlife Coordination Act or any other applicable state or federal laws. However, by entering into this Settlement Offer, each signatory represents that it believes its statutory obligations or responsibilities are, or can be, met consistent with this Settlement Offer.

H. FORCE MAJEURE

Ludington Pumped Storage Project Settlement Agreement, February 27, 1995 Project No. 2680 (Michigan)

p. 19-20

J. Force Majeure

The Companies shall perform the requirements of this FERC Agreement within the time limits established herein, unless performance is prevented or delayed by events which constitute a Force Majeure. If Force Majeure is defined, for the purpose of this Agreement, as an occurrence or nonoccurrence arising from causes not foreseeable, beyond the control of and without the fault of the Companies, and which could not be avoided or overcome by due diligence. Force Majeure events include an inability to perform an obligation of this Agreement to governmental action beyond the control of the Companies (e.g. inability to obtain necessary governmental permits or licenses, land-use restrictions, etc.), acts of God or adverse weather conditions. "Adverse weather conditions" are defined as weather related phenomena that prevents the Companies or any persons acting for or on their behalf, from performing obligations under this Agreement and that could not have been overcome by due diligence. Force Majeure does not include unanticipated or increased costs, changed financial circumstances, commencement of a proceeding in bankruptcy, contractual disputes, or failure to obtain a permit or license as a result of the Companies' actions or omissions.

When a Force Majeure event occurs that the Companies believe causes a delay in performing an obligation under this Agreement, the Companies shall notify the MDNR telephonically of the circumstances within twenty-four (24) hours after it first becomes aware of those circumstances. Disputes over assertions of Force Majeure will be subject to resolution under the Dispute Resolution Procedures of Appendix B hereto.

p. 22-23 (Courts and Non-FERC Agencies)

B. Force Majeure

Any delay attributable to a Force Majeure shall not be deemed a violation of the Consumers Power Company's and the Detroit Edison Company's obligation under this State Agreement as set forth in this section.

The Consumers Power Company and the Detroit Edison Company shall perform the requirements of this State Agreement within the time limits established herein, unless performance is prevented or delayed by events which constitute a "Force Maleure. 11 Force Majeure is defined, for the purpose of this State Agreement, as an occurrence or nonoccurrence arising from causes not foreseeable, beyond the control of and without the fault of the Consumers Power Company and the Detroit Edison Company, and which could not be avoided or overcome by due diligence. Force Majeure events include an inability to perform an obligation of this State Agreement to governmental action beyond the control of the Consumers Power Company and the Detroit Edison Company (e.g. inability to obtain necessary governmental permits or licenses, land-use restrictions, etc.), acts of God, or adverse weather conditions. "Adverse weather conditions" are defined as weather related phenomena that prevents the Companies or any persons acting for or on their behalf, from performing obligations under this Agreement and that could not have been overcome by due diligence. Force Majeure does not include unanticipated or increased costs, changed financial circumstances, commencement of a proceeding in bankruptcy, contractual

**General and
Administrative Provisions:
Force
Majeure**

disputes, or failure to obtain a permit or license as a result of the Consumers Power Company's or the Detroit Edison Company's actions or omissions.

When a Force Majeure event occurs that the Companies believe causes a delay in performing an obligation under this Agreement, the Companies shall notify the MDNR telephonically of the circumstances within twenty-four (24) hours after it first becomes aware of those circumstances. Disputes regarding whether a Force Majeure event occurred shall be subject to the dispute resolution procedure set forth in Section VI.A.

**Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)**

p. 54-55

6. Force Majeure.

Chelan shall not be liable for failure to perform or for delay in performance due to any cause beyond its reasonable control. This may include, but is not limited to, fire, flood, strike or other labor disruption, act of God, act of any governmental authority or of the Fishery Agencies or Tribes, riot, embargo, fuel or energy unavailability, wrecks or unavoidable delays in transportation, and inability to obtain necessary labor, materials or manufacturing facilities from generally recognized sources in the applicable industry. Chelan will make all reasonable efforts to resume performance promptly once the force majeure is eliminated.

I. REIMBURSEMENT OF COSTS

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 28

12.5 CPCo shall reimburse the MDNR for such costs up to an annual cap of \$100,000, (adjusted for the CPI) within thirty (30) days of receipt of a written statement from the MDNR. All payments required pursuant to Paragraph 12.3 shall be by check made payable to the "State of Michigan" and forwarded to the Assistant Attorney General in charge of the Environmental Protection Division for deposit in the State of Michigan Habitat Improvement Account.

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project October 5, 1994; Project No. 2323 (Massachusetts)

p. 19

C. NEP agrees to reimburse the easement holders' reasonable costs for monitoring and enforcing the terms of the conservation easement.

Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994) United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)

p. 33-35

Article 201. The licensee shall pay the United States an ' annual charge, effective the first day of the month in which this license is issued, for the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, as determined by the Commission. The authorized installed capacity for that purpose is 144,800 hp.

Article 204. If the licensee's project, was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual licenses), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

Order Issuing New License, City of Watertown, New York (Issued June 16, 1995) United States Federal Energy Regulatory Commission; Project No. 2442

p. 12

Article 201. The licensee shall pay the United States the

following annual charges:

For the purposes of reimbursing the United States for the Commission's administrative costs, pursuant to Part I of the Federal Power Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized existing installed capacity for that purpose is 5,400 kilowatts (KW). This annual charge shall be effective as of the first day of the month in which this license is issued.

In addition to the above charge a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized proposed additional capacity for that purpose is 5,400 KW. This annual charge shall be effective as of the date of commencement of operation of the new capacity.

p. 26

If the licensee's project was directly benefitted by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement during the term of the original license (including extensions of that term by annual license(s), and if those headwater benefits were not previously assessed and reimbursed to the owner of the headwater improvement, the licensee shall reimburse the owner of the headwater improvement for those benefits, at such time as they are assessed, in the same manner as for benefits received during the term of this new license.

**Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)**

p. 54-56

9.4. Reimbursement of agency costs

9.4.1 WE shall reimburse the state Resource Agencies' voting Team members salary and travel costs associated with the Team meeting attendance and preparation excluding costs associated with Section 9.3. Travel costs will be based on actual costs using the state agency travel regulations.

9.4.2 WE shall reimburse other costs associated with resource agency responsibilities in implementing provisions of the Settlement excluding costs associated with Section 9.3. The following process will be used:

- a) by August of each year, the Team will identify license compliance issues within the scope of this Settlement and an implementation/compliance schedule for the upcoming year;
- b) the MDNR, WDNR and other parties as appropriate shall provide WE with input on response time expected for these issues, based on employee levels and funding;
- c) by October of each year, WE will determine which costs be will reimbursed for Settlement implementation based on predicted response time for MDNR, WDNR and other parties as appropriate, FERC compliance schedule requirements, and WE budgetary constraints;
- d) the MDNR, WDNR, other parties as appropriate and WE will complete the consultation on funding by December 15 for the next year;

- e) any party having a funding related dispute can use the dispute resolution process as outlined in Paragraph 9.3;
- f) WE reserves the right to modify the funding decisions based on changes to its budget or compliance schedule modifications after consultation with the Team;
- g) funding decisions can be modified anytime during a given year by the Team for those unexpected items which are not included in (a) through (c).

9.4.3 By January 31 of the year following the issuance of licenses pursuant to this Settlement, the MDNR, WDNR and other Parties as appropriate will provide WE and the DPCA with a written statement or invoice of costs incurred by them in the previous calendar year. Any such written cost statement, or invoice, of work performed on this Settlement will describe with reasonable specificity the nature of the costs incurred.

9.4.4 WE shall reimburse the MDNR for such costs within thirty (30) days of receipt of a written statement from the MDNR and the WDNR for such costs within thirty (30) days of receipt of a written statement from the WDNR. All payments to the MDNR required pursuant to Paragraph 9.4.1 shall be by check made payable to the "State of Michigan" and forwarded to the Assistant Attorney General in charge of the Environmental Protection Division for deposit in the State of Michigan Habitat Improvement Account. All payments to the WDNR required pursuant to Paragraph 9.4.1 shall be by check made payable to the "Wisconsin Department of Natural Resources" and forwarded to the officer in charge of the such accounts for deposit in a provided account. Other parties will be reimbursed as agreed upon with WE.

J. MANAGEMENT AND ADVISORY COMMITTEES

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

A. Advisory Committee

In order to keep abreast of changing conditions that may affect river flows and management objectives, an Advisory Committee representative of the various interests in the Beaver River corridor will be formed as more specifically detailed in Attachment 2.

Attachment 2

THE BEAVER RIVER FUND AND ADVISORY COUNCIL

Niagara Mohawk will provide \$80,000 within one year of FERC license acceptance ("upfront money") to be deposited into the Beaver River Fund. As indicated in Attachment 1, all or part of the upfront money will be used to facilitate the State's acquisition of the following from Niagara Mohawk within eighteen months of Niagara Mohawk's FERC license acceptance for Beaver River Project No. 2645: (a) a conservation easement, 25 feet in width, around the Moshier impoundment, (b) reserved sand and gravel rights along Moshier bypassed reach and the fee title to the abutting acreage to the south, and (c) fee title to "Eagle Canyon", all with appropriate reservations for Niagara Mohawk access, operation and maintenance purposes, d) any other Niagara Mohawk lands, easements and mineral rights not essential to project operation and not otherwise identified herein. Any money not used to purchase the land will remain in the fund for other uses. The State will prepare the title documents, appraisal, surveys and all other documents necessary to transfer title of the property at no cost to the Beaver River Fund or Niagara Mohawk.

2. Niagara Mohawk will contribute no less than \$14,000 (fixed contribution) annually to the Beaver River Fund for the years 1 - 15 following acceptance of the FERC license and \$20,000 annually for the following 15 years for the purposes described herein.

3. The base minimum flows at Moshier, Eagle, Elmer and Taylorville will be 45, 45, 20, and 60 cfs, respectively. If downward adjustments to any or all of these base minimum flows are made, Niagara Mohawk will supplement the Beaver River Fund annually by an amount equivalent to 50 percent of the annual hydropower generating value associated with the difference between the flows selected and the base minimum flows using the energy values prevailing in that year. For the purposes of this evaluation, the Public Service Commission (PSC) Service Classification No. 6 (SC6) for transmission Voltage, blended on peak/off peak "energy only" rates will be used for the value of energy.

4. The Beaver River Fund will be administratively managed by Niagara Mohawk and distributed according to the recommendation of a Beaver River Advisory Council. The NYSDEC will chair the council. At a minimum the following entities shall be invited to serve on the Council.

New York State Department of Environmental Conservation (NYSDEC)

Niagara Mohawk Power Corporation QWC)

United States Fish & Wildlife Service (USFWS)

New York Rivers United (NYRU)

Board of Hudson River-Black River Regulating District (MRRD)

New York State Conservation Council (NYSCC)

Adirondack Park Agency (APA)

Adirondack Mountain Club (ADK)

Lewis County

Trout Unlimited (TU)

American Whitewater Affiliation (AWA)

Adirondack Council (AC)

0 National Park Service (NPS)

Each member will; have one vote with regards to the distribution of funds based on majority vote.

The Council will also make recommendations which must be considered by the regulatory agencies and Niagara Mohawk regarding management of the Beaver River and hydropower project operations, in accordance with other provisions of this agreement.

5. The Beaver River Fund will be used within the Beaver River basin for project services designated by majority vote of the council for purposes of ecosystem restoration and protection, natural resource stewardship, public education, facility maintenance, and applied research necessary to accomplish these projects and provide these services and additional public access to outdoor recreational resources not currently agreed to by Niagara Mohawk as its commitment to these purposes. This fund is not intended for any of the parties to carry out any obligations under the new FERC license or any amendment thereto. Furthermore, the fund is not intended for any person or party to discharge any legal or statutory obligations. Unspent funds shall accumulate with interest in a Federal Deposit Insurance Corporation (FDIC) insured account or instrument managed pursuant to prevailing trust standards. Within one year following surrender or expiration without annual renewal of the new FERC license, the funds accumulated and not otherwise obligated shall revert to Niagara Mohawk.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 25-28

12.1 The coordination and implementation of this Settlement will be overseen by a two-level project coordination structure. These shall be known as the CPCo-Resource Agencies Steering Committee and the Manistee-Muskegon-AuSable Coordination Team.

12.2 CPCo and the resource agencies shall each designate a Project Leader (a total of 4) who will have overall responsibility for the coordination and implementation of the actions required by this Settlement and shall be collectively known as the CPCo-Resource Agencies Steering Committee (Steering Committee). The Steering Committee shall be responsible for the resolution of any disputes, in accordance with the procedures outlined in Section 14 of this Settlement, and shall also meet at least once annually to review the progress of overall implementation of this Settlement. The chair of the Steering Committee shall be the CPCo Project Leader. The Chair shall be responsible for setting the date, time and place of the annual meeting and such other meetings of the Steering Committee, as may be required, and shall notice the other Project Leaders at least 14 (fourteen) days in advance, provided, however, that the Chair shall set a meeting of the Steering Committee if requested, in writing, by any two of the Steering Committee members. The Chair shall also be responsible for all meeting arrangements, including the recording and dissemination of notes. A quorum of the Steering Committee to conduct business shall be defined as any three of the four Project Leaders at a properly noticed meeting. If any party decides to change its designated Project Leader, the name, address, and telephone number of the successor shall be provided, in writing, to the other parties and the FERC seven (7) days prior to the date the change becomes effective or as soon after as practical. The date, time and location of the annual meeting of the Steering Committee to review the overall implementation of the Settlement shall also be noticed to the following individuals at least 14 (fourteen) days in advance: Director, FERC Division of Compliance and Administration (DCPA); Regional Director, NPS; and Chairman, Michigan Hydro Relicensing Coalition (MHC). These individuals, or their designee, may attend the annual meeting and participate in an ex-official advisory capacity. These individuals shall each receive a copy of the notes from the annual meeting, regardless of whether they or their designee attended. Provision of notice and notes to the Chairman of the MHC is dependent on the MHC providing the Steering Committee with its Chairman's name and address in writing. The Steering Committee may, at its option, invite any individual or organizational representative to any of its meetings to serve in a similar advisory capacity.

12.3 A Manistee-Muskegon-AuSable Coordination (MMAC Team) shall be established to provide for the ongoing coordination and implementation of the actions required by this Settlement. The MMAC Team shall consist of one representative each from CPCo and the three resource agencies, who shall be appointed by the respective Project Leaders described in Paragraph 12.2 above. If any party decides to change its MMAC Team member, the name, address and telephone number of the successor shall be provided in writing, to the other parties and the FERC Director, DCPA, seven (7) days prior to the date the change becomes effective or as soon after as practical. Communications between the parties and all documents, reports, submissions and correspondence concerning activities performed pursuant to the terms and conditions of this Settlement shall be directed through the MMAC Team members. The MMAC Team will meet as often as is necessary to provide for the swift and orderly implementation of the

terms and conditions of this Settlement, providing, however, that the MMAC Team Chair shall set a meeting within 14 (fourteen) days of a request, in writing, by any two of the MMAC Team members. The Chair of the MKAC Team shall be the designated representative of CPCo. The Chair shall be responsible for setting the date, time and place for MMAC Team meetings and for providing other appropriate meeting arrangements. A quorum of the MMAC team necessary to conduct business shall be any three of the four members at a properly noticed meeting. The MMAC Team may, at its option, invite any individual or organizational representative to any of its meetings for advice and participation in an ex-official advisory capacity. The MMAC Team may also form ad-hoc teams that include other employees, interested parties, contractors or consultants to pursue and/or monitor any actions required by or resulting from this Settlement. The MMAC shall also inform, on a periodic basis, all interested parties, including those defined in Paragraph 12.2 and such others as may be identified, regarding their progress and actions taken to implement this Settlement. This information may be provided in a written or meeting format. The frequency of these periodic reports will be determined at the annual Steering Committee meeting described in Paragraph 12.2 by the Project Leaders. Any disputes arising from the conduct of the MMAC Team shall be referred to the Project Leaders for resolution in accordance with the provisions of Section 14 of this Settlement.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. 15-16 (Section C - Enhancement Fund)

The Fund will be administered by a three member committee, which shall determine the investment strategy for the fund and the appropriate distribution of available funds for each year. The committee will be comprised of a representative of NEP, a designee of the Secretary of the State of Vermont Agency of Natural Resources and a designee of the Secretary of the Commonwealth of Massachusetts Executive Office of Environmental Affairs. Funding decisions will be made by unanimous vote of the three member committee. The committee will also be charged with approving additional contributions to the fund when and if they become available through gift, grant, or other means.

By the end of October of each year preceding a distribution cycle, the committee will submit to FERC for approval a ranked list of projects selected for funding by the committee and an accompanying accounting plan. One or more projects may be funded in any distribution cycle. Upon the completion or abandonment of any funded project, and in no case later than the next distribution cycle, the committee will submit to FERC an accounting specifying the actual use of the awarded funds over the course of the project. Eligible Fund recipients include nonprofit organizations, educational institutions and units of government within Vermont and Massachusetts. In general, funds will be available on a 50% matching basis; however, the Committee is authorized to waive the matching requirement upon an applicant's showing of need. Projects will be selected through a competitive grant application basis.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

p. 7-10

ESTABLISHMENT OF SCIENTIFIC ADVISORY TEAM

A Scientific Advisory Team shall be established for the purpose of evaluating the data and information upon which the Settlement is based and the scientific activities established or authorized by the FERC Agreement as set forth hereafter. It is the intent of the parties that the Scientific Advisory Team shall replace and assume the duties of the Ludington Advisory Committee.

A. PURPOSES OF TEAM

The duties and responsibilities of the Scientific Advisory Team shall include, but are not necessarily limited to, the following related to technical oversight of fish mortality abatement measures:

1. Oversight of the seasonal barrier net monitoring program, including establishment of protocols, and procedures subject to FERC approval as necessary;
2. Reviewing and recommending to FERC substantial modifications to the seasonal barrier net project to improve the efficiency of the net;
3. Oversee development and deployment of real time fish monitoring technologies, including sonar and hydro acoustical arrays and a lake/weather model with FERC approval, as necessary; and
4. Review of Consumers Power Company's and The Detroit Edison Company's five-year survey of evolving abatement technologies.

Additional duties and responsibilities related solely to the State Agreement are set out in the State Agreement.

B. COMPOSITION OF SCIENTIFIC ADVISORY TEAMS The Scientific Advisory Team shall be co-chaired by the MDNR and a representative of the utilities. Membership of the Scientific Advisory Team shall be comprised of one (1) designee of each of the following organizations except for MDNR, which may designate two (2) members of the Team.

1. Designee of the Secretary of the Interior;
2. MUCC;
3. NWF;
4. Consumers Power Company (2 votes - FERC Agreement issues only);
5. The Detroit Edison Company (2 votes - FERC Agreement issues only);
6. MDNR;
7. Chippewa-Ottawa Treaty Fishery Management Authority or its successors or assigns ("COTFMA");
8. GTB;
9. LRB;
10. LTBB; and
11. One member chosen by mutual agreement of MDNR, MUCC, and NWF.

All decisions of the Scientific Advisory Team shall be by simple majority of those present and voting.

C. FUNDING OF TEAM

Consumers Power Company and The Detroit Edison Company shall provide reasonable and prudent operating expenses for the Scientific Advisory Team not to exceed \$15,000 per year. Disputes regarding such funding will be handled through the Dispute Resolution Procedures described herein.

D. FERC REVIEW AND APPROVAL

For any Scientific Advisory Team recommendations or decisions which involve structural or operational modifications to the LPSP, including substantial modifications to the barrier net and

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monitoring programs, the parties recognize that FERC review and approval may be necessary. Consumers Power Company and The Detroit Edison Company shall be under no obligation to comply with such Scientific Advisory Team recommendations or decisions until all necessary FERC approvals are obtained. Scientific Advisory Team recommendations and decisions will be subject to the dispute resolution procedures outlined in Section IV.A. In the case of any Scientific Advisory Team recommendations or decisions presented to FERC for review and approval, all parties represented on the Scientific Advisory Team will be required not to oppose the same.

E. NON-OPPOSITION TO RATE RECOVERY

All parties are obligated not to oppose rate recovery by Consumers Power Company and The Detroit Edison Company of Scientific Advisory Team funding (Section III.C.) and the reasonable and prudent costs caused by any change in LPSP operations and structures which results from a team recommendation or decision. It is understood that rate recovery may be sought by either company for Scientific Advisory Team funding in a special or single issue rate filing or in a general rate case.

**Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)**

G. Rock Island Coordinating Committee.

1. Establishing of Committee.

There shall be a Rock Island Coordinating Committee (the "Committee") composed of one technical representative of each party. The committee shall meet whenever requested by any two Parties following a minimum of ten days written notice (unless waived), or pursuant to subsection A.6, and shall act only by consensus of all parties. Any Fishery Agency or Tribe may, at any time, elect by written notice not to participate in the Committee.

2. Use of Committee.

The Committee will be used as the primary means of consultation and coordination between Chelan and the Fishery Agencies and Tribes in connection with the conduct of studies and implementation of the measures set forth in this Agreement and for dispute resolution pursuant to subsection A.6. The U.S. Fish and Wildlife Service may participate in meetings of the Committee in offer to consult and coordinate with the Committee on anadromous fish issues of concern to the Service.

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 6

D. Flow Advisory Committee

The signators agree that: Niagara Mohawk and the NYSDEC, in order to keep abreast of changing conditions that may affect river flows, will empanel a Flow Advisory Committee representative of the various interests in the Salmon River corridor and participate in same. The purpose of the Flow Advisory Committee would be to recommend changes that affect the flow and water-related issues on the Salmon River, as more specifically detailed in Attachment 5.

Attachment 5

THE SALMON RIVER FLOW MANAGEMENT ADVISORY TEAM

The Salmon River system is one of New York's most valuable aquatic resources. Although the lower 18 miles is nationally known for supporting the most intensively utilized

trophy trout and salmon fishery in the Northeast, the upstream seasonal storage facilities are an important source of cost effective power generation for the region and significant water based multiple use opportunities occur throughout. Generally undeveloped, rural and wooded, the river corridor supports a remarkable diversity of water based resources including Lake Ontario-contiguous and remote wooded wetlands, strong rapids and placid pools, a 110-foot high natural waterfall set in a dramatically beautiful gorge, two scenic reservoirs and hundreds of miles of uncompromised water quality in the upper river and tributary streams where wild trout abound.

Not only is resident wildlife correspondingly diverse and abundant, seasonal migrations of Lake Ontario fishes, waterfowl, raptors, shorebirds and songbirds are remarkable along the corridor, particularly in the lower river and in the areas of the Port Ontario wetland and Salmon River Reservoir.

Water management is a critical key in both maintaining the quality and diversity of the aquatic systems and their associated recreational use and in the maintenance and enhancement of an indigenous aquatic community in the lower river. Since the control of river flow and reservoir water levels are seated in the conditions of a single Federal license for decades, it is essential not only to make the best decisions balancing generation and environmental needs beforehand, but to also continuously monitor compliance and effectiveness and to periodically reevaluate decision criteria and action in an environment of increasing knowledge and changing hydropower, ecological and recreational needs. These latter requirements are best addressed by a representative body specifically created for that purpose.

The Salmon River Flow Management Advisory Team shall be the focus and sounding board for flow and water related issues on the Salmon River and shall be responsive to both power generation and environmental needs while fostering the enhancement and maintenance of diverse, high quality recreational activity. Specifically, the vision and mission of the team are:

Vision

Help make the Salmon River Corridor America's premier sportfishing and recreational area.

Demonstrate the compatibility of power generation, environmental resources and recreational interests on the Salmon River corridor.

Help the Salmon River corridor evolve into a year-round family-oriented recreational opportunity that promotes a healthy, broad-based economy for the local area while enhancing and protecting the environment and quality of life of the community.

Mission

Recommend flows through the Salmon River Project such that a self-sustaining indigenous fishery can develop in the downstream river corridor.

Assist in the development of a year-round trout and salmon sport fishery in the downstream river corridor.

Make provision for enhanced recreational boating use on the Salmon River and its reservoirs.

Encourage development of high-quality and environmentally sensitive recreational opportunities throughout the entire river basin.

Provide input to enhance the scenic character of the Salmon River including the Salmon River Reservoir, the Salmon River Falls area and the downstream river corridor.

Provide input to river corridor planning efforts to meet common goals and objectives.

Provide opportunity for growth and diversification of the area's economic base.

Do all of the above in a balanced fashion such that the river resource, as it has for decades, continues to provide low-cost electricity for the electric customers of Niagara Mohawk - at the same time enhancing recreational opportunity and supporting a healthy ecosystem.

The Salmon River Flow Management Advisory Team shall include as members representatives of those parties involved in the original FERC license negotiating process as follows, with the stated allocation of vote(s):

<u>Part</u>	<u>Vote</u>
Niagara Mohawk Power Corporation	1
NYS Department of Environmental Conservation	1
U.S. Fish and Wildlife Service	1
National Park Service	1
NYS Office of Parks, Recreation & Historic Preservation	1
American Whitewater Affiliation	1
New York Rivers United	1
Trout Unlimited	1
Adirondack Mountain Club	1

Additionally, local municipal interests shall be represented by a coalition of the elected officials of Oswego County, towns and/or villages in the Salmon River Corridor who shall appoint a total of five (5) members with one vote each.

Changes in membership structure or vote allocation may be permitted only by motion passed with no dissenting vote(s).

The team shall act through correspondence of members or through meeting participation by members or their designee of record. Proxies are prohibited and no single person may represent more than one membership or recognized coalition.

Failure by a member to respond within 15 working days of receipt of a motion through correspondence shall constitute an abstention. Absence of a member or their designee of record from a meeting vote shall constitute an abstention.

Meetings may be called at any time by majority request, however, should two or more members so request, a meeting will be called within the calendar year if none are otherwise scheduled.

The team shall, as a minimum, annually review Niagara Mohawk monitoring reports/submittals to FERC on river flow, reservoir level, lower river water temperature, releases to the Bennett's Bridge bypass reach (Salmon River Falls section) and departures from S.O.P. affecting flow management.

The team may similarly act to effect changes in the FERC license or to correspond with the FERC only by motion passed with no dissenting vote(s). Such rights and privileges to petition the FERC by individual team members and their organizations are not curtailed, but in exercising them they may not state or suggest that they act upon the behalf of, represent, or enjoy the support of, the Salmon River Flow Management Advisory Team.

An executive committee consisting of the team members representing Niagara Mohawk and the Department of Environmental Conservation shall together conduct the administration of the team, accomplishing correspondence, meeting notice and minutes, preparing team recommendations and providing other administrative support as necessary for the timely and effective functioning of the team.

The executive committee shall also act on behalf of the team to advise upon immediate or emergency flow management needs or opportunities when the immediacy of circumstances precludes full team participation. Such actions shall be reported in writing to all team members with two weeks.

SALMON RIVER FLOW MANAGEMENT ADVISORY TEAM

Priorities for Non-Routine Flow Management*

A. Discretionary Use of Additional Water: Salmon River Reservoir Level Exceeds Upper Action Trigger

<u>Priority</u>	<u>Action</u>
1.	Maintain or enhance hydropower production consistent with 2 and 3.
2.	Maintain or enhance fishery quality in the lower river.
3.	Enhance midsummer whitewater opportunity.
4.	Retain Salmon River Reservoir level above trigger if significant environmental benefit(s) would accrue.
5.	Temporarily enhance microhabitat (carrying capacity) for indigenous species in lower river.
6.	Enhance aesthetics at Salmon River Falls.

B. Required Reductions in Water Use: Salmon River Reservoir Level is Below Lower Action Trigger

<u>Priority</u>	<u>Action</u>
1.	Reduce or eliminate release to Salmon River Falls, if resultant savings is significant to other goals.
2.	Reduce releases for hydropower generation that are beyond needs for planned base flow and multiple use in the lower river.
3.	Reduce midsummer whitewater releases.
4.	Reduce releases for fishery quality in the lower river.
5.	Maintain Salmon River Reservoir level below the seasonal ecological target level should that level exceed the lower action trigger. (Seasonal ecological target levels differing from the lower action trigger may result from the Reservoir Fluctuation Study underway.)
6.	Reduce microhabitat for the aquatic community in the lower river by temporarily reducing base flow.
7.	Compromise lower river macrohabitat (water quality) by severely reducing base flow.

*NOTE: These priorities for flow management are to guide discretionary or necessary action during periods of stored water surplus or shortage as determined by the water level at Salmon River Reservoir, consistent with legal requirements.

Actions in response to emergency conditions and those required for facility maintenance are exempt, though reasonable compliance is required. Emergencies shall include imminent or continuing jeopardy to water quality as well as that to human life, health, safety, project facilities or downstream property.

Upper and lower action triggers are defined in the August 9, 1993 Meeting Minutes, page 2 - Attachment 2 to the Offer of Settlement.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 7

"Team" is the Settlement Implementation Team as provided for in Paragraph 9.0, including representatives of WE, MDNR, WDNR, FWS, NPS, and ex-official members. "Wisconsin Electric" or "WE" means the company, its subsidiary, and any affiliated companies and/or parent.

p. 50-54

9. Implementation

9.1. Project Coordination

9.1.1 The Team shall coordinate and implement the Settlement. The Team shall be made up of equal representation from the Resource Agencies and WE, and shall include ex-official advisory members as provided in Paragraph 9.1.2. Specifically, one representative each from the WDNR, MDNR/MDEQ, DO] and four representatives from WE. The Team chair shall be designated by WE and shall be one of the WE representatives. If any party decides to change its Team member, the name, address and telephone number of the successor shall be provided, in writing, to the other Parties and the FERC Director, Division of Project Compliance and Administration (DPCA), seven (7) days prior to the date the change becomes effective or as soon after as practical.

9.1.2 Ex-official advisory status application is open to any organization. The chair of such organizations shall make application in writing to the Team for ex-official advisory status. All such letters must include the name and address of any proposed representative and the requested duration of membership. The Team shall within thirty (30) days decide to accept or deny such requests. All denials shall be provided with a written explanation of the denial that is signed by all Team members. The Team shall periodically review the status and representative of all ex-official advisory members to ensure they are still interested in retaining their status. All ex-official advisory members are invited to all annual and periodic oversight meetings and can attend any other Team meetings. Appendix 11 lists the initial organizations that are invited to be ex-official advisory members.

9.1.3 By-laws for the Team shall define how the Team functions, the terms of ex-official advisory membership, and can be modified and updated by the Team. By-laws shall be developed using a consensus approach within 12 months of license issuance. The Team shall deal with all issues related to implementing the Settlement. All decisions will be made by consensus of the Team.

9.1.4 The Team shall have at minimum one annual meeting to review activities for the preceding year and regularly scheduled meetings to provide for the ongoing coordination and implementation of the actions required by this Settlement. The Chair shall be responsible for: (1) setting the date, time and place of the annual meeting and such other meetings of the Team, as may be required; (2) noticing the other Team members of any meeting at least fourteen (14) days in advance, (3) set a meeting of the Team, if requested in writing, by any two of the Parties; and (4) all meeting arrangements, including the recording and dissemination of notes. All meeting items and arrangements should be provided to the ex-official advisory members on the same schedule as the Team. A quorum of the Team to conduct business shall be defined as any six of the eight Team members at a properly noticed meeting with equal representation of WE and resource agency members.

9.1.5 The date, time and location of the annual meeting of the Team to review the overall implementation of the Settlement shall also be noticed to the following individuals at least fourteen (14) days in advance: DPCA and all ex-official advisory members. These individuals, or their designee, may attend the annual meeting and participate in an ex-official advisory capacity. These individuals shall each receive a copy of the notes from the annual meeting, regardless of whether they or their designee attended. Provision of notice and notes to the representatives of ex-official advisory members is dependent on those members providing the Team with their respective Chairpersons' name and address in writing. The Team may, at its option, invite any individual or organizational representative to any of its meetings to serve in a similar advisory capacity.

9.1.6 Communications between the Parties and all documents, reports, submissions and correspondence concerning activities performed pursuant to the terms and conditions of this Settlement shall be directed through the Team. The Team will meet as often as is necessary to provide for the swift and orderly implementation of the terms and conditions of this Settlement. The Team may, at its option, invite any individual or organizational representative to any of its meetings for advice and participation in an ex-official advisory capacity, in addition to the exofficio advisory members. The Team may also form ad-hoc teams that include other employees, interested Parties, contractors or consultants to pursue and/or monitor any actions required by or resulting from this Settlement. The Team shall periodically inform all interested Parties including those defined in Paragraph 9. 1.1 and such others as may be identified, regarding their progress and actions taken to implement this Settlement. This information may be provided in a written or meeting format. The frequency of these periodic reports will be determined at the annual meeting described in Paragraph 9.1.5 by the Team.

9.2. Review, Consultation and Concurrence of Settlement Submissions

9.2.1 This section provides for communication procedures between the Team. Team reviews referred to in this paragraph pertain to activities among the Parties and would be, in many cases, preparatory to seeking FERC approvals. Exceptions to the need for formal Team review are minor actions that require FERC approval, including easements and minor property sales. These actions require Team notification prior to submission for Commission approval and the dispute resolution process in Paragraph 9.3 applies to resolve all outstanding concerns. In all situations described herein, where the license requires FERC approval, WE shall use a good faith effort to promptly seek and obtain authorizations from FERC before any changes to operations, facilities, project boundaries, or procedures are implemented.

9.2.2 All plans, studies, reports and submissions shall be delivered to the Team including ex-official advisory members for review in accordance with the schedules set forth in this Settlement. Prior to the formal review period, an informal review period of at least fourteen days (14) shall be provided in an attempt to resolve all significant concerns.

9.2.3 Upon receipt of any submission or other item relating to the work that is required to be submitted for review pursuant to this Settlement, the Team members will, in writing within forty-five (45) days, signify:

- (a) concurrence with the submission, or;
- (b) non-concurrence with the submission, notifying WE of deficiencies.

Upon receipt of a notice of concurrence and following FERC approval as necessary, WE shall take any action required by the submission or other item as concurred with or as modified.

Approved submissions shall become enforceable under the terms of this Settlement and any new licenses issued. All comments from the Team, including ex-official advisory members, must be addressed in the final submission to FERC.

9.2.4 Notice of non-concurrence arising from Paragraph 9.2.3 will specify the reason(s) for the non-concurrence. Unless a notice of nonconcurrence specifies a longer time period and upon receipt of a notice of non-concurrence from the Resource Agencies, WE shall within sixty (60) days thereafter: (1) address the comments and submit the modified plan, report, or other item to the Resource Agencies then to FERC for approval, as necessary, or (2) refer the matter to dispute resolution pursuant to Paragraph 9.3. WE shall take any action not directly related to the portion of the submission non-concurred with to the extent that any required FERC approval has been received.

9.2.5 Team concurrence means the submission is acceptable to meet the intent of the Settlement and does not mean that these Parties concur with all conclusions, methods, or statements in the submission.

Appendix 4, p. 1-2

1. ADVISORY COMMITTEE

An Advisory Committee will be established to assure the attributes and values of the Spread Eagle Barrens State Natural Area remain in focus, to provide direction and address management issues on the State Natural Area as they arise. This committee provides annual guidance to the Operations Team and should be advised, early, of impending changes in management, policy, or issues which may have an effect on over all management of the property.

The Committee will meet annually to ensure continued involvement and interaction. The annual meeting will be scheduled on the first Monday in March at 10 a.m. at the Natural Resource Center and will include a report by the Operations Team on accomplishments and scheduled activities.

The Committee members will include the DNR District Wildlife Supervisor, Endangered Resources Natural Area Management Coordinator, Wisconsin Electric Power Company representative, Chairperson of the Florence County Forestry Committee, President of the Sand County Foundation, and Town Chairpersons representing each of the three towns within the project area.

a. Public Recreation Sub-committee: Responsibilities of this committee will be to monitor and recommend changes to policies concerning public recreational use. The sub-committee will consist of an adjoining private landowner, and two representatives of various nature and outdoor sports organizations.

b. Public Education Sub committee: Responsibilities are to explain and promote the unique ecological features of the Spread Eagle Barrens State Natural Area and to promote sound management of our natural resources. The sub-committee shall seek to develop long-term research, educational and training opportunities presented by the creation of the Spread Eagle Barrens State Natural Area. The committee will consist of five members; one Florence County Board, one Wisconsin Electric Power Co., U.W.S.P. Staff, one Sand County Foundation, one DNR, and one local other person.

Other sub-committees will be formed as needs develop.

2. OPERATIONS TEAM

A Operations Team will be responsible for day-to-day operations that will provide overall management. The Team will consist of the DNR Florence Forester/Ranger, DNR Marinette Area Wildlife Manager, and County Forest Administrator.

K. MODIFICATION AND AMENDMENT

**Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)**

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4. Negotiation of Modifications of Agreement.

No sooner than six months prior to expiration of the Initial Period, any Party may request all other Parties to commence negotiations to modify the terms and conditions hereof or to replace this Agreement in whole or in part. Any modification hereto shall be subject to FERC approval, except that the Parties may agree to implement on an interim basis pending FERC approval any measure not requiring prior FERC approval. No Party shall file a petition with the FERC pursuant to subsection A.5 to modify this Agreement without first presenting the proposed modification to all Parties and allowing a reasonable opportunity to negotiate, but in no case greater than ninety days, with respect to such modifications under this subsection A.4.

5. Petition for Modification or Other Claim or Action.

a. Subject to the limitations stated in the final sentence of subsection A.4, at any time after the Initial Period any Party to this Agreement may:

1. Request the imposition by the FERC of different, additional or modified fish protection measures.

2. Bring any cause of action, raise ant defense or claim, or rely on any theory in any appropriate forum.

3. Petition any appropriate administrative agency or political body for relief, including the deletion of one or more measures otherwise in effect under this Agreement, or

4. Take other appropriate action relating to any issue or matter addressed by this Agreement or which could have been addressed by this Agreement or that otherwise relates to the Rock Island Project and its operations.

b. In any action under this subsection the petitioning Party shall have the burden of proof. The Parties will continue to implement this Agreement until the relief sought becomes effective by operation of law, unless otherwise agreed.

c. With respect to any petition or suit filed pursuant to this subsection A.5 and any subsequent judicial review thereof, or any renewal of appeal under subsection A.8, nothing in this Agreement shall bar, limit or restrict any Party from raising any relevant issue of fact or law, regardless of whether such issue is or could have been addresses by this Agreement; provided, that, consistent with subsection H.7, no claim shall be made for damages that might have arisen during the period from March 7, 1979 through the Initial Period.

d. Notwithstanding any other provision of this subsection A.5 if the schedule for bypass development, testing and installation for either powerhouse is extended pursuant to subsections B.2i or B.3g, no Party shall avail itself of ant reopener clause as to bypass measures at that powerhouse until the expiration of all such time extensions.

e. Notwithstanding any other provision of this subsection A.5 any party may participate in any legislative or administrative proceeding dealing with fish protection or compensation issues; provided, that, consistent with subsection H.6, no Party shall advocate or support the imposition of fish protection or compensation measures at the Rock Island Project that are different from or in addition to those required by this Agreement until after expiration of the Initial Period.

**Conservation
Provisions:
Fish Passage
and
Protection**

f. The Parties intend that this subsection A.5 shall apply to each and every provision of this Agreement, and therefore the terms of this subsection A.5 are hereby incorporated by reference into and shall apply to every other provision of this Agreement as if set out fully in each such provision.

II. CONSERVATION PROVISIONS

A. FISH PASSAGE AND PROTECTION

1. Upstream Passage

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

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NEP agrees to provide upstream passage at Station No. 2 for adult Atlantic salmon returning to the Deerfield River. Upstream passage will be implemented via a phased approach, determined by the number of adult Atlantic salmon returning to the Deerfield River. Adult Atlantic salmon will be radio-tagged and released at the Holyoke Dam Fishway and monitored at stations along the Deerfield River, in accordance with a plan to be developed by NEP and approved by the Connecticut River Atlantic Salmon Commission (CRASC) technical committee.

Radio tagging will begin in the first migration season after issuance of the new license and continue annually until either: 1) at least 12 adult Atlantic Salmon have been verified in the Deerfield River below Station No. 2 for two consecutive years and during those years an interim fish trapping system has successfully captured Atlantic salmon in the Deerfield River in a timely fashion with as little stress to the salmon as possible and with survival rates as good as those fish captured at the Holyoke fish lift; 2) at least 4 adult Atlantic Salmon have been verified in the Deerfield River below Station No. 2 for two consecutive years and no interim trapping system was available or successful in recapturing fish during the monitoring period; or 3) CRASC determines that radio-tagging is no longer acceptable. Upon reaching the number of returning adult salmon under the conditions specified in 1 or 2 above, NEP will install a permanent upstream trap facility within two construction seasons in accordance with plans provided (Plan No. H-64756-P) as modified by comments of the USFWS, or implement an alternative system mutually agreed to by NEP, USFWS and MDFW.

Radio-tagging may also be discontinued if a ratio of salmon returning to the Deerfield River to all salmon released from Holyoke is mutually agreed to by NEP, MDFW and USFWS. If such a ratio is agreed to, it will be used to calculate the number of adult salmon returning to the Deerfield River for the purposes of determining if the numbers specified in 1 or 2 above have been achieved.

The Parties agree to support a license article providing for the retention of USFWS authority to prescribe upstream fish passage construction, as described in plans (Plan No. H-64756-P) as modified by comments of the USFWS, or some alternate upstream passage system

agreed to by NEF, MDFW and USFWS, in the event that the radio-tagging is discontinued and no ratio of Holyoke released fish to Deerfield River fish has been agreed to.

Rock Island Settlement Agreement, March 1987
Project No. 943 (Washington)

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F. Adult Fish Ladders

1. Modification to meet operating criteria.

a. Chelan will modify the existing fish ladders at Rock Island Dam so that they meet current Fishery Agency operating criteria. It is anticipated that this will entail increasing the transportation velocities on the left bank ladder and redistributing flows to the four right bank ladder entrances.

b. Chelan shall conduct a comprehensive hydraulic evaluation of the right bank ladder based on a mutually agreeable study design. If the hydraulic evaluation shows a discrepancy between the pumped water supply and the design flow at particular tailwater elevations, Chelan will make up the difference using the existing gravity water supply in order to meet design flows.

c. The combined construction cost of modifications at the left and right bank ladders (not including the cost of the hydraulic evaluation and gravity water supply) shall not exceed 650,000.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 33-35

4.2. Upstream Fish Passage

4.2.1 The MDNR and WDNR agree not to pursue fish passage at Projects located at natural barriers (i.e. waterfalls) and covered by this Settlement. These projects are Peavy Falls, Michigamme Falls, Twin Falls, and Big Quinnesec Falls Projects.

4.2.2 WE agrees to provide for the design, construction, operation, and maintenance of upstream fish passage structures at Way, Lower Paint, Hemlock Falls and Kingsford Projects upon completion of the license reopener process described in Paragraphs 4.2.2.1 through 4.2.2.6. The Parties agree that the upstream fish passage shall be funded by WE independent of the Mitigation and Enhancement Fund.

4.2.2.1 A fish/watershed management plan providing the biological justification for upstream fish passage shall be developed by MDNR and/or WDNR. The biological justification shall detail the fish species to be passed and recommended biological design parameters for fish passage facilities. The fish/watershed management plan shall be subject to the following conditions:

a) In preparing the fish/watershed management plan, the MDNR and/or WDNR shall consult with the FWS pursuant to Section 7 of the Endangered Species Act.

c) The fish/watershed management plan shall be prepared in coordination with the Team.

b) The justification for the upstream fish passage shall, in detail, identify the ramifications to the river stakeholders,

The Team shall provide input by being involved in scoping, providing data, assisting in analysis, and providing recommendations. The Team will seek consensus on the final fish/watershed management plan, however, the Resource Agencies have the ultimate authority on fish/watershed management plans.

d) The fish/watershed management plan shall include and address all comments from river stakeholders.

4.2.2.2 Upon determining the need for upstream fish passage and prior to submitting a request to FERC to require fishway installation, MDNR and/or WDNR shall consult with the Team on such a request. The Parties reserve their right to initiate dispute resolution under Paragraph 9.3 if the Parties' concerns with the fishway request are unresolved.

4.2.2.3 Upon completion of requirements in Paragraph 4.2.2.2, MDNR and/or WDNR shall submit to the Commission a request for the installation of fish passage at a project(s) along with the fish/watershed management plan providing the biological Justification for upstream fish passage. Upon receiving the request for fishway installation, the Commission should issue an order requiring WE to install the necessary fish passage. WE reserves its right to appeal under FERC regulations if WE's concerns with the fishway request are unresolved.

4.2.2.4 Upon receipt of the final enforceable FERC order for the installation of fish passage, WE shall, within 6 months, file with the Commission for approval a design plan and schedule for installing fish passage structures at the project(s) requiring upstream fish passage. Such design plans shall be developed in consultation with the Team and include, but not be limited to: (1) functional design drawings for fish passage structures; and (2) an implementation plan for installing the structures.

4.2.2.5. WE shall complete installation of any upstream fish passage device structures required by the Commission following the implementation schedule. Prior to completing construction of a structure, WE shall develop an operation and maintenance (O&M) plan and a performance evaluation plan in consultation with the Team. WE shall file these plans with the Commission for approval and prior to commencing operation of the fish passage structure(s).

4.2.2.6 WE shall propose modifications to a fish passage structure and/or the project operation, if necessary, to meet the biological design parameters determined by the Team for the fish passage facility. Any proposed structural modifications of the fish passage facility shall be done in consultation with the Team. WE shall submit such a proposal to the Commission for approval within two (2) months of the completion of consultation with the Team.

4.2.3 The FWS reserves the Secretary of Interior's authority pursuant to Section 18 of the Federal Power Act, 16 USC Section 811, to prescribe upstream and downstream fishways after the issuance of new licenses, and will not invoke this authority or make recommendations pursuant to the Fish and Wildlife Coordination Act for implementing fish passage without consulting WDNR and MDNR.

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 3

Upstream fish passage will not be required at the Moshier Development at this time.

**Black River Project and Beebe Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 4

Consistent with existing fishery management objectives, no upstream fish passage measures will be required at this time.

2. Downstream Passage

(See also Sections II.B.3 and 6, Fishery Flows and Bypass Flows)

Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995) Project No. 2645 (New York)

p. 2

A route for downstream fish passage for the Moshier Development will be provided through a new gate structure. Final details of the design including final location and the potential need for fish protection and conveyance measures (e.g., distribution of flows between release structures and/or channel modifications), if any, and installation will be undertaken by Niagara Mohawk based on 1995 field inspections and professional judgment of the USFWS and NYSDEC within 2 years of FERC license acceptance.

p. 5

Instream flow releases from the existing gate structure will provide a downstream fish passage route. Minor channel modifications below the release gate will be undertaken by Niagara Mohawk based on 1995 field inspections and the professional judgment of USFWS and the NYSDEC within 2 years of FERC license acceptance.

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A route for downstream fish passage for the Effley Development will be provided through the new gate structure. This structure will be a gated orifice through the dam, approximately 2 SF in area, with its invert located approximately 5.0 feet below normal maximum headwater elevation without flashboards. It will be designed to pass a nominal 20 cfs (ranging from 18 cfs to 22 cfs as controlled by pond level). Final details of the design, including final location and the potential need for fish protection and conveyance measures (e.g., plunge pools, piping, etc.), if any, and installation will be undertaken by Niagara Mohawk based on 1995 field inspections and professional judgment of the USFWS and NYSDEC within 2 years of FERC license acceptance.

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A downstream fish passage route for the Elmer Development will be provided through the new release structure. This structure will be approximately 2 SF in area, with its invert located approximately 5.0 feet below normal maximum headwater elevation without flashboards. It will be designed to pass a nominal 20 cfs (ranging from 18 cfs to 22 cfs as controlled by pond level). Final details of the design, in consideration of reduced flows to 10 cfs, including the potential need for fish protection and conveyance measures (e.g., plunge pools, piping, etc.), if any, and installation will be undertaken by Niagara Mohawk based on 1995 field inspections and professional judgment of the USFWS and NYSDEC within 2 years of license acceptance.

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995 Project Nos. 2569, 2538 (New York)

p. 11

Downstream fish movement will be provided from April 11 through November 30 via a modification to the existing stoplogged ice chute. To accommodate safe downstream fish movement, an approximately 3-foot-wide by 2.5-foot-deep flume with a rounded bottom will be installed within the existing ice chute so that it extends beyond the lip of the ogee spillway. A flow of 37 cfs will be provided to attract and convey fish. Measures will be implemented to

provide for a 4-foot-deep plunge pool and an improved outlet at the end of the ice chute. Licensee will consult with the USFWS and NYSDEC on the final design. This fish conveyance structure will be installed within 2 years of license issuance.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 8-11

5.0 Downstream Fish Protection

5.1 CPCO shall study, plan, design, construct, operate and maintain fish entrainment protection devices or measures in accordance with this Section. For these 11 hydroelectric projects, the parties agree that fish protection, where practicable, is preferred to the annual contributions called for in Paragraph 5.3. CPCO shall fund capital costs in the amount of \$5 million in 1992 dollars (adjusted for the CPI) to study, plan, design and construct fish protection devices or measures in accordance with the provisions of Paragraph 5.2 at its projects on the AuSable, Manistee and Muskegon Rivers. The allocation of the \$5 million among the projects will depend on the results of the evaluation in Paragraph 5.2. Operation and maintenance costs related to the fish protection devices and measures are not included in the \$5 million. All submittals shall follow procedures in Section 13. If less than the \$5 million is spent on studying, planning and constructing fish protection devices or measures as a result of the inability to obtain FERC approval, per Paragraph 5.2, CPCO shall retain the balance of the \$5 million and utilize it for the contributions required by Paragraph 5.3.

5.2 CPCO shall contract with consulting firm(s) experienced in the design and installation of downstream fish protection devices at hydroelectric projects to evaluate designs, applicability, costs and effectiveness of fish protection devices or measures for installation at each hydroelectric project. CPCO shall provide the name and qualifications of its recommended consulting firm(s) for resource agencies review, in accordance with Section 13, 90 days after issuance of the FERC license for each of CPCO's hydroelectric projects. Within twelve (12) months of resource agencies review of the firm(s), CPCO shall complete an evaluation of potential measures and devices at each of the 11 hydroelectric projects. The evaluation results shall be provided to the resource agencies for review. When the resource agencies recommend fish protection device installation, CPCO shall (subject to Section 14) make application to FERC within 180 days of receipt of the resource agencies recommendation. When FERC approves the protective measures, CPCO shall within 90 days, begin contracting for design and installation. Upon FERC approval of the final design, CPCO shall apply for necessary permits and proceed with installation.

5.3 Beginning with the effective date of the FERC license for each hydroelectric project, CPCO shall annually contribute the following amounts in 1992 dollars (adjusted for the CPI) to the State of Michigan Habitat Improvement Account to be used for the following activities: fisheries habitat restoration or enhancement, preparing comprehensive river management plans, aquatic studies, fisheries recreation, water quality improvement and soil erosion control activities on the AuSable, Manistee and Muskegon Rivers.

5.5 If a fish protection measure(s) is implemented at any project, the annual contribution specified in Paragraph 5.3 for such project shall be reduced based upon the effectiveness of the fish protection. The effectiveness of the fish protection will be determined by comparing the results of the preapplication fish entrainment and mortality studies with a single, one-year study of similar scope performed after the fish protection measures are installed. CPCO shall provide all

study plans, study results and recommended contribution changes to the resource agencies as provided for in Section 13. If CPCO subsequently modifies the fish protection, CPCO may conduct an additional study(ies) to reestablish the amount of future contributions.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

Overview

#4 REACH (1.5 miles to major tributary, total of 2 miles) - 100 cfs or inflow October 1 - May 31 and 125 cfs June 1 - September 30; downstream fish passage for Atlantic salmon restoration effort. OBJECTIVE: provide cold water fishery opportunity.

#3 REACH (0.4 miles) - 100 cfs or inflow; downstream fish passage. OBJECTIVE: protect smallmouth bass habitat, meet town's desire for lower flows for swimming and public use in potholes.

#2 REACH (non-project waters, 9 miles to confluence with Connecticut River) - 200 cfs guaranteed flow; fish passage for Atlantic salmon program. OBJECTIVE: provide quality resident cold water fishery, passage for Atlantic salmon, better summer Class 2 canoeing flows.

p. 9

F. NEP has provided plans for downstream fish passage facilities at Station Nos. 2, 3, and 4. NEP agrees to install these facilities in accordance with these plans (Plan nos. H-64758-P, H64757-P, H64755-P) as modified by the comments of the USFWS and said facilities shall be operational within 2 construction seasons of issuance of a New License. Prior to operation, NEP will provide a plan for evaluating the effectiveness of these facilities for review and comment by the USFWS and MDFW and approval by FERC.

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

Statement of Exception

... If management objectives change or new information becomes available, which subsequently requires fish passage, MPC shall provide appropriate upstream and/or downstream fishways. In addition, the Department of Interior reserves the authority to prescribe the construction, operation, and maintenance of fishways pursuant to Section 18 of the Federal Power Act [Hebgen Development, pg. 1.15; Madison Development, pg. 2.4; Hauser Development, pg. 3.3; Holter Development, pg. 4.3; Black Eagle Development, pg. 5.3; Rainbow Development, pg. 6.2; Cochrane Development, pg. 7.2; and Morony Development, pg. 8.2]

MPC excepts to the reservation of authority asserted by the Department of the Interior. Moreover, even if the Department is ultimately held to have authority to prescribe fishways during the term of the license, MPC excepts to the extent that the Department's reservation of authority suggests that a fishway could be prescribed prior to affording MPC notice and an opportunity for hearing. MPC further excepts to the foregoing passage to the extent that it implies that management objectives may be changed during the License term other than by the appropriate Technical Advisory Committee, and to the extent it suggests that MPC would be obligated to provide fishways other than with Protection, Mitigation, and Enhancement funds already allocated to the Technical Advisory Committees for fisheries issues.

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II. FISHERIES RESOURCES

The mitigative measures discussed under erosion control and water resources also protect fish populations in the project area from many of the potential adverse impacts of building and operating hydropower facilities. If additional actions, as listed in the following, are required, MPC will be responsible to accomplish those actions:

C. Provide bypass facilities needed to guide juvenile and adult fish migrating downstream past dams and project turbines; Based on the limited information available, restrictions on upstream and downstream salmonid passage associated with operation of the Hebgen Development do not significantly limit fisheries populations in Hebgen Reservoir or downstream Madison River. If management objectives change or new information becomes available, which subsequently requires fish passage, MPC shall provide appropriate upstream and/or downstream fishways. In addition, the Department of Interior reserves the authority to prescribe the construction, operation, and maintenance of fishways pursuant to Section 18 of the Federal Power Act.

II. FISHERIES RESOURCES

The mitigative measures discussed under erosion control and water quantity and quality also protect fish populations in the project area from many of the potential adverse impacts of building and operating hydropower facilities. If additional actions, as listed in the following, are required, MPC will be responsible to accomplish those actions:

C. Provide bypass facilities needed to guide juvenile and adult fish migrating downstream past dams and project turbines. Based on the limited information available, restrictions on upstream and downstream fish passage associated with operation of the Madison Development do not significantly limit fisheries populations in Madison Reservoir or the downstream Madison River. If management objectives change or new information becomes available, which subsequently requires fish passage, MPC shall provide appropriate upstream and/or downstream fishways. In addition, the Department of Interior reserves the authority to prescribe the construction, operation, and maintenance of fishways pursuant to Section 18 of the Federal Power Act.

(1) Fish passage facilities may be provided through annual funds for the recovery of threatened and endangered (T&E) fish species and other fish species of special concern. Initially, these funds will be used for the recovery of the Arctic grayling. The grayling recovery effort, guided by the Montana Fluvial Arctic Grayling Work Group, may include but not be limited to: 1) purchasing hatchery space to raise grayling; 2) constructing artificial spawning channels, gabions and weirs, and facilities to spawn and raise grayling; 3) adding chemical treatments to remove competitive species from tributaries; 4) funding a biological technician, including expenses; 5) conducting grayling life history work including radio telemetry, habitat preference, and DNA/RNA/physical behavior studies; 6) using miscellaneous equipment for fieldwork including tag and trapping materials and electrofishing equipment; 7) fish passage facilities, and 8) funding an investigation of pre- and postspawning movements of grayling below Madison Dam to determine the need for a weir or fish ladder to facilitate upstream movement of spawning grayling into Madison Reservoir, including life history and status review of the grayling population in the Madison River/Reservoir System.

Cost: \$50,000 per year.

C. Provide bypass facilities needed to guide juvenile and adult fish migrating downstream past dams and project turbines. Based on the limited information available, restrictions on upstream and downstream fish passage associated with operation of the Hauser Development do not significantly limit fisheries populations in Hauser Reservoir or the downstream Missouri River.

If management objectives change or new information becomes available, which subsequently requires fish passage, MPC shall provide appropriate upstream and/or downstream fishways. In addition, the Department of Interior reserves the authority to prescribe the construction, operation, and maintenance of fishways pursuant to Section 18 of the Federal Power Act

Rock Island Settlement Agreement, March 1987

Project No. 943 (Washington)

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B. Juvenile Fish Bypass Systems

1. General Scope of Bypass Measures.

a. Subject to the schedules, criteria and conditions set forth in this Agreement, or as hereafter modified, Chelan will fund and conduct a Bypass Development Program to study, design, develop, test and install mechanical juvenile fish Bypass Systems for deflections, collections and routing of juvenile salmonids past operating powerhouse generating units.

b. All construction contemplated or proposed under this Agreement shall be designed and constructed, regardless of the method of financing under this Agreement, using quality materials and then-current engineering standards for the purpose of obtaining a high-quality product designed to require low maintenance and have a long useful life.

2. Powerhouse No. 1 Schedule.

The following is the schedule for the Bypass Development Program at Powerhouse No. 1:
a. in 1987:

1. Construct hydraulic model of Powerhouse No. 1 at Washington State University and commence investigations of possible Bypass Systems suggested by the Fishery Agencies and Tribes.

2. Perform hydroacoustic monitoring to determine vertical and horizontal fish distribution.

b. in 1988:

1. Begin design work on a Prototype Guidance Device (as defined in subsection B.4 (a)) that satisfies the criteria specified in subsection B.4(b).

2. Begin necessary modifications to the powerhouse for the installation of the Prototype Guidance Device.

c. in 1989

1. Construct, install and test the Prototype Guidance Device (assuming a design is selected pursuant to subsection B.4 (b)).

d. in 1990:

1. Make necessary modifications to the Prototype Guidance Device.

2. Begin engineering and construction of a prototype bypass flume or conduit (provided that preliminary fish guidance efficiency test results on the Prototype Guidance Device indicate a reasonable probability that subsection B.5 criteria will be satisfied).

3. Test the Prototype Guidance Device based on agreed method to determine the fish guidance efficiency of the bypass device and flume/conduit combination.

e. in 1991 (all schedule activities after 1990 assume that all bypass installation criteria specified in subsection B.5 have been met and the decision has been made to install the system; if the subsection B.5 criteria cannot be satisfied at this time the parties agree to continue modeling and modification of the Prototype Guidance Device so long as the Account referred to in Section C has not yet been established):

1. Begin installation of Bypass System (the Parties recognize that the currently contemplated design of a Bypass System at Powerhouse No. 1 will require relocation of the trashrack).

f. in 1992:

1. Complete Bypass System installation.

g. in 1993:

1. Perform bypass fish guidance efficiency study on installed Bypass System based on agreed method.

h. in 1994-95.

1. Adjust and evaluate Bypass System based on operating experience.

i. The foregoing schedule for the Bypass Development Program may be modified by written agreement of all parties or as the result of the occurrence of any of the events identified in subsection J.6. As an alternative to the foregoing schedule, a Bypass Development may proceed, after establishment of the Account pursuant to Section C, under a schedule prepared by the Fishery Agencies and Tribes in accordance with conditions specified in Section C. Any alternative schedule shall allow Chelan adequate time to perform all scheduled activities.

j. Upon notification to Chelan of the decision to install a Bypass System at Powerhouse No.1 pursuant to either subsection B.5 or C.5, Chelan may elect to delay said installation for a period not to exceed one (1) year.

3. Powerhouse No. 2 Schedule.

The following is the schedule for the Bypass Development Program at Powerhouse No. 2

a. in 1987:

1. Reactive Hydraulic Model at Washington State University and resume investigation of possible Bypass System, including devices and Systems suggested by the Fishery Agencies and Tribes.

2. Begin design work on a prototype Guidance Device that satisfies the criteria specified in subsections B.4 (b).

b. in 1988:

1. Construct, install, and test the Prototype Guidance Device (assuming a design is selected pursuant to subsection B.4b

c. in 1989:

1. Make necessary modifications to the Prototype Guidance Device and continue testing. Test for fish guidance efficiency based on agreed method.

d. in 1990 (all schedule activities after 1990 assume that all bypass installation criteria specified in subsection B.5 have been met and the decision has been made to install the system; if the subsection B. 5 criteria cannot be satisfied at this time the Parties agree to continue modeling and modification of the Prototype Guidance Device so long as the Account referred to in Section C has not yet been established):

1. Begin installation of Bypass System.

e. in 1991:

1. Complete Bypass System installation.

2. Perform bypass fish guidance efficiency study on installed Bypass System based on agreed method.

f. in 1992:

1. Adjust and evaluate Bypass System based upon operating experience.

g. The foregoing schedule for the Bypass Development Program may be modified by written agreement of all Parties or as the result of the occurrence of any of the events identified in

subsection J.6. As an alternative to the forgoing schedule, a Bypass Development Program may proceed, after establishment of the Account pursuant to Section C, under a schedule prepared by the Fishery Agencies and Tribes in accordance with the conditions specified in Section C. Any such alternate schedule shall allow Chelan adequate time to perform all scheduled activities.

4. Prototype Development and Testing.

a. A "Prototype Guidance Device" is defined as a mechanical device consisting of a submerged traveling screen, a bar screen or some newly developed device that functions in a manner similar to such screens, plus all auxiliary devices incorporated into the initial design for the primary purpose of guiding fish into the screen. Also included in this definition shall be minor modifications to the original installation made in an effort to improve fish guidance efficiency, which may include, by way of example, changing the angle, porosity, elevation, or leading or trailing edge of the screen: changing the angle, porosity or length of auxiliary deflection devices: changing the lighting: extending the ceiling or floor: changing the gap at the top of the screen: relocating or modifying deflectors on the trashrack or otherwise altering the hydrodynamics of the trashracks; or relocating the trashracks at Powerhouse No. 1. More than one such modification to the Prototype Guidance Device may be tested simultaneously or alternatively during the same study year. This definition does not include major redesign or reconstruction which may include, by way of example, relocation of the trashrack at Powerhouse No. 2. removal or installation of concrete that requires dewatering. lengthening of the screen requiring major structural work, conversion from a submerged traveling screen to bar screen or vice versa. Any such major modification or reconstruction shall be deemed to be construction of a new Prototype Guidance Device. Regardless of character, any modification that would result in an increase in the cost of installing a Bypass System utilizing that modification to a point where the cost of installation exceeds the applicable cost limitation in subsection B.7 shall be a major reconstruction.

b. The decision to proceed from studies to the manufacture and installation of a Prototype Guidance Device at each powerhouse shall be made by the Fishery Agencies and Tribes if the hydraulic model studies indicate interception by the guidance device as designed of the portion of the initial flow that contains 50% or more of the juvenile migrants of all species as identified by vertical distribution studies. Otherwise, manufacture and installation of a Prototype Guidance Device shall be by mutual consent of all Parties.

c. Chelan shall not be obligated to manufacture and install more than one (1) Prototype Guidance Device for each powerhouse, except by mutual consent of all Parties. Additional Prototype Guidance Devices may be manufactured, installed and tested pursuant to subsection C.3 after establishment of the Account.

5. Bypass Installation Criteria.

Chelan's obligation to install a mechanical Bypass System at either or both powerhouse shall be contingent on satisfaction of the criteria specified in either (a) and (c) or (b) and (c) below:

a. Of the prototype Guidance Device at either powerhouse achieves a point estimate of at least fifty percent (50%) fish guidance efficiency based on the average of all species, then the decision to install a Bypass System at that powerhouse may be made by the Fishery Agencies and Tribes. Percent fish guidance efficiency shall be expressed by the following formula:

Sum of all salmonid migrants successfully guided by device
during the spring and summer migration

x 100

Sum of all salmonid migrants passing through the unit intake
during the spring and summer migration.

Fish guidance efficiency shall be measured in accordance with a testing method agreed to by all Parties.

b. If the Prototype Guidance Device guides less than fifty percent (50%) of the average of all species as defined in a. above, then the decision to install a Bypass System at that powerhouse shall be made only by the mutual consent of all Parties to this agreement.

c. Regardless of the fish guidance efficiency of any tested device, a Bypass System will not be installed at either powerhouse in the event of any of the following:

1. It is determined by Chelan's consulting engineers and confirmed by the FERC that the selected Bypass System would be unsafe or cause substantial damage to the powerhouse structure or to the generating units; or

2. It is determined that the selected Bypass System would degrade the generating units by more than 2.0%; or

3. The final estimated cost of construction and installation of the Bypass System exceeds the appropriate cost limitation in subsection B.7, subject to subsection B.7(c).

6. Powerhouse No. 1 Unit Selection Option.

In the event all necessary criteria for the installation of a Bypass System specified in the subsection B.5 are satisfied with regard to Powerhouse No.1 and the decision is made to install, Chelan shall have the option to install the selected Bypass System on all units or only on units Nos. B-5 through B-10, inclusive. If Chelan elects to install such system only on units Nos. B-5 through B-10, Chelan agrees not to operate units Nos B-1 through B-4 between April 1 and August 31 of each year (alternative dates may be established by agreement of the Parties). During said period Chelan reserves the right to operate the "house unit", Unit B-H, when necessary to provide station service. For all purposes under this agreement installation of the bypass system on units B-5 through B-10, with the accompanying shutdown of units Nos. B-1 through B-4 from April 1 to August 31 (or other such period as may be agreed upon), shall constitute a complete juvenile fish Bypass System for Powerhouse No. 1.

7. Capital Cost Estimates.

a. The estimated capital cost of installation of Bypass Systems, exclusive of modeling, prototype manufacture, prototype installation and testing, is:

1. 17,900,000 (1986 dollars) at Powerhouse No. 1.

2. 7,700,000 (1986 dollars) at Powerhouse No. 2.

b. Subject to the testing, Prototype Guidance Device and installation criteria specified in subsection B.5, Chelan shall be obligated to install a juvenile Bypass System at either or both powerhouses unless the final cost estimate prior to preparation of the full design for such installation at the applicable powerhouse(s), as specified in subsection B.7(a), subject to subsection B.7(c). Of such final cost estimate for either juvenile Bypass System is greater than 1.2 times the applicable cost estimate, as specified above, then Chelan shall have no obligation to install have no obligation to install such Bypass System under this Agreement unless mutually agreed by all Parties or ordered pursuant to subsection A.5.

c. In the event the cost estimate referred to in subsection B.7(b) above exceeds the 1.2 multiplier, upon written request by the Fishery Agencies and Tribes, Chelan shall go out for public bid for the proposed Bypass System on a "turnkey" basis, which bid shall include the cost of design as well as manufacture and installation. If the bid proposal submitted by the lowest responsible bidder is within the 1.2 multiplier limitation for the applicable Bypass System, Chelan shall award a contract or proceed with installation. If no responsible turnkey bid proposal is received that is within the 1.2 multiplier, Chelan shall have no obligation to award a contract or proceed with installation of said Bypass System. The Parties agree that in fairness to all

prospective turnkey the cost limitations in effect under this agreement shall be stated in the bid documents.

8. Operation and Maintenance

a. Chelan agrees to develop an operation and maintenance for each installed Bypass System which is reasonably acceptable to the Fishery Agencies and the Tribes. The plan shall be developed prior to the completion of installation of the selected Bypass System and reviewed annually. The plan shall define in detail when and how the devices are to be operated, inspection and maintenance procedures, procedures for monitoring fish guidance and fish quality and evaluation of any Bypass System improvements installed pursuant to Subsection B.8(c) or B.9. Chelan will maintain each installed Bypass System in a manner that will ensure that all devices operate at the same level of mechanical performance and reliability that they achieve upon completion of installation and any subsequent modifications. Chelan shall not be held responsible for reductions in F.G.E. of the Bypass System resulting from deviations in fish behavior or other causes beyond Chelan's control.

b. Chelan agrees to replace installed Bypass Systems or devices at the end of their useful life with identical or, by mutual agreement of the parties, improved systems or devices, so that Bypass System and devices continue to operate during the term of this Agreement. Improved Systems and devices will be installed under this subsection B.8(b) when the estimated cost for their installation is less than or equal to the estimated cost of installing a system or device identical to the ones being replaced. The end of the useful life of a Bypass System or device shall be reached when either:

1. the system or device ceases to operate at substantially the same level of mechanical performance and reliability that it achieved upon completion of installation and any subsequent modification or

2. Maintenance costs sufficient to maintain the above level of performance and reliability make it economical to replace the system or device.

c. Chelan agrees to perform minor modifications to the Bypass System or Devices, such as redesign and replacement of failure-prone components, minor modification to reduce injury or avoidance of guidance devices, and minor modification to facilitate cleaning and inspection. Minor modifications may include any of the measures described as such in subsection B.4 a. Chelan will conduct an evaluation of any such minor modifications.

9. Use of Unexpended Funds for capital improvement.

If a Bypass system is installed at either or both Powerhouses for less than the applicable estimated cost specified in subsection B.7(a), an amount equal to the cost estimate for that system, less the amount actually expended for installation, shall be available to the Fishery Agencies and Tribes for use by joint agreement for capital improvements to the installed juvenile Bypass System which are shown by test results to improve that Bypass System's fish guidance efficiency or for studies designed to develop improvements to that installed Bypass System; provided that any expenditure pursuant to this subsection B.9 shall reduce the amount of any such unused funds dollar for dollar. Any unexpended funds available for use pursuant to this subsection B. 9 shall not be escalated for inflation pursuant to subsection J. 5 beyond the date of installation of the applicable Bypass System. In the event Chelan elects pursuant to subsection B. 6 to install bypass devices on only six (6) units at Powerhouse No. 1, the applicable cost estimate for the purpose of this subsection B.9 shall be \$12,300,000.

10. Operational Preference.

If any units at Powerhouse No. 1 or Powerhouse No. 2 have a bypass system installed and operational prior to installation of a Bypass System on the other units (other than prototype

Guidance device), than Chelan agrees to give operational preference to those units which have a Bypass System installed. Chelan will put on line within their efficient loading those units with an operational Bypass System that are available for operation in accordance with the standard utility practices prior to putting on line any unit either powerhouse that is not equipped with a Bypass System; provided, a unit shall not be declared unavailable for operation solely because operation of another unit would be more economically or financially useful.

11. Study Methodologies and Criteria.

For purposes of Subsection B.2 and B.3, the Parties agree on the following methodologies and study criteria:

a. all studies will be conducted following accepted techniques and methodologies in use for similar studies at mainstem Columbia basin dams. All studies will be based on a sound statistical design and analysis.

Order Issuing New License, City of Watertown, New York (Issued June 16, 1995) United States Federal Energy Regulatory Commission; Project No. 2442

A-3-A-5

Downstream Fish Passage Issue

Downstream passage was identified as a concern by USFWS and NYSDEC during first stage consultation. A preliminary design for providing downstream passage was developed by the Applicant and included in the Draft License Application. Further consultation during 1994 with Messrs. Benedetto Rizzo and Curtis Orvis, USFWS fish passage experts, led to the development of a design acceptable to all parties.

Agency Consultation

Initial consultation began on April 27, 1989, with distribution of the Initial Consultation Package (ICP). An initial scoping meeting was held with the agencies on June 25, 1989. Agency comments on the ICP identified downstream fish passage as a concern.

The City distributed its Draft Application for New License to the agencies on June 14, 1991. The need for downstream fish passage facilities and changes in trash rack configuration was discussed with the agencies at a meeting on November 4, 1991. Preliminary design concepts were provided to USFWS engineers after the November meeting. On January 14, 1994, FERC staff requested additional information on fish passage facilities. The City met with Mr. Rizzo and Mr. Orvis, USFWS, on February 11, 1994, to discuss preliminary design concepts. A revised design, based upon these discussions, was sent to the USFWS on February 17, 1994, for review and approval. The USFWS markup was returned to the City on February 18, 1994, and comments were incorporated into the preliminary design which is now acceptable to the USFWS. On February 18, 1994, the proposed layout was also submitted to NYDEC and interested parties for their review and comment in accordance with the January 14, 1994, letter from the FERC requesting additional information.

Resolution and Settlement

On April 1, 1994, the City filed its response to FERC's January 14, 1994, correspondence requesting additional information (AIR). A summary of issues is presented at Tab 1 of this document. This Settlement presents proposed facilities and resource management measures that have been developed in consultation with resource agencies and other interested parties, including Intervenor. Copies of correspondence documenting concurrence with the City's proposal is included at Tab 3 of this document.

The draft proposal for the fish passage facility was provided to agencies on March 15, 1994 for review and comment. This Settlement presents the basis of design for the proposed fish passage facility, incorporating features requested by the USFWS and which embrace NMEC concerns, and agreed to by the USFWS and the City. On April 6, 1994, the USFWS stated, 'Summarily, we approve the downstream fish passage plans for the Watertown Hydroelectric Project as shown on the February 18, 1994, functional design drawing with the inclusion of an air vent, as necessary.' The USFWS requested that it review final design prior to start of construction. The USFWS recommends that the fishway be constructed and placed in operation prior to commencement of commercial electrical energy production from the upgraded hydroelectric facilities (June 9, 1994, letter from USFWS to City). In anticipation of early approval of the City's proposal by the FERC, the City proposes to construct and place the fish passage facility in operation during December 1996.

Benefits to the Resource

Once approved by the FERC, the City will proceed with the proposed upgrade of its powerhouse, installation of fish passage facilities, and replacement of the existing trash rack. Early replacement is considered essential because of the age of existing equipment. Failure of this equipment would take the powerhouse off line for an undetermined period of time because of the lack and/or difficulty in obtaining replacement parts. During Project downtime, instream flows cannot be regulated to control releases through the bypass reach for protection of the aquatic habitat or for recreational use by whitewater kayakers, nor can safe downstream fish passage be assured.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 35-36

4.3. Downstream Fish Protection

4.3.1 In accordance with the provisions of Paragraph 4.3, WE shall provide, over the duration of the license, \$3.4 million [in 1996 dollars adjusted annually in the year of payment, for changes in the Consumer Price Index (CPI) of the U.S. Department of Labor] to design, evaluate, construct, operate, and maintain fish protection devices at the Projects. O&M costs related to the fish protection devices are included in the \$3.4 million, however O&M costs of protection devices shall be limited to \$60 thousand annually (in 1996 dollars adjusted annually in the year of payment, for changes in the CPI) for all Projects. Annual O&M costs shall include all items determined to be appropriate O&M costs by the Team. Appropriate O&M costs may include labor, material, and contracts to cover all costs associated with the operation, deployment, cleaning, repairs, and winterization of any device(s) installed.

4.3.2 WE shall, after consultation with the Team, file with the Commission for approval a design plan and schedule for installing downstream fish protection following the schedule in Paragraph 2.3.9. The Team, with outside assistance from agreed upon individuals, will develop a list of protection measures applicable to each project listed in Paragraph 4.3. 1. The appropriate device, if any, shall be selected from this list for installation at each project based upon estimated biological aid cost-benefit effectiveness. WE shall be responsible for conceptual design work and effectiveness analysis to include hydraulic testing, estimated effectiveness, and estimated costs for the selected device. The installation schedule for protection devices at each project will be developed in consultation with the Team, however, the intended timetable for installation of fish

protection devices at the Projects shall take place in years 5, 8, 9, 10, 11, 12, 13, and 14 of the licenses. The Team can alter this timetable.

4.3.3 WE shall, after consultation with the Team, file with the Commission for approval a plan and schedule for installation of downstream fish protection devices at each project when the Team determines it appropriate following the schedule in Paragraph 2.3.9. This plan shall include, but not be limited to, functional design drawings of the fish protection devices and an implementation schedule for installing these devices.

4.3.4 WE shall complete installation of any downstream fish protection devices required by the Commission following the schedule in Paragraph 2.3.9. Prior to completing construction of a device, WE shall, after consultation with the Team, file with the Commission for approval an O&M plan and a performance evaluation plan.

4.3.5 WE shall propose modifications to a fish protection device and/or operation of the fish protection device to meet expected effectiveness, if necessary. Any proposed modifications of the device shall be done in consultation with the Team. WE shall submit such a proposal to the Commission for approval within three (3) months of the completion of consultation with the Team.

3. Turbine Operation

Ludington Pumped Storage Project Settlement Agreement, February 27, 1995 Project No. 2680 (Michigan)

E. COVERED MATTERS

The matters resolved by this FERC Agreement are all issues currently pending in Consumers Power Company and The Detroit Edison Company (Ludington Pumped Storage Project), Project No. 2680, 16 including the August 11, 1987 FERC Order Modifying Mitigative Plan for Turbine Mortality. The matters resolved include:

1. The mitigation and abatement of fish mortality resulting from the operation of the LPSP including a) proper implementation and maintenance of identified measures to abate fish mortality; and b) establishment of a program to monitor, assess, optimize and improve the fish mortality abatement potential of any technological or operational modification employed to mitigate mortality;

2. The establishment of a schedule to identify and evaluate new technologies or operational changes to further reduce unavoidable future mortality;

4. Barriers, Racks, Screens and Nets

Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995) Project No. 2645 (New York)

p. 3

In order to effectively exclude many adult fish from being entrained into the intake, Niagara Mohawk will replace the existing trashracks with new trashracks (or equivalent) with 1-inch clear bar spacing within two years of license acceptance.

p. 5

In order to effectively exclude many adult fish from being entrained into the intake, Niagara Mohawk will replace the existing trashracks at the entrance to the power canal with new trashracks (or equivalent) with 1-inch clear bar spacing within 10 years of FERC license acceptance.

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)

p. 4

G. Fish Protection

To exclude many adult fish from being entrained through the turbines, licensees will replace the existing trashracks at all developments with new trashracks having 2-inch clear bar spacing. In addition, at all developments except for Sewalls Development (for which only the 2-inch clear bar spacing trashracks are required), overlays having 1-inch clear bar spacing will be placed in the top 50% of the water column from May 1 through October 1.

Installation of at least one set of new trashracks and overlays at any development will be completed within 2 years of the date of license issuance. Work on all developments within a project will be completed by year 12 from the date of issuance of the applicable license.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 8-11

5.0 Downstream Fish Protection

5.1 CPCo shall study, plan, design, construct, operate and maintain fish entrainment protection devices or measures in accordance with this Section. For these 11 hydroelectric projects, the parties agree that fish protection, where practicable, is preferred to the annual contributions called for in Paragraph 5.3. CPCO shall fund capital costs in the amount of \$5 million in 1992 dollars (adjusted for the CPI) to study, plan, design and construct fish protection devices or measures in accordance with the provisions of Paragraph 5.2 at its projects on the AuSable, Manistee and Muskegon Rivers. The allocation of the \$5 million among the projects will depend on the results of the evaluation in Paragraph 5.2. Operation and maintenance costs related to the fish protection devices and measures are not included in the \$5 million. All submittals shall follow procedures in Section 13. If less than the \$5 million is spent on studying, planning and constructing fish protection devices or measures as a result of the inability to obtain FERC approval, per Paragraph 5.2, CPCO shall retain the balance of the \$5 million and utilize it for the contributions required by Paragraph 5.3.

5.2 CPCO shall contract with consulting firm(s) experienced in the design and installation of downstream fish protection devices at hydroelectric projects to evaluate designs, applicability, costs and effectiveness of fish protection devices or measures for installation at each hydroelectric project. CPCO shall provide the name and qualifications of its recommended consulting firm(s) for resource agencies review, in accordance with Section 13, 90 days after issuance of the FERC license for each of CPCo's hydroelectric projects. Within twelve (12) months of resource agencies review of the firm(s), CPCO shall complete an evaluation of potential measures and devices at each of the 11 hydroelectric projects. The evaluation results shall be provided to the resource agencies for review. When the resource agencies recommend fish protection device installation, CPCO shall (subject to Section 14) make application to FERC within 180 days of receipt of the resource agencies recommendation. When FERC approves the protective

measures, CPCO shall within 90 days, begin contracting for design and installation. Upon FERC approval of the final design, CPCO shall apply for necessary permits and proceed with installation.

5.3 Beginning with the effective date of the FERC license for each hydroelectric project, CPCO shall annually contribute the following amounts in 1992 dollars (adjusted for the CPI) to the State of Michigan Habitat Improvement Account to be used for the following activities: fisheries habitat restoration or enhancement, preparing comprehensive river management plans, aquatic studies, fisheries recreation, water quality improvement and soil erosion control activities on the AuSable, Manistee and Muskegon Rivers.

Contributions made in accordance with this paragraph shall be by check made payable to the State of Michigan by October 1st of each year for the previous 12-month period, or any portion thereof, and shall be forwarded to the Assistant Attorney General in charge of the Environmental Protection Division for deposit to the State of Michigan Habitat Improvement Account. For any period of time which this Settlement is in place and one or more of the units associated with the projects listed in Paragraph 5.3 are not operating due to maintenance, or other scheduled or unscheduled outages, the payments shall be adjusted downward accordingly.

5.4 Each year, MDNR will consult in advance with USF&WS, USFS and CPCo regarding the expenditure of contributions made pursuant to Paragraph 5.3 and liquidated damages assessed pursuant to Paragraph 6.9 prior to MDNR authorizing an activity. The MDNR need not obtain FERC approval of an activity, unless it would require modification of one of the 11 licenses, and will provide an annual accounting report to FERC, USFS, USFWS, and CPCo of expenditures made from these funds by December 1 of each year.

5.5 If a fish protection measure(s) is implemented at any project, the annual contribution specified in Paragraph 5.3 for such project shall be reduced based upon the effectiveness of the fish protection. The effectiveness of the fish protection will be determined by comparing the results of the preapplication fish entrainment and mortality studies with a single, one-year study of similar scope performed after the fish protection measures are installed. CPCO shall provide all study plans, study results and recommended contribution changes to the resource agencies as provided for in Section 13. If CPCO subsequently modifies the fish protection, CPCO may conduct an additional study(ies) to reestablish the amount of future contributions.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

Explanatory Statement, p. 1

In August of 1986, Licensees filed a mitigation plan pursuant to Articles 16 and 37. The Commission required further study reports and plans to be filed. 40 FERC 1 62,151 (1987). On September 30, 1988, the Commission required the installation of temporary fish barrier nets to reduce turbine entrainment and mortality. 44 FERC 1 62,324. Such nets have been installed annually, approximately mid-April to mid-October, since 1989. A final resolution of the fish mortality situation has not been made by the Commission. In addition, litigation related to the fish mortality situation has been going on before other agencies and before Michigan courts.

Explanatory Statement, p. 3

(2) Section II presents several means to reduce future fish mortality at the LPSP. Those measures include the continued annual installation of the seasonal barrier net system that has been in use since 1989, ongoing maintenance, performance and reporting standards are established for the net.

FERC Offer Of Settlement, p. 4-6

II. FISH MORTALITY ABATEMENT MEASURES

A. SEASONAL BARRIER NETS

Consumers Power Company and The Detroit Edison Company shall continuously maintain the seasonal barrier net in place at the LPSP during the ice-free season until expiration of the Ludington license, revocation of the Ludington license, or permanent shut down of the LPSP, whichever occurs first. The net should be placed not later than April 15 of each year and removed not earlier than October 15 of each year and during the interim period must be properly maintained and promptly repaired. Consumers Power Company and The Detroit Edison Company shall continuously endeavor to optimize and improve the fish mortality abatement potential of the net. Expansion of the season during which the barrier net is in place shall receive further consideration.

The obligations of Consumers Power Company and The Detroit Edison Company to maintain the barrier net continuously during the ice-free season are subject to Force Majeure, as defined by Section IV, J hereto.

1. Net Performance Standards

Over an entire seasonal period, the barrier net shall provide a minimum of 80-s reduction in the entrainment of game fish (salmonids and yellow perch combined) over five (5) inches in length and a minimum 85i reduction in entrainment of large forage fish (alewife and smelt combined) over five (5) inches in length. Consumers Power Company and The Detroit Edison Company shall continue to provide funding for studies to monitor the effectiveness of the barrier net and for an independent observer to document monitoring activities. Net performance shall be evaluated and determined by the Scientific Advisory Team.

2. Maintenance of Replacement Capacity Consumers Power Company and The Detroit Edison Company shall provide that additional net replacement panels, anchors, buoys, lines and other equipment and materials necessary to maintain the net on a continuous basis are procured, maintained and made available at the LPSP. The equipment and material redundancies shall be sufficient to allow for replacement of all elements of the net system in the event of an extraordinary storm or any other impact that may damage the net system.

3. Reporting Requirements

Consumers Power Company and The Detroit Edison Company shall submit written annual reports to FERC and the Intervenor not later than December 31 of each year. The annual report shall describe the actions which have been taken to evaluate and improve both the effectiveness of the barrier net and the methodology employed to measure net effectiveness. The report shall also include representative data and reports received by Consumers Power Company and The Detroit Edison Company or their representatives during the previous year relating to the performance and improvement of the barrier net. The Scientific Advisory Team shall have access to all data and reports relative to the performance and improvement of the barrier net. The annual report shall also describe the measures Consumers Power Company and The Detroit Edison Company have taken to maintain the proper replacement capacity for the annual barrier net.

FERC Offer of Settlement, p. 9-10

D. FERC REVIEW AND APPROVAL

For any Scientific Advisory Team recommendations or decisions which involve structural or operational modifications to the LPSP including substantial modifications to the barrier net and monitoring programs, the parties recognize that FERC review and approval is necessary. Consumers Power Company and The Detroit Edison Company shall be under no obligation to comply with such Scientific Advisory Team recommendations or decisions until all necessary FERC approvals are obtained. In the case of any Scientific Advisory Team recommendations or decisions presented to FERC for review and approval, all parties represented on the Scientific

Advisory Team will be required not to oppose the same. Scientific Advisory Team recommendations and decisions will be subject to the dispute resolutions outlined in Section VI.A.

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 3

B. Fish Protection/Passage

The signators agree: Niagara Mohawk will replace the existing trashracks with 3.75-inch clear spacing with new trashracks with 1-inch clear spacing at the Lighthouse Hill Development within four years of receiving the license. Furthermore, Niagara Mohawk will replace the existing trashracks with 1.5-inch clear spacing with trashracks with 1-inch clear spacing at the Bennetts Bridge Development when the existing racks are replaced.

**Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)**

p. 35

4.3. Downstream Fish Protection

4.3.1 In accordance with the provisions of Paragraph 4.3, WE shall provide, over the duration of the license, \$3.4 million [in 1996 dollars adjusted annually in the year of payment, for changes in the Consumer Price Index (CPI) of the U.S. Department of Labor] to design, evaluate, construct, operate, and maintain fish protection devices at the Projects. O&M costs related to the fish protection devices are included in the \$3.4 million, however O&M costs of protection devices shall be limited to \$60 thousand annually (in 1996 dollars adjusted annually in the year of payment, for changes in the CPI) for all Projects. Annual O&M costs shall include all items determined to be appropriate O&M costs by the Team. Appropriate O&M costs may include labor, material, and contracts to cover all costs associated with the operation, deployment, cleaning, repairs, and winterization of any device(s) installed.

4.3.2 WE shall, after consultation with the Team, file with the Commission for approval a design plan and schedule for installing downstream fish protection following the schedule in Paragraph 2.3.9. The Team, with outside assistance from agreed upon individuals, will develop a list of protection measures applicable to each project listed in Paragraph 4.3. 1. The appropriate device, if any, shall be selected from this list for installation at each project based upon estimated biological and cost-benefit effectiveness. WE shall be responsible for conceptual design work and effectiveness analysis to include hydraulic testing, estimated effectiveness, and estimated costs for the selected device. The installation schedule for protection devices at each project will be developed in consultation with the Team, however, the intended timetable for installation of fish protection devices at the Projects shall take place in years 5, 8, 9, 10, 11, 12, 13, and 14 of the licenses. The Team can alter this timetable.

4.3.3 WE shall, after consultation with the Team, file with the Commission for approval a plan and schedule for installation of downstream fish protection devices at each project when the Team determines it appropriate following the schedule in Paragraph 2.3.9. This plan shall include, but not be limited to, functional design drawings of the fish protection devices and an implementation schedule for installing these devices.

4.3.4 WE shall complete installation of any downstream fish protection devices required by the Commission following the schedule in Paragraph 2.3.9. Prior to completing construction of

a device, WE shall, after consultation with the Team, file with the Commission for approval an O&M plan and a performance evaluation plan.

4.3.5 WE shall propose modifications to a fish protection device and/or operation of the fish protection device to meet expected effectiveness, if necessary. Any proposed modifications of the device shall be done in consultation with the Team. WE shall submit such a proposal to the Commission for approval within three (3) months of the completion of consultation with the Team.

p. 4.2

A. Protect fish against injury or mortality resulting from impingement and entrainment; Hebgen is operated as a seasonal storage facility and contains no power generation equipment. Therefore, fisheries impacts from entrainment and impingement is not a significant issue.

A. Protect fish against injury or mortality resulting from impingement and entrainment:

(1) Mitigating for fish losses from Hauser and Holter reservoirs due to spill flows, entrainment, and impingement at Hauser and Holter dams. MPC will commit annual funds to assist MDFWP in a fish stocking program and investigate measures to enhance retention of fish in both reservoirs.

5. Hatcheries

(See also Section 6, Stocking Programs, below.)

Missouri/Madison Project Recommended Terms and Conditions, May 1995

Project No. 2188 (Montana)

p. 2.4

Fish passage facilities may be provided through annual funds for the recovery of threatened and endangered (T&E) fish species and other fish species of special concern. Initially, these funds will be used for the recovery of the Arctic grayling. The grayling recovery effort, guided by the Montana Fluvial Arctic Grayling Work Group, may include, but not be limited to: 1) purchasing hatchery space to raise grayling; 2) constructing artificial spawning channels, gabions and weirs, and facilities to spawn and raise grayling; 3) adding chemical treatments to remove competitive species from tributaries; 4) funding a biological technician, including expenses; 5) conducting grayling life history work including radio telemetry, habitat preference, and DNA/RNA/physical behavior studies; 6) using miscellaneous equipment for fieldwork including tag and trapping materials and electrofishing equipment; 7) fish passage facilities, and 8) funding an investigation of pre- and postspawning movements of grayling below Madison Dam to determine the need for a weir or fish ladder to facilitate upstream movement of spawning grayling into Madison Reservoir, including life history and status review of the grayling population in the Madison River/Reservoir System.

Cost: \$50,000 per year.

Rock Island Settlement Agreement, March 1987

Project No. 943 (Washington)

p. 37-46

Hatchery-Based Compensation

1. Program Obligation.

Chelan agrees to construct, maintain and fund the operation and maintenance of a hatchery-based compensation program for the Rock Island Project sufficient to meet the Production objective set out in subsection E.3, consistent with the schedule set out in subsection E.2 and as otherwise described below. Chelan agrees to provide a new central hatchery facility, satellite facilities and support facilities necessary to implement the compensation program set out herein. On connection with the construction of the central and satellite facilities, the Parties shall mutually agree on the preliminary and final designs and engineering and on acceptance of the completed construction with regard to compliance with specifications. This compensation program will proceed in two phases.

2. Phase I Hatchery Compensation Schedule.

The hatchery program described in subsection E.1 shall proceed on the following schedule:

a. in 1987:

1. Chelan and the Fisheries Agencies and Tribes will jointly select a site for the central hatchery facility.

2. The Fishery Agencies and Tribes will jointly develop a production plan, following consultation with Chelan, which shall describe the rearing and release program, including anticipated use of satellite facilities and production evaluations, such as coded wire tag mark/recovery studies. The implementation of the production plan shall be funded by Chelan.

3. Chelan, in consultation with the Fishery Agencies and Tribes, shall fund genetic and microhabitat studies. The results of the ongoing studies to identify distinct genetic stocks of studies to identify distinct genetic stocks of anadromous salmonids above Rock Island Dam will be used to supplement existing information and guide the final selection of the number and location of adult traps and satellite facilities.

b. in 1988-89:

1. Chelan will construct the central hatchery facility.

2. The Fishery Agencies and Tribes will jointly make adjustments to the production plan with respect to the use of satellite facilities and will plan implementation.

3. Chelan shall construct needed satellite facilities to implement the plan, subject to the limitations set out in subsections E.3 and E.5 below.

3. Phase I Facility Capacity Requirements.

a. Phase I hatchery compensation facilities, including satellite facilities, will be capable of rearing and releasing 250,000 pounds of salmon at 10/lb. (approximately 200,000 yearlings). The Phase I hatchery program will be carried out in a manner that is consistent with the maintenance of genetically distinct stocks in the mid-Columbia River system above Rock Island Dam. To that end, the design will incorporate the capability for incubating, rearing, adult trapping and holding for up to five discrete stocks of salmon and steelhead.

The Parties agree that Chelan's obligation under Phase I will be fulfilled by providing the additional production capacity, the necessary support facilities and funding for studies appropriate to carry out the program, as well as the funding for the production of 250,000 pounds of salmon and 30,000 pounds of steelhead, as set out in this subsection E.3a. Chelan is not obligated to provide a specific level of fish production on an annual basis.

b. Satellite facilities for short-term rearing and release of juvenile will be constructed to meet the rearing and release requirements provided in the production plan referred to in subsection E.2. Adult trapping may be accomplished at facilities presently in existence or under construction, specifically the Wells fishway trap and the adult traps being constructed at the Dryden and Tumwater fishways on the Wenatchee River. Four short-term juvenile rearing and

release facilities and one net pen station for the sockeye salmon pilot program are currently contemplated to meet the production objective. Chelan agrees to construct the satellite facilities specified in subsection E.5b. In accordance with subsection E.2, the Fisheries Agencies and Tribes may request additional satellite rearing and release facilities be constructed to meet requirements of the production plan. Chelan will be obligated to construct these additional satellite facilities if the total construction costs of labor and materials for all satellite facilities, including those specified in subsection E.5b. does not exceed \$450,000.

4. Evaluation Requirements.

Chelan shall fund, based on study designs mutually agreed upon by the Parties:

a. a pilot program to begin artificial production of sockeye salmon. Any salmon production program that results from this pilot program will be included within the 250,000 pounds specified in subsection E.3a.

b. a sampling program to determine hatchery v. natural components of steelhead returns.

c. an evaluation of hatchery production and its inter-relationship with natural production to be used to assist in adjusting the production program.

5. Construction Criteria.

a. Chelan agrees to construct a central hatchery facility as described below:

1. A hatchery building that would include: covered vehicle storage, shop laboratory, restrooms, bunkroom and shower, incubation room and an office.

2. Forty 10' x 100' x 4' outside raceways.

3. Two 50' x 220' x 6' earthen ponds.

4. Six adult holding ponds.

5. A pollution abatement system.

6. 87 cfs of well water (77.7 cfs for salmon and 9.3 cfs for steelhead); comprised of 40 cfs of water from deep aquifer and 47 cfs of water from the shallow aquifer at the Rocky Reach east bank or, if 47 cfs of shallow aquifer is unavailable due to engineering infeasibility, 47 cfs of Columbia River water.

7. All the necessary piping, alarm systems, fencing and miscellaneous equipment associated with a hatchery of this size.

b. Chelan agrees to construct satellite facilities for the stocks and production capacities on the tributaries specified below, subject to the limitations contained in paragraph E.3(b), unless the Fishery Agencies and Tribes jointly determine that such facilities shall be constructed on public lands or other lands acquired through easements or agreements and shall utilize existing canals or other suitable structures when feasible and consistent with the production plan referred to in subsection E.2.

Stock	Tributary	Production Capacity
Spring Chinook	Methow River System	28,800 pounds
Spring Chinook	Wenatchee River System	67,200 pounds
Summer Chinook	Okanogan River System	57,600 pounds
Summer Chinook	Wenatchee River System	86,400 pounds
Sockeye	Lake Wenatchee or Osoyoos (Net pens)	10,000 pounds

c. Chelan agrees to fund the annual maintenance and operation of all facilities identified in and necessary to implement Section E.

6. Rocky Reach Credit.

If Chelan proceeds with a Phase I summer spill program following evaluation of spill effectiveness for passage of summer migrants, as provided in Section D, up to 35,000 pounds of the 250,000 pounds of hatchery production described in this Section E may at Chelan's option be annually credited against mitigation production requirements for Rocky Reach, FERC Project No. 2145. This credit shall be exclusive of the 30,000 pounds of steelhead production capacity required by subsection E.3(a).

7. Phase II Hatchery Compensation.

a. A project mortality study will be conducted in (1) 1995 or (2) upon successful completion of juvenile Bypass Systems at both powerhouses or a juvenile bypass "program," whichever event occurs earlier, for the purpose of determining juvenile losses at the Rock Island Project. The losses so determined shall be used to adjust hatchery production levels based on then-current run size determined at the project. The study design shall be developed jointly by the Parties. For the purposes of this subsection E.7a a juvenile bypass "program" may be defined as an installed Bypass System at one powerhouse and an affirmative written election by the Fishery Agencies and Tribes to rely until 1995 solely on spill purchased under Section for fish passage protection at the other powerhouse.

b. An adult mortality study will be conducted during the implementation of the phase I hatchery production period described in subsection E.2 for the purpose of determining the adult losses at the Rock Island Project. The specified study plan must be agreed upon by all the Parties, but in general terms the Parties anticipate that losses of adult salmon and steelhead will be measured by trapping and tagging fish with passive integrated transponder tags, releasing one group above Rock Island Dam, another below the dam, and comparing the ratio of the two groups for fish passing Rocky Reach Dam and for fish entering the Wenatchee River. The study will be designed to assure a sufficient number of replicates for reliable results. The adult losses so determined shall be converted to establish the required juvenile hatchery production necessary to compensate for such adult losses based on the latest available juvenile-to-adult survival rates by species agreed upon by all Parties, and any necessary adjustment in hatchery production will be made.

c. The hatchery production level shall be adjusted, if requested by the Fishery Agencies and Tribes, when the juvenile run size increases to at least 110% of the run size used in the initial Phase II adjustments based on a rolling five (5) year average; Provided, such adjustment shall not be made any earlier than six (6) years after the Phase II adjustment specified in subsection E.7b above. This adjustment is intended to account for increased project-related losses associated with greater numbers of fish passing the Rock Island Project and shall be implemented in accordance with the production plan referred to in subsection E.2. Chelan shall have a period of two (2) years to construct sufficient facilities for the required production adjustment in subsections E.7b or E.7c. Chelan shall conduct an annual juvenile passage monitoring program jointly developed by the Parties. The monitoring program shall be sufficient to develop the data base necessary to compute the rolling five (5) average referred to in this subsection E.7c.

8. Hatchery Contracting Opportunities.

The Parties recognize that the Fishery Agencies and Tribes have a particular interest in the development, implementation, monitoring and evaluation of the program under this Section E. To that end the Parties agree:

a. Chelan shall give equal consideration to any Fishery Agency or Tribe in the selection of contractors to perform biological studies under this Section E and

b. Chelan shall utilize its best efforts to assure that the Tribes are able to participate in the contracting opportunities that may become available under the Section E.

6. Stocking Programs

(See also Section 5. Hatcheries above.)

Missouri/Madison Project Recommended Terms and Conditions, May 1995 Project No. 2188 (Montana)

p. 4.3

II. FISHERIES RESOURCES

The mitigative measures discussed under erosion control and water quantity and quality also protect fish populations in the project area from many of the potential adverse impacts of building and operating hydropower facilities. If additional actions, as listed in the following, are required, MPC will be responsible to accomplish those actions:

A. Protect fish against injury or mortality resulting from impingement and entrainment:

(1) Mitigating for fish losses from Hauser and Holter reservoirs due to spill flows, entrainment, and impingement at Hauser and Holter dams. MPC will commit annual funds to assist MDFWP in a fish stocking program and investigate measures to enhance retention of fish in both reservoirs.

Cost: \$35,500 annually for losses of hatchery rainbow trout and other game fish from Hauser and Holter reservoirs.

Wilderness Shores Settlement Agreement, July 29, 1996 Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

Appendix 4, p. 5

2. Plant And Animal Community Maintenance and Restoration
SEEPAGE LAKES, RIVERS, AND CREEKS
- Continue stocking brook trout in Sand Lake.

7. Damage Assessments

Ludington Pumped Storage Project Settlement Agreement, February 27, 1995 Project No. 2680 (Michigan)

APPENDIX A

Fish Damage Calculations

This appendix summarizes the base case for fish damages per unit of pumping at the Ludington Pumped Storage Plant (LPSP) adopted by the parties for purposes of settlement. The parties recognize that each of the estimates herein as well as ultimate fish damages per unit of pumping are subject to change based upon convincing scientific evidence as interpreted by the Scientific Advisory team in accordance with Section II of the State Agreement to which this is an appendix.

For purposes of this base case, the parties have agreed to use the fish mortality estimates for 1979-1980 provided by Liston, et al., under contract to Consumers Power Company, modified by the assumption that larval fish mortalities are 5% of entrainment, the fish mortality damage estimates claimed by the State of Michigan in its filings concerning the LPSP, and the barrier net effectiveness estimates for 1992 prepared by Barnes and Williams Environmental Consulting Company under contract to Consumers Power Company.

The base case assumes that fish mortalities at the LPSP are proportional to the volume of water pumped into the plant, which is proportional to the power used in pumping. It is also assumed that plant operations will be scheduled in light of the fish mortalities and damages which will result from plant operations and that payment for fish mortalities will be based on actual pumping activity in future plant operations. Thus a principal objective of the analysis presented in this appendix is to represent the damage estimates adopted for purposes of settlement as fish damage per megawatt hour (MWH) used in pumping Lake Michigan water into the LPSP.

In determining the damages to be paid for purposes of settlement, the base case accounts for the effectiveness of the fish barrier nets currently in use at the LPSP. These nets are assumed to be largely ineffective on fish which are less than five (5) inches long and hence are too slender to be blocked by the net mesh. The effectiveness of the net for fish greater than five inches long is greatest for those species, generally considered game fish or commercial fish, which grow much larger than five inches while effectiveness of the net is somewhat lower for those species, generally considered as forage species for game fish, which are only modestly larger than five inches as adults. Thus, for purposes of this analysis, the base case classifies fish killed by the LPSP, as "game fish", "large forage", and "larvae/small forage." These conceptual classes of fish correspond to the categories presented in the reports of Liston, et al., based respectively on their sampling with a "sieve net" and Kodiak trawl located above the plant penstocks during sampling, Kodiak trawls fished between the LPSP jetties during pumping and ichthyoplankton nets fished between the plant jetties.

Fish mortality varies with fish abundance in the LPSP area. Fish abundance varies seasonally according to the habits and life cycles of the various fish species as well as over shorter periods in response to weather effects on Lake Michigan. Currently available data will only support seasonal distribution of fish mortalities with monthly resolution.

Thus, this appendix presents monthly estimates of game fish, large forage, and larvae/small forage mortality damages per unit of power used in pumping. It further adjusts these estimates based on current estimates of effectiveness of the fish barrier nets used at the LPSP.

Aggregate Fish Mortalities

Based on the reports of Liston, et al., the base case assumes annual fish mortalities of 67,376 adult game fish; 560,585 kilograms of large forage fish; and 909,825 kilograms (1,479,825 kilograms before adjustment to 50% larval mortality rate on passage through the plant) of small forage fish and equivalent adults for mortalities of larval fish.

Aggregate Fish Mortality Damages

The base case assumes damages based on the Liston mortality estimates and the State's methodology (1) as follows:

(1) It is the State's position that, using the Liston mortality estimates and applying appropriate values based upon mortality of specific species and life stages, the value of the fish loss is estimated at approximately \$5.9 million per year in 1988 dollars. Modification of the larval mortality estimate for purposes of this settlement reduces this amount to just over \$5.0 million. This is composed of \$145,083 replacement costs for lake sturgeon based on the assumption that replacement costs are less than the existence values for this threatened species, \$5,307 in lost

profits for commercial harvest of lake whitefish, round whitefish, and bloaters; \$127,713 in stocking costs for the small game fish killed at the LPSP; \$4,843,179 in recreational fishing value for large game fish killed at the LPSP and for the large game fish which could have been produced through use of the forage fish killed at the LPSP; less additional stocking costs of \$101,418 which the State would have incurred in utilizing the forage fish killed by the plant. Although the State estimated the combined recreational fishing value of game fish killed and game fish which would be supported by the forage killed, approximately 40% of the recreational fishing value estimated by the State is attributable to the direct mortalities of large game fish. The State's valuation methodology has not been accepted by the licensees.

Fish Category

Game Fish

- *Sturgeon
- *Commercial fishing
- *Recreational value of game fish killed

Large Forage Fish

- *Recreational fishing value of game fish supported by large forage fish killed
- *Stocking costs for juvenile game fish killed
- *Stocking costs for game fish supported by large forage fish Larval/Small forage fish
- *Recreational fishing value of game fish supported by larval/small forage fish
- *Stocking costs for game fish supported by larval/small forage fish killed

TOTAL

Damages in 1988\$ Damages in 1994 \$ (. .)

Seasonal Fish Loss Distribution

Based on the fish mortality estimates of Liston, et al., the base case approximates the seasonal distribution of fish mortalities as follows, where the percentages are proportions of the annual totals (column totals):

<u>Month</u>	<u>Game Fish</u>	<u>Large Forage</u>	<u>Larval/Small Forage</u>
January	5.6%	0.0%	0.0%
February	2.1%	0.0%	0.0%
March	3.4%	0.0%	0.0%
April	2.0%	0.5%	0.5%
May	6.5%	0.5%	0.8%

Seasonal Pumping in Study Period

The base case assumes the following use of power for pumping at LPSP during the period of the Liston, et al., studies from which mortality estimates were taken:

<u>Month</u>	<u>Pumping (MWH) April 79 - March 80</u>
January	256,496
February	194,335

Fish Damages per Pumping MWH without Barrier Net

Based on the annual fish damages in 1994 dollars shown above, the seasonal distribution of fish mortalities shown above, and the pumping data presented above, the base case estimates fish damages per megawatt hour used in pumping at LPSP as follows in the absence of the barrier net or other fish protection measures:

<u>Month</u>	<u>Game Fish Damage/MWH</u>	<u>Large Forage Damage/MWH</u>	<u>Larval/Small Forage Damage/MWH</u>	<u>Total Damage/ MWH</u>
January	\$0.628	\$0.000 \$0.000	\$0.628	
February	\$0.316	\$0.000 \$0.000	\$0.316	

Fish Damages -per Pumping MWH with the Barrier Net

Estimates of barrier net effectiveness estimated by Barnes and Williams for 1992 average approximately 85 percent for those fish classified as game fish and approximately 80 percent for those classified as large forage fish. Based on the fish damages per megawatt hour of pumping without the barrier net in operation estimated above and these estimates of net effectiveness, the base case calculates fish damages per megawatt hour used in pumping at LPSP as follows if the net were in operation in each month, twelve months a year:

<u>Month</u>	<u>Game Fish Damage/MWH</u>	<u>Large Forage Damage/MWH</u>	<u>Larval/Small Forage Damage/MWH</u>	<u>Total damage/ MWH</u>
January	\$0.094	\$0.000 \$0.000	0.094	
February			\$0.047	\$0.000 \$0.

(...)

The total fish damage per megawatt hour given in the righthand columns of the tables above are the basis for calculating damage payments as specified in this State Agreement, with the table above applied when the barrier nets are operational and the preceding table applied when the barrier nets are not installed and operational.

Base Fish Damages Projection for 1996-2000 in 1994 Levelized Dollars

The fish damage per megawatt hour calculated above has been applied by Consumers Power Company using their scheduling (dispatch) model for the LPSP, with resulting plant operations and fish damage payments as displayed in the following table, where "Unadjusted" refers to plant schedules projected without consideration of fish damage payments and "Adjusted" refers to plant schedules projected in light of consequent fish damage payments:

<u>Month</u>	<u>Pumping GWH (Unadjusted)</u>	<u>Fish Damages Pumping GWH (Unadjusted)</u>	<u>Pumping GWH (Adjusted)</u>	<u>Fish Damages (Adjusted)</u>
January	229	\$143,874	200	\$118,000
February	236	\$74,485	228	\$68,000

The total fish damages using the adjusted plant above is the Base Fish Damages Projection for 1995 this State Agreement.

The total fish damages using the adjusted plant schedule shown above is the Base Fish Damages Projection for 1995 referred to in this State Agreement.

FERC Offer of Settlement, p. 2-3

A. ABATEMENT OF FISH MORTALITY

The principal and foremost objective of this FERC Agreement and the State Agreement (collectively, the "Settlement") is the abatement of fish mortality resulting from the operation of the LPSP. The Settlement assures that currently identified measures to abate fish mortality continue to be properly implemented and maintained. The Settlement mandates a program to monitor, assess, optimize, and improve the fish mortality abatement potential of any technology or operational modification employed to mitigate mortality under appropriate oversight. The Settlement provides incentives to the parties to continue to identify new technologies or operational changes to further reduce mortality during all months of the year. The Settlement requires the evaluation of fish abatement technology, including advances in barrier technology and the evaluation of technologies for the real time monitoring of fish populations, by the Scientific Advisory Team described in Part III hereto. changes in project operations and/or structures which result from the FERC Agreement may be subject to review and approval by the Federal Energy Regulatory Commission ("FERC"), or its successor agency, as appropriate.

Courts and Non-FERC Agencies Settlement Agreement, Appendix, p. 2

In determining the damages to be paid for purposes of settlement, the base case accounts for the effectiveness of the fish barrier nets currently in use at the LPSP. These nets are assumed to be largely ineffective on fish which are less than five (5) inches long and hence are too slender to be blocked by the net mesh. The effectiveness of the net for fish greater than five inches long is greatest for those species, generally considered game fish or commercial fish, which grow much larger than five inches while effectiveness of the net is somewhat lower for those species, generally considered as forage species for game fish, which are only modestly larger than five inches as adults. Thus, for purposes of this analysis, the base case classifies fish killed by the LPSP, as "game fish", "large forage", and "larvae/small forage." These conceptual classes of fish correspond to the categories presented in the reports of Liston, et al., based respectively on their sampling with a "sieve net" and Kodiak trawl located above the plant penstocks during sampling, Kodiak trawls fished between the LPSP jetties during pumping and ichthyoplankton nets fished between the plant jetties.

8. Studies and Monitoring

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 7

After three full years of the above referenced minimum flows being provided, NYSDEC will conduct a investigation on resident brook trout. If the investigation reveals the need to supplement the existing brook trout population, then NYSDEC will commence a four year program of transplanting native brook trout from local heritage streams to enhance prospects for a sustainable brook trout fishery. Niagara Mohawk will provide two fisheries biologists for three days in each year of the transplant program and equipment n for safe transport of fish during this effort.

p. 8

A route for downstream fish passage for the Effley Development will be provided through the new gate structure. This structure will be a gated orifice through the dam, approximately 2 SF in area, with its invert located approximately 5.0 feet below normal maximum headwater elevation without flashboards. It will be designed to pass a nominal 20 cfs (ranging from 18 cfs to 22 cfs as controlled by pond level). Final details of the design, including final location and the potential need for fish protection and conveyance measures (e.g., plunge pools, piping, etc.), if any, and installation will be undertaken by Niagara Mohawk based on 1995 field inspections and professional judgment of the USFWS and NYSDEC within 2 years of FERC license acceptance.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 4

I. Fisheries management

No effectiveness studies of fish exclusion, protection or movement will be required as part of this Settlement. - However ', should the understanding of fish movements, fish-passage technology, fishery management goals, or other needs change during the term of the licenses, the USFWS reserves the authority of the Department of Interior to prescribe fishways as may be deemed necessary in the future.

**Consumers Power Company Settlement, November 11, 1992
Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)**

p. 11

5.5 If a fish protection measure(s) is implemented at any project, the annual contribution specified in Paragraph 5.3 for such project shall be reduced based upon the effectiveness of the fish protection. The effectiveness of the fish protection will be determined by comparing the results of the preapplication fish entrainment and mortality studies with a single, one-year study of similar scope performed after the fish protection measures are installed. CPCO shall provide all study plans, study results and recommended contribution changes to the resource agencies as provided for in Section 13. If CPCO subsequently modifies the fish protection, CPCO may conduct an additional study(ies) to reestablish the amount of future contributions.

p. 13

6.3 CPCO shall develop and implement, in consultation with the resource agencies, a water quality, fish contaminant and sediment quality monitoring program as outlined in Appendix C. **Appendix C, p. 77**

**APPENDIX C
WATER QUALITY, SEDIMENT QUALITY AND FISH CONTAMINANT
MONITORING PROGRAM**

C. Fish Contaminants

1. A fish contaminant monitoring program, similar in scope to the pre-application fish contaminant study, shall be conducted at five year intervals, on a schedule to be determined by the parties, for no more than five times during the license period.

2. Prior to conducting each monitoring effort, CPCo shall develop a study plan, for resource agencies review and concurrence, that includes the species, sizes and locations to be sampled.

3. For the purposes of water quality monitoring, the study plan shall include ten walleye from each of the following locations: 1) Manistee River - Hodenpyl Reservoir and Below Croton Dam. The walleye shall be in the 20-22 inch size range, unless another size is approved by the resource agencies. Other species and sampling locations shall be selected in consultation with the resource agencies. These fish shall be analyzed as whole fish using the MDNR standard analysis list as follows with other parameters determined in consultation with the resource agencies:

<u>Standard Analyses</u>	<u>Analytical Detection Level</u>
Hexachlorobenzene	0.001 mg/kg
gamma-BHC (Lindane)	0.005 mg/kg
Aldrin	0.005 mg/kg
Dieldrin	0.005 mg/kg
4,4'-DDE	0.003 mg/kg
4,4'-DDD	0.005 mg/kg
4,4'-DDT	0.005 mg/kg
Heptachlor epoxide	0.003 mg/kg
...	

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. 9-11

F. NEP has provided plans for downstream fish passage facilities at Station Nos. 2, 3, and 4. NEP agrees to install these facilities in accordance with these plans (Plan nos. H-64758-P, H64757-P, H64755-P) as modified by the comments of the USFWS and said facilities shall be operational within 2 construction seasons of issuance of a New License. Prior to operation, NEP will provide a plan for evaluating the effectiveness of these facilities for review and comment by the USFWS and MDFW and approval by FERC.

NEP agrees to provide upstream passage at Station No. 2 for adult Atlantic salmon returning to the Deerfield River. Upstream passage will be implemented via a phased approach, determined by the number of adult Atlantic salmon returning to the Deerfield River. Adult Atlantic salmon will be radio-tagged and released at the Holyoke Dam Fishway and monitored at stations along the Deerfield River, in accordance with a plan to be developed by NEP and approved by the Connecticut River Atlantic Salmon Commission (CRASC) technical committee.

Radio tagging will begin in the first migration season after issuance of the new license and continue annually until either: 1) at least 12 adult Atlantic Salmon have been verified in the Deerfield River below Station No. 2 for two consecutive years and during those years an interim fish trapping system has successfully captured Atlantic salmon in the Deerfield River in a timely fashion with as little stress to the salmon as possible and with survival rates as good as those fish captured at the Holyoke fish lift; 2) at least 4 adult Atlantic Salmon have been verified in the Deerfield River below Station No.2 for two consecutive years and no interim trapping system was available or successful in recapturing fish during the monitoring period; or 3) CRASC determines that radio-tagging is no longer acceptable. Upon reaching the number of returning adult salmon under the conditions specified in 1 or 2 above, NEP will install a permanent upstream trap facility within two construction seasons in accordance with plans provided (Plan No. H-64756-P) as

modified by comments of the USFWS, or implement an alternative system mutually agreed to by NEP, USFWS and MDFW.

Radio-tagging may also be discontinued if a ratio of salmon returning to the Deerfield River to all salmon released from Holyoke is mutually agreed to by NEP, MDFW and USFWS. If such a ratio is agreed to, it will be used to calculate the number of adult salmon returning to the Deerfield River for the purposes of determining if the numbers specified in 1 or 2 above have been achieved.

The Parties agree to support a license article providing for the retention of USFWS authority to prescribe upstream fish passage construction, as described in plans (Plan No. H-64756-P) as modified by comments of the USFWS, or some alternate upstream passage system agreed to by NEP, MDFW and USFWS, in the event that the radio-tagging is discontinued and no ratio of Holyoke released fish to Deerfield River fish has been agreed to.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

Explanatory Statement, p. 1-3

On July 30, 1969, the Federal Power Commission issued a hydro license for the unconstructed Ludington Pumped Storage Project ("LPSP"). Article 37 of the license required the Licensees to perform studies and file reports on "the effects of the project and its operation on the fishery resources of the project areas, including an evaluation of the need to provide public fishing access to the jetties" and to "make such modifications in project facilities and operations as may be required under Article 16 herein.

In August of 1986, Licensees filed a mitigation plan pursuant to Articles 16 and 37. The Commission required further study reports and plans to be filed. 40 FERC 1 62,151 (1987). On September 30, 1988, the Commission required the installation of temporary fish barrier nets to reduce turbine entrainment and mortality. 44 FERC 1 62,324. Such nets have been installed annually, approximately mid-April to mid-October, since 1989. A final resolution of the fish mortality situation has not been made by the Commission. In addition, litigation related to the fish mortality situation has been going on before other agencies and before Michigan courts.

...

(2) Section II presents several means to reduce future fish mortality at the LPSP. Those measures include the continued annual installation of the seasonal barrier net system that has been in use since 1989. ongoing maintenance, performance and reporting standards are established for the net. Other measures are: the continued review of future abatement technologies, investigation of real time fish population monitoring and the possible development of a lake/weather model to predict changes in local fish population. The real time monitoring and lake/weather model could give the Licensees additional information that would allow them to more accurately reflect current fish losses in their decisions regarding dispatch of the LPSP.

(3) Section III establishes and describes the operations of a Scientific Advisory Team ("Team") relevant to the FERC Agreement. The duties of the Team would include those that it would take over from the Ludington Advisory Committee which reviews matters relating to the current barrier net. The Team would generally review and oversee the implementation of the measures discussed in Section II. Section III also addresses funding for and FERC involvement with the Team's activities.

Missouri/Madison Project Recommended Terms and Conditions, May 1995

Project No. 2188 (Montana)

p. 1.15

D. Monitor fish populations that could be affected by project operation. In accordance with adaptive management principles, a fisheries biologist will be funded (as needed) over the license term to implement and monitor proposed Hebgen Development PM&E activities as determined by the Madison River Fisheries TAC, which is composed of state and federal agency personnel responsible for resources within the project area.

Activities of the Madison River fisheries biologist should include, but are not limited to: 1) evaluating the potential for grayling reintroductions; 2) studying the effects of the proposed reservoir drawdown regime on macrophytes and reservoir fishes; 3) enhancing tributary spawning; 4) protecting and enhancing riparian habitat; 5) studying macrophyte/fish interactions; 6) studying fish population dynamics; 7) studying fish life history; 8) evaluating the effects of system flow releases on riverine fish populations; 9) evaluating flushing flow effects in the system on fish communities; 10) studying the effects of reservoir drawdowns on primary and secondary productivity; and 11) coordinating data and activities with MPC, the resource agencies, and the public; 12) spawning gravel supplementation and evaluation; and, 13) additional fish out-migration trapping and standing surveys during bypass reach upramping and downramping periods. As part of each evaluation, recommendations will be made for PM&E measures.

Cost: \$40,000 per year for 1.0 FTE fisheries biologist and \$30,000 per year for 1.0 FTE fisheries field technician for the Madison River System (Hebgen Reservoir to Three Forks). Operation and maintenance expenses will be funded at \$20,000 per year for the fisheries biologist and \$15,000 for the fisheries technician. One-time fisheries equipment and materials will be funded at \$25,000.

p. 1.16-1.17

1. Monitor the Effectiveness of Project Facilities to Protect Fisheries Resources

To ensure that fish resources are protected, we recommend the following article, requiring MPC to develop and implement an appropriate monitoring plan.

MPC shall file every three years for approval a Fisheries Monitoring Plan for the Madison River from Hebgen Reservoir to Three Forks. The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to fisheries resources.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring, such as fish populations, streambed morphology, aquatic insect populations, etc; and
- c. analysis and interpretation of monitoring results.

The monitoring program shall include a schedule for:

- a. implementation of the program,
- b. reporting and consultation with the Madison River Fisheries Technical Advisory Committee (TAC) concerning the annual results from the program, and
- c. filing the results, agency comments, and Licensee's response to agency comments with the FERC.

The program shall be approved by the Madison River Fisheries TAC prior to filing with the FERC.

MPC shall prepare a fisheries habitat protection plan, after consultation with the appropriate agencies. The plan should include: proposals to implement appropriate PM&E

measures; schedules for start-up and completion of proposed measures; and estimated costs for proposed measures. MPC shall include documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the commission. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

p. 2.4

D. Monitor fish populations that could be affected by project operation. In accordance with adaptive management principles, a fisheries biologist will be funded (as needed) over the license term to implement and monitor proposed Madison Development PM&E activities as determined by the Madison River Fisheries TAC, which is composed of state and federal agency personnel responsible for resources within the project area.

Activities of the fisheries biologist should include, but are not limited to : 1) monitoring rainbow and brown trout, grayling, and other game fish population dynamics to evaluate the effects of river and reservoir operations on the life stages of these fishes; 2) evaluating aquatic habitat enhancement in the Madison River; 3) monitoring the effects of flushing flows in protecting and enhancing spawning habitat for fishes; 4) evaluating Madison River tributary stream flows for fish spawning and fish reintroduction potential and to facilitate various protection and enhancement measures; 5) continue studying macrophyte and- fish interactions in Madison Reservoir; 6) monitoring fish species of special concern within the Madison River System; 7) protecting and enhancing riparian habitat; 8) securing federal and private matching funds for fisheries protection and enhancement; 9) evaluating the effect of reservoir drawdowns on primary and secondary productivity in the reservoir; 10) evaluating the effects of ice erosion of reservoir shoreline habitats; 11) coordinating data and PM&E activities with the resource agencies and the public; 12) monitoring of salmonid species specific habitat usage and preference in the bypass reach; 13) analysis of invertebrate drift and fish populations relative to bypass reach flows; 14) spawning gravel supplementation and evaluation in bypass reach; and, 15) additional fish out-migration trapping and stranding surveys during bypass reach upramping and downramping periods.

Cost: \$40,000 per year for 1.0 FTE fisheries biologist and \$30,000 per year for 1.0 FTE fisheries field technician for the Madison River System (Hebgen Reservoir to Three Forks); Operation and maintenance expenses will be funded at \$20,000 per year for the fisheries biologist and \$15,000 for the fisheries technician. One-time fisheries equipment and materials will be funded at \$25,000.

p. 2.7-2.8

1. Monitor the Effectiveness of Project Facilities to Protect Fisheries Resources

To ensure that fish resources are protected, we recommend the following article, requiring MPC to develop and implement an appropriate monitoring plan.

MPC shall file every three years for approval a Fisheries Monitoring Plan for the Madison River from Hebgen Reservoir to Three Forks. The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to fisheries resources.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring, such as fish populations, streambed morphology, aquatic insect populations, etc.; and

c. analysis and interpretation of monitoring results.

The monitoring program shall include a schedule for:

A. implementation of the program,

B. reporting and consultation with the Madison River Fisheries Technical Advisory Committee (TAC) concerning the annual results from the program, and

C. filing the results, agency comments, and Licensee's response to agency comments with the FERC.

The program shall be approved by the Madison River Fisheries TAC prior to filing with the FERC.

MPC shall prepare the plan after consultation with the appropriate agencies and interested entities. MPC shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the commission. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

p. 3.3-3.4

D. In accordance with adaptive management principles, a fisheries biologist may be funded over the license term to implement and monitor proposed Holter Development PM&E activities as determined by the Hauser-Holter Fisheries TAC. Activities of the fisheries biologist may include, but are not limited to: 1) evaluating flushing flow effects on riparian habitat and fish communities; 2) evaluating the effect of drawdowns or ice on shoreline erosion with respect to impacts on fish spawning and habitat; 3) periodically evaluating flow, flushing losses, fish movement and spawning, fish population dynamics, and gas bubble trauma; 4) initiating and evaluating potential types of artificial habitat enhancement; 5) coordinating hatchery augmentation in the reservoir, including evaluation of strains of game fish, numbers and size of hatchery fish, and determination of timing of fish stocking; 6) evaluating the impacts of normal dam maintenance drawdowns and emergency plant shutdowns on the aquatic ecosystem; 7) enhancing spawning habitat in tributaries entering Hauser Reservoir; 8) monitoring sensitive fish and species of special concern within Hauser Reservoir; 9) protecting and enhancing riparian habitat; 10) protecting and enhancing the fisheries in Lake Helena including introduction of hatchery fish, control of rough fish, and aquatic habitat enhancements; 11) securing federal and private matching funds for fisheries protection and enhancement; 12) studying kokanee shoreline spawning; and 13) coordinating data and PM&E activities with the resource agencies, and the public. As part of each evaluation, recommendations will be made for PM&E measures.

Cost: \$40,000 per year for 1.0 FTE fisheries biologist and \$30,000 per year for 1.0 FTE fisheries field technician for Hauser-Holter reservoirs (Hauser Reservoir to Holter Dam).

Operation and maintenance expenses will be funded at \$20,000 per year for the fisheries biologist and \$15,000 for the fisheries technician. One-time fisheries equipment and materials will be funded at \$25,000.

p. 3.5-3.6

G. Flow Windows

MPC has proposed to "endeavor" to operate the flow regime of the Hauser plant with the targets and caveats described in Typical Operations (a) and (b) above. MPC shall prepare an annual flow window excursion report to FERC with agency comments included. MPC will, upon receipt of the license, develop a plan to study the effects of flow window excursions on fisheries

resources, and in consultation with agencies make appropriate revisions in the flow windows at each of the three affected developments (Hauser, Holter, and Morony).

1. Monitor the Effectiveness of Project Facilities to Protect Fisheries Resources

To ensure that fish resources are protected, we recommend the following article, requiring MPC to develop and implement an appropriate monitoring plan.

MPC shall file every three years for approval a Fisheries Monitoring Plan for the Missouri River in the Holter and Hauser Reservoirs. The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to fisheries resources.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring, such as fish populations, streambed morphology, aquatic insect populations, etc.; and
- c. analysis and interpretation of monitoring results.

The monitoring program shall include a schedule for:

- a. implementation of the program,
- b. reporting and consultation with the Hauser-Holter Fisheries Technical Advisory Committee (TAC) concerning the annual results from the program, and
- c. filing the results, agency comments, and Licensee's response to agency comments with the FERC.

The program shall be approved by the Hauser-Holter Fisheries TAC prior to filing with the FERC.

MPC shall prepare the plan after consultation with the appropriate agencies and interested entities. MPC shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the commission. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

p. 9.9

3. Missouri Fisheries PM&E Fund

MPC will establish funding for the recovery of threatened and endangered (T&E) fish species and other aquatic species of special concern that may be impacted by the operation of the Great Falls developments. Funds will be used to conduct life-history studies and recovery of the pallid sturgeon, sturgeon chub, sickle-fin chub, blue sucker, western silvery minnow, plains minnow, Flathead chub, and paddlefish in the Missouri River between Morony Dam and Fort Peck Reservoir. This may include, but not be limited to: 1) purchasing hatchery space for rearing pallid sturgeon; 2) purchasing net and tagging supplies, radio telemetry equipment, boats, and other hardware; 3) conducting life-history research, including DNA/RNA/physical behavior studies; and 4) funding a part-time salary and expenses for a fisheries technician or biologist. Specific use of funds will be determined by the Missouri River Fisheries Technical Advisory Committee.

Cost: \$35,000 per year.

Rock Island Settlement Agreement, March 1987

Project No. 943 (Washington)

p. 25-26

11. Study Methodologies and Criteria.

For purposes of Subsections B.2 and B.3 the Parties agree on the following methodologies and study criteria:

- a. All studies will be conducted following accepted techniques and methodologies in use for similar studies at mainstem Columbia Basin dams. All studies be based on sound statistical design and analysis.
- b. Fish guidance efficiency tests will be conducted using hydroacoustic and direct capture methods, and will include assessment of injury and stress.
- c. All study designs and modifications to study designs will be subject to agreement by all parties.
- d. Hydraulic models for both powerhouses will remain available through 1997 for bypass development studies requested by the Fisheries Agencies and the Tribes and or Chelan, unless the Parties agree otherwise.

p. 47-48

G. Rock Island Coordinating Committee.

1. Establishment of the committee.

There shall be a Rock Island Coordinating Committee (the "Committee") composed of one technical representative of each party. The committee shall meet whenever requested by any two Parties following a minimum of ten days written notice (unless waived), or pursuant to subsection a.6, and shall act only by consensus of all Parties. Any Fishery Agency or Tribe may, at any time, elect by written notice not to participate in the Committee.

2. Use of Committee.

The Committee will be used as the primary means of consultation and coordination between Chelan and the Fisheries Agencies and Tribes in connection with the conduct of studies and implementation of the measures set forth in this Agreement and for dispute resolution pursuant to subsection A. 6. The U.S. Fish and Wildlife Service may participate in meetings of the Committee in order to consult and coordinate with the Committee on anadromous fish issues of concern to the Service.

3. Studies and Reports.

All studies and reports prepared under this Agreement will be available to all Parties as soon as reasonably possible. Draft reports will be through the Committee representatives for comment, and comments will either be addressed in order or made an appendix to the final report.

p. 51

H. Fishery Agencies' and Tribe's Responsibilities.

9. Cooperation in Studies.

The Fishery Agencies and The Tribes shall cooperate with Chelan in conducting studies and shall provide assistance in obtaining any approvals or permits which may be required for implementation of this Agreement.

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 4

E. Temperature Monitoring

The signators agree that: Niagara Mohawk will establish, operate and maintain a temperature monitor at the Lighthouse Hill Reservoir for NYSDEC's use in managing the fishery

resources downstream of Lighthouse Hill. Niagara Mohawk will investigate the feasibility of Niagara Mohawk installing another temperature monitor at the gaging station in Pineville, New York. Likewise, the NYSDEC has indicated that they would establish and operate a temperature monitor in the Salmon River at the Great Lakes Fish Hatchery. Niagara Mohawk will collect and compile temperature data from all temperature monitors.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 6-7

1. General Intent

The Fisheries Settlement Agreement between the City and various Parties is intended to resolve all issues related to the effects on fisheries resources of the Project, as currently constructed, for the period of May 12, 1981 (FERC approval date of the Interim Agreement), through the duration of the Settlement Agreement. It consists of the Anadromous Fish Flow Plan (Flow Plan), and the Anadromous and Resident Fish Non-Flow Plan (Non-Flow Plan). For each plan, coordinating committees are established to provide general oversight and direction concerning plan implementation. In addition, the City agrees to establish a new environmental staff position dedicated primarily to this purpose.

Specific sections of the Flow Plan include: . . . (6) provisions for field monitoring to determine the accuracy of various models, and to determine alternative spawning and fry protection periods; and (7) compliance requirements that include flow monitoring and recording, and the preparation by the City of semi-annual compliance reports.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 4-5

The principal terms of the 1994 settlement agreement are as follows:

1. Carolina Power will continue its dioxin sampling program in Waterville Lake until the State of North Carolina rescinds its fish advisory. If the upstream paper company (the source of the dioxin in the reservoir's sediments) terminates its sampling program, Carolina Power will expand its sampling program as described in the Settlement Agreement. The license will reserve to the Commission the right to require Carolina Power to take other actions in the future if the Commission determines such actions to be necessary and in the public interest, and will reserve to Carolina Power the right to seek relief from the requirement to expand its sampling program.

p. 6-7

North Carolina and Tennessee have issued consumption advisories for dioxin contaminated fish for Waterville Lake and the Pigeon River below the powerhouse, respectively. The source of the dioxin contamination is a paper mill located on the Pigeon River upstream of the Walters Hydroelectric Project. Although the paper mill has reduced dioxin in its discharge by 95 percent, dioxin is present in measurable concentrations throughout the reservoir. The dioxin contamination poses two areas of concern in the operation of the Walters Hydroelectric Project: (1) isolating dioxin-contaminated sediments from aquatic biota and (2) monitoring dioxin levels in fish living in Waterville Lake and the Pigeon River.

The EA examined dredging, artificial capping, and natural capping as methods of isolating sediment dioxin. The EA found that dredging is not a feasible solution. The volume of

contaminated sediment is too great to remove, dewater, and dispose of, and removing the more erodible surface layer would only expose layers of sediment which have higher levels of dioxin. 14/ Natural capping, proposed by Carolina Power, would allow the existing contaminated sediments to be gradually covered by 'cleaner' sediments through the natural sedimentation process. The EA found that the natural capping process could eventually isolate the sediment dioxin but that the process could take an extended length of time and might not be permanent because the sediments would be subject to the scour action of floods. Artificial capping would entail placing 'clean' material over the contaminated sediment. The staff recommended in the EA that artificial capping of the sediments in the upper reaches of Waterville Lake should be required if dioxin concentrations do not fall to acceptable levels (state consumption advisories have not been removed) within a brief time. The 1991 estimate of the cost of the artificial capping was \$15 million.

In the settlement agreement, the parties have adopted the recommendation made by the staff in the EA, with modifications. The settlement agreement provides that Carolina Power will monitor concentrations of dioxin and furans in edible fillets from predatory and bottom-feeding fishes in the project reservoir. The monitoring will continue until otherwise ordered by the Commission or until North Carolina rescinds its fish consumption advisory for the project reservoir, whichever occurs first. 15/ Carolina Power will also file with the Commission the dioxin monitoring reports on the project reservoir now being prepared each year by Champion International. If, in any year, Champion International does not conduct reservoir dioxin sampling, Carolina Power will conduct the sampling.

The settlement agreement also provides that, at the end of the fourth calendar year after the issuance of the new license for the Walters Hydroelectric Project, Carolina Power will file a report with the Commission recommending what further action, if any, should be taken to address dioxin contamination of sediments in the project reservoir. The agreement provides that, after notice and opportunity for hearing and after consultation with the state and federal agencies, and upon a finding that such action is necessary and in the public interest, the Commission may require Carolina Power to take appropriate action to address dioxin contamination of sediments in the project reservoir.

We conclude that monitoring fish tissue levels of dioxin would be useful in confirming the apparent trend of declining dioxin levels in fish from Waterville Lake and the Pigeon River. Monitoring data would be useful to state agencies for determining if and when state health advisories could be lifted. Furthermore, rescinding health advisories (if warranted) may obviate the need for more expensive remediation, efforts such as artificial encapsulation of lake sediments. However, if monitoring indicates that fish tissue levels have not dropped below state advisory limits, or are not declining at a sufficient rate, the Settlement agreement requires Carolina Power to reevaluate the dioxin issue at the end of four years. At that time the Commission could require Carolina Power to take a more active approach such as some form of encapsulation. Therefore, we are incorporating the provisions of the settlement agreement, stated above, into Article 409 of the new license for the Walters Hydroelectric Project.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 32

4.1.12 WE shall monitor water, sediment, and fish according to the provisions of Appendix 3. WE may send a written request to the Program Manager for the MDNR-MDEQ FERC

Coordination Unit, and Northeast Region Water Leader of the WDNR to change the monitoring frequency, chemical analyses, or target fish species listed in Appendix 3. Alternative monitoring frequencies, chemical analyses or target fish species may be implemented by WE upon written approval of the above individuals.

Appendix 3, p. 4-5

Fish Monitoring Requirements:

1. Resident walleye (20-22" size range) and white suckers (16-20") shall be monitored for selected chemical contaminants once every ten years of the FERC license at each project covered under this agreement. Monitoring shall start two years after the issuance of the FERC licenses. Other species and/or size ranges and sampling locations may be used with the approval of the FERC Program Manager of the FERC Coordination Unit and the Northeast Region Water Leader of the Waters Division of WDNR (for those projects which are border waters).
2. Prior to conducting each monitoring effort, WE shall develop a study plan, for review and the approval of the above individuals that includes the species, sizes and locations to be sampled.
3. Monitoring locations shall be: 1) Michigamme Reservoir; 2) Peavy Pond; 3) Michigamme Falls Impoundment; 4) Twin Falls Impoundment; 5) Kingsford Impoundment; and 6) Big Quinessec Falls Impoundment. If detectable concentrations of the contaminants listed below are found in any of the impoundments then the corresponding upstream river site shall be sampled, if requested after consultation with the FERC Program Manager of the FERC Coordination Unit and the Chief of the Waters Division of WDNR (for those projects which are border waters). The corresponding upstream river sites are as follows: 1) Michigamme River above Michigamme Reservoir; 2) Paint River above Lower Paint Impoundment; 3) Menominee River below Michigamme Reservoir then Hemlock Falls Impoundment shall be sampled, if requested after consultation with the FERC Program Manager of the FERC Coordination Unit.
4. Chemical analyzes of whole fish samples shall include:

<u>Standard Analyzes</u>	<u>Detection Level</u>
Dieldrin	0.005 mg/kg
4,4'-DDE	0.003 mg/kg

Additional parameters maybe included at any of the sites at the discretion of the FERC Program Manager of the FERC Coordination Unit and the Northeast Region Water Leader of WDNR (for those projects which are border waters) if there is reason to believe that the chemical is present at levels of concern.

p. 4.3

II. FISHERIES RESOURCES

The mitigative measures discussed under erosion control and water quantity and quality also protect fish populations in the project area from many of the potential adverse impacts of building and operating hydropower facilities. If additional actions, as listed in the following, are required, MPC will be responsible to accomplish those actions:

A. Protect fish against injury or mortality resulting from impingement and entrainment:

- (1) Mitigating for fish losses from Hauser and Holter reservoirs due to spill flows, entrainment, and impingement at Hauser and Holter dams. MPC will commit annual funds to assist MDFWP in a fish stocking program and investigate measures to enhance retention of fish in both reservoirs.

Cost: \$35,500 annually for losses of hatchery rainbow trout and other game fish from Hauser and Holter reservoirs.

B. STREAM FLOWS

1.A. Base Flows

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 1

A. Base Flows

The signators agree that: a continual base flow will be provided as described in the Water Budget Model submitted to the agencies on May 5, 1993 (Rule Curve 15), as modified as a result of meetings with river conservation groups on June 16, 1993 and August 9, 1993 (Rule Curve 16). The meeting minutes are attached.

Bennetts Bridge Development will remain as a seasonal store and release facility that operates in the peaking mode. Lighthouse Hill Development will operate as a store and release facility that operates in a daily re-regulating mode. Base flows below 450 cfs will be made through a new base flow unit that will be located in the spare bay of the Lighthouse Hill powerhouse as described in the Minimum Flow Unit, Phase II - Conceptual Study Report submitted to the resource agencies on May 5, 1993.

Rule Curve 16 will result in continual base flows downstream of the Great Lakes Fish Hatchery of 285 cfs January through April, 185 cfs May through August, and 335 cfs September through December, assuming 22 cfs of the required base flow - is to be provided on a year-round basis from the Great Lakes Fish Hatchery.

1.B. Minimum and Maximum Flows

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 5

B. Minimum Flows

A year-round minimum flow of 45 cfs will be provided in the bypassed reach via the existing minimum flow slide gate. As indicated in Item 3 of Attachment 2, the minimum now could be reduced down to as low as 30 cfs seasonally based on the results of two bypassed reach site inspections tentatively scheduled for July 1995 and in the winter of 1995/1996 and with the mutual agreement of NYSDEC and USFWS after consultation with the Beaver River Advisory Council and within 2 years of license acceptance. The seasonal minimum flow reduction would occur from October 1 to the end of spring runoff when uncontrolled spillage ceases or May 31, whichever comes first.

Instream flow releases from the existing gate structure will provide a downstream fish passage route. Minor channel modifications below the release gate will be undertaken by Niagara Mohawk based on 1995 field inspections and the professional judgment of USFWS and the NYSDEC within 2 years of FERC license acceptance.

p. 6

B. Minimum Flows

A year-round minimum flow of 35 cfs will be provided in the bypassed reach. Both existing slide gates located at the spillway will be used to release 15 cfs; 20 cfs will be provided through a diversion tunnel. The release device for the diversion tunnel remains to be designed.

p. 8

B. Minimum Flows

A year-round nominal flow of 20 cfs will be provided in the bypassed reach via a new gate structure located on the north side of the spillway.

p. 9

B. Minimum Flows

A year-round nominal flow of 20 cfs will be provided in the bypassed reach and will be provided through the existing needle beam structure located in the middle of the spillway, the release structure for which remains to be designed. Furthermore, it is agreed that the minimum flow may be reduced by USFWS after consultation with the Beaver River Advisory Council, to no less than 10 cfs within 1 year of license acceptance.

A downstream fish passage route for the Elmer Development will be provided through the new release structure. This structure will be approximately 2 SF in area, with its invert located approximately 5.0 feet below normal maximum headwater elevation without flashboards. It will be designed to pass a nominal 20 cfs (ranging from 18 cfs to 22 cfs as controlled by pond level). Final details of the design, in consideration of reduced flows to 10 cfs, including the potential need for fish protection need for fish protection and conveyance measures (e.g., plunge pools, piping, etc.), if any, and installation will be undertaken by Niagara Mohawk based on 1995 field inspections and professional judgement of the USFWS and NYSDEC within 2 years of license acceptance.

p. 10

B. Minimum Flows

A year-round minimum flow of 60 cfs will be provided in the bypassed reach via the existing minimum flow slide gate. It is further agreed that the minimum flow may be reduced to between 45 and 60 cfs based on the results of a bypassed reach site inspection tentatively scheduled for July 1995 and with the mutual agreement of NYSDEC and USFWS after consultation with the Beaver River Advisory Council and within 1 year of license acceptance.

p. 18

O. Effectiveness Studies

Effectiveness Studies will not be required for minimum flows, fish exclusion, protection or passage.

Attachment 2, p. 1

3. The base minimum flows at Moshier, Eagle, Elmer and Taylorville will be 45, 45, 20, and 60 cfs, respectively. If downward adjustments to any or all of these base minimum flows are made, Niagara Mohawk will supplement the Beaver River Fund annually by an amount equivalent to 50 percent of the annual hydropower generating value associated with the difference between the flows selected and the base minimum flows using the energy values prevailing in that year. For the purposes of this evaluation, the Public Service Commission (PSC) Service Classification No. 6 (SC6) for transmission Voltage, blended on peak/off peak "energy only" rates will be used for the value of energy.

D. Flows

1. The licensees will provide a continuous flow of not less than 1,000 cfs through the 6 developments, except when inflow is less than 1,000 cfs, outflow will be determined by and be equivalent to inflow.
2. There are some surges that are within and others that are beyond the control of licensees. For the purposes of this Settlement Offer, "surge" is defined as a sudden and perceptible, manmade raising or lowering of river flow and stage (where "sudden" is on the order of minutes).
3. For the purpose of establishing the duration of flows designated for walleye spawning season, walleye spawning season is defined as that period of the year commencing on March 15 and continuing until 30 days after the average daily water temperature of 50 degrees Fahrenheit is reached or exceeded on four consecutive days after April 15, unless modified by mutual agreement between NYSDEC and USFWS.

p. 6

B. Flow Release

A year-round flow of not less than 20 cfs will be released through the stoplog section located between the dam and trashracks to provide a downstream fish movement route.

p. 8

A. Bypassed Reach Flows

A year-round instream flow of not less than 120 cfs will be provided in the bypassed reach through a notched section of the dam.

p. 9

A. Bypassed Reach Flows

Instream flows of not less than 300 cfs will be provided in the bypassed reach during walleye spawning season through a combination of notched dam and low-level sluice-gate(s). Not less than 80 cfs will be provided through a notch in the dam during the balance of the year to provide for downstream fish movement. Reduction of flows at the end of walleye season will be in no more than 75 cfs increments at no less than four hour intervals, or as otherwise determined to be needed based on field inspections by licensee, NYSDEC and USFWS which will be conducted during the first year after release structures are installed.

p. 10

B. Bypassed Reach Flows

Year-round instream flows will be provided in both bypassed reaches as follows:

- 1) In the north channel, there will be a release of not less than 20 cfs through a notch in the dam in addition to the existing 12 cfs leakage; if leakage is reduced in the future, additional release modifications will be provided to maintain a flow of 32 cfs in the north channel.
- 2) In the south channel, current leakage of 137 cfs is sufficient; if leakage is reduced in the future, additional release modifications will be provided to maintain a flow of 137 cfs in the south channel.
- 3) The 20 cfs release through the notch in the dam in the north channel will provide for downstream fish movement.

p. 11

B. Bypassed Reach Flows

A year-round instream flow of not less than 14 cfs will be provided in the south channel bypassed reach through a pipe through the dam with a plunge pool downstream.

p. 10-11

In lieu of providing minimum releases of water from the project dam to the bypassed reach of the Pigeon River, the parties to the settlement agreement have agreed to establish the Pigeon River Fund. The settlement agreement provides that Carolina Power will make contributions to the Fund, which will be used to support projects and activities that provide direct benefits to surface water quality, fish and wildlife habitat, fishery management, and public access to a surface water body in or near the Pigeon River and French Broad River basins. Carolina Power will make an initial contribution of \$1 million to the Fund. Starting one year after it is obligated to make its initial contribution, Carolina Power will make annual payments into the Fund according to a graduated schedule. These payments will continue until the Commission orders a minimum flow to be released into the bypassed reach.

Although the Fund does not provide an immediate solution to the impacts associated with the dewatered bypass reach, it provides for immediate enhancements in the project area and creates a framework for addressing flows in the bypassed reach at some appropriate future date. The Fund provides compensation to the State of North Carolina for the loss of potential habitat for fish and other aquatic resources, aesthetics, and recreational resources. Establishment of the Fund will also avoid the negative effects associated with the Cataloochee Creek diversion option (i.e. construction of diversion structures, loss of stream habitat, etc.). 12/ Therefore, we are incorporating this provision of the settlement agreement as Article 414 of the license. We note however that this action does not affect the authority reserved to the Commission by standard Articles 12 and 15 to require Carolina Power, after notice and opportunity for hearing, to alter project operations, including flows, as may become appropriate.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)****p. 6-7****III. Fisheries and Wildlife**

A. NEP agrees to provide minimum flows as follows to protect and enhance fishery and aquatic resources.

p. 8-9

C. It is expected that the future operation of Deerfield No. 2 will significantly reduce the frequency and effects of transitions from minimum flow to generation flows. (The "Expected Operation" is projected to average no more than 2 transitions per day and not more than 10 per week.) The Parties agree that subject to verification of this operation and its effects, no specific-peaking limitations or restrictions are warranted at this time. NEP agrees to maintain release data for the No. 2 Station for a period of 36 months after issuance of a new License and will make this data available to the Parties on an annual basis. The Parties agree to cooperatively review and discuss this data, and consider whether any changes in Station operation are necessary. The Parties agree to support the inclusion of a license article allowing for the reconsideration of Station No. 2 operations if this data indicates that the Expected Operation is not occurring.

D. NEP agrees to submit, within one year of the issuance of a New License, a plan to FERC proposing means to monitor, report and verify the minimum flows and reservoir operations required by this Agreement. Said plan shall be prepared in consultation with the Resource

Agencies. NEP agrees to implement the plan within two years of license issuance unless otherwise directed by FERC.

E. Emergency conditions beyond the control of NEP including but not limited to anticipation of or occurrence of high natural precipitation, or other natural conditions leading to extreme runoff events; flood storage requirements; ice conditions; equipment failure; or electrical emergencies in which the operational restrictions set out herein will or are reasonably likely to result in interruption of service to electrical customers; may occasionally require NEP to make variations from the operational restrictions set out herein when compliance would be impossible, or inconsistent with the prudent and safe operation of the Project. NEP will provide notice of such variation to USFWS and the Vermont Agency of Natural Resources (VANR) or the Massachusetts Department of Environmental Protection (MDEP), whichever is affected, within one business day of NEP's knowledge of such an event. Such variations shall not be deemed in violation of, or contrary to this Settlement Agreement.

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

p. 2.3-2.4

MPC shall maintain an instantaneous minimum spawning flow of 200 cfs' in the Madison River bypass reach from April 1 through June 30 and maintain an instantaneous minimum flow of 80 cfs in the Madison River bypass reach from July 1 through March 31.

In the Madison River bypass reach, flow reductions from 600 cfs to minimum flow will not exceed 100 cfs per hour. When flows in the bypass reach are less than 600 cfs, flow increases to 600 cfs in the bypass will not exceed 100 cfs per hour except when needed to meet the 1,100 cfs instantaneous minimum flow below Madison Powerhouse (USGS gage 6-410) or to avoid overfilling Madison Reservoir. Downramping rates (river stage reductions) from 2-6 inches/hour may prevent stranding loss of fry and juvenile salmonids. Similar upramping rates (2-6 inches per hour) may maintain more consistent salmonid fry habitat and prevent potential flushing of deposited eggs from spawning gravels.

C. Provide bypass facilities needed to guide juvenile and adult fish migrating downstream past dams and project turbines. Based on the limited information Present leakage flow through (under) Madison Dam is about 46 cfs. Therefore, maintenance of a 200 cfs instantaneous minimum flow in the bypass reach (when turbine water is fully diverted) will require a continuous water spillage of about 154 cfs over Madison Dam. Present leakage flow through (under) Madison Dam is about 46 cfs. Therefore, maintenance of an 80 cfs instantaneous minimum flow in the bypass reach (when turbine water is fully diverted) will require a continuous water spillage of about 34 cfs over Madison Dam.

**Order Issuing New License, City of Watertown, New York (Issued June 16, 1995)
United States Federal Energy Regulatory Commission; Project No. 2442**

p. A-8-A-10

MINIMUM FLOW RELEASE ISSUE

The Watertown Hydroelectric Project diverts water at the Delano Island Dam from the right channel of the Black River. The Diversion Dam on the left channel between Delano Island and the left river bank completes the dam complex that maintains the pool serving both the Project powerhouse and the City's water supply intake (Figure 2 - Project Features, included at

the end of this section). The left channel from the Diversion Dam downstream to the powerhouse tailrace forms a bypass reach approximately 3,500 feet long. Since completion of maintenance repair work conducted in 1992, the City has maintained an interim minimum flow release of 300 cfs through this bypass reach to protect the aquatic habitat and resident fish. This flow was selected as a preliminary instream flow for this reach before the instream flow study was completed. It was agreed during first stage consultation that the final instream flow recommendation would be determined in consultation with the resource agencies after an instream flow study of the bypass reach had been performed and the results of the study were filed with the FERC on November 18, 1993, and on that same day made available to USFWS and NYDEC as noted in this section. The Instream Flow Incremental Methodology (IFIM) study provided the basis for the negotiated instream flow release as presented in this Settlement.

AGENCY CONSULTATION

The decision to proceed with an instream flow study to determine a minimum flow for the bypass reach was based upon consultation with NYDEC and USFWS personnel during first stage consultation. Comments on the draft application received from NYDEC on September 6, 1991, and the USFWS on September 12, 1991, reiterated the need for a means of determining an adequate minimum flow release for the entire bypass reach. The decision to select the IFIM for determining a minimum flow was made at an agency work session held on November 4, 1991. At this meeting, NYDEC agreed to provide the City with a list of target fish species. Target species and life history stages were provided by USFWS and NYDEC on March 12, 1992. A study plan was provided for agency review on April 14, 1992. This study plan was reviewed at a joint agency meeting held on May 27, 1992. At this meeting, the agencies agreed to provide modified Habitat Suitability Index (HSI) curves specific to local conditions and species. NYDEC provided HSI curves to the City on July 2, 1992, and NYDEC personnel gave final approval to transect locations on July 10, 1992 (personal communication to Barnes Williams). The USFWS approved transect selections on September 2, 1992 (personal communication to Barnes Williams). The study was delayed for one year, initially because of construction or major repairs and then because of unusually high water during 1992. The final report was provided to the NYDEC, USFWS, and the FERC on November 18, 1993. This report concluded that a preferred river discharge of from 150 to 200 cfs would provide adequate habitat for fish and invertebrate species in the upper bypass reach.

RESOLUTION AND SETTLEMENT

On April 1, 1994, the City filed its response to FERC's January 14, 1994, correspondence requesting additional information (AIR). A summary of issues is presented at Tab 1 of this document. This Settlement presents proposed facilities and resource management measures that have been developed in consultation with resource agencies and other interested parties, including Intervenor. Copies of correspondence documenting concurrence with the City's proposal is included at Tab 3 of this document.

On January 13, 1994, a Joint agency meeting was held to discuss the results of the IFIM study. At this meeting, it was concluded that the minimum flow release from the Diversion Dam should be set at 250 cfs. An established flow of 250 cfs plus leakage (estimated to be 145 cfs) totaling 395 cfs in the lower bypass reach will be measured at a control transect. The flow will be calibrated using a staff gauge at the control transect to ensure compliance. The agreed-upon instream flow of 250 cfs through the bypass reach is currently being released by the City at the Diversion Dam. Replacement of aging equipment will ensure continued ability to control this release.

In its June 9, 1994, comments, the USFWS provided the following recommendation. After reviewing the instream flow study results and discussing the habitat versus management objectives for the affected reach, a mutual agreement on minimum instream flow requirements was reached. The Service recommends that the following article be incorporated into the project license.

Article A. The Licensee shall provide a continuous minimum flow of 250 cubic feet per second (Cfs) from the upper dam and maintain a continuous minimum flow of 395 cfs as measured immediately downstream of Eastern Boulevard for protection of water quality and fish and wildlife resources in the Black River. To ensure compliance with these releases, the Licensee shall develop, after consulting with the Service, the Geological Survey, and the New York State Department of Environmental Conservation, a gaging plan to include the installation of staff gages, reservoir surface level monitoring devices, and recording stream gaging equipment. The provision of these minimum flows may be modified if required by operating emergencies beyond the control of the Licensee and for short periods of time upon mutual agreement between the Licensee, the Service, and the New York State Department of Conservation. This plan shall allow the consulted agencies at least 60 days to review and comment on a draft plan. The final plan shall be submitted to the Federal Energy Regulatory Commission for approval.

On April 29, 1994, the NYDEC provided written confirmation of support for the Settlement.
BENEFITS TO THE RESOURCE

Establishing a minimum flow of 250 cfs in the upper portion of the bypass reach will ensure habitat protection for fish and invertebrate species. This minimum flow can be maintained with the improved controls planned as part of upgrading the powerhouse under the proposed Capacity Amendment. Any delay in inaugurating improvements to the powerhouse will hinder the ability to reliably control the minimum flow through the bypass reach. If the City is forced to operate under existing conditions with its present equipment for three or four more years, the possibility of outages and the inability to control releases into the bypass reach may jeopardize or reduce aquatic habitat for fish and their invertebrate forage species.

Wilderness Shores Settlement Agreement, July 29, 1996**Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)****p. 12-13**

3.1.1.1 WE shall release from the Way Project into the Michigamme River the minimum flows described below as measured at the U.S. Geological Survey (USGS) gage (USGS No. 04061500) below the Hemlock Falls Project for the protection of fish and aquatic resources and recreation in the Michigamme River:

January through April 250 CFS

May 400 CFS

June 400 CFS

July 300 CFS

August through December 250 CFS

3.1.1.2 WE shall not operate the project in a daily peaking mode at any time.

3.1.1.3 These flows may be temporarily modified during low water conditions when it becomes apparent that the continued release of the required minimum flow will result in the reservoir elevation dropping below the required minimum elevation. Under these conditions, consultation shall be conducted with the Team to determine the operation of the project during these

conditions which may include, but not be limited to, waivers of the minimum flow and minimum reservoir elevation requirements. Flows may also be temporarily modified if required by operating emergencies beyond the control of WE, and for short periods upon agreement between WE and the Resource Agencies. If the flow is so modified, WE shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

p. 14

3.1.1.8 WE shall re-establish the required minimum flows during any power outages and automatic shutdown periods of the generator within 30 minutes.

3.1.2.1 WE shall operate the project in a run-of-river mode for the protection of aquatic resources in the Michigamme River. WE shall at all times act to minimize the fluctuation of the impoundment surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream of the project tailrace, approximate the sum of inflows to the project impoundment. These flows may be temporarily modified if required by operating emergencies beyond the control of WE, and for short periods upon agreement between WE and the Resource Agencies. If the flow is so modified, WE shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

p. 15-16

3.1.3.1 WE shall release from the Lower Paint Project the following minimum flows to the Paint River, measured at the USGS gage (No. 04062000) below the project, for the protection and enhancement of fish and wildlife resources, riparian vegetation, aesthetic resources, water quality, and recreation:

December through March	175 CFS
April 1 through May 15	350 CFS
May 16 through June 15	300 CFS
June 16 through June 30	275 CFS
July through November	250 CFS

These flows may be temporarily modified if required by operating emergencies beyond the control of WE, and for short periods upon agreement between WE and the Resource Agencies. If the flow is so modified, WE shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

3.1.3.2 WE shall not operate the Lower Paint Project as a peaking project.

3.1.3.3 WE shall, after consultation with the Team, file with the license application for Commission approval a plan to monitor the conditions described in Paragraphs 3.1.3.1 and 3.1.3.2. The plan shall include, at a minimum, provisions to: (1) maintain a log of hourly turbine generation and spill records from the project; (2) maintain and operate the USGS gage (No. 04062000) on the Paint River below the Lower Paint Project; and (3) notify the Commission and the Team of any excursion outside of the operational criteria detailed in Paragraph 3.0. WE shall provide operational data to the FWS, MDNR, and WDNR upon request for such information within 10 working days.

p. 17-18

3.1.4.3 WE shall operate Peavy Falls Project in peaking mode such that no reduction in weekend flow occurs for the purpose of water conservation for weekday use.

3.1.5.2 WE shall operate Michigamme Falls Project such that no reduction in weekend flow occurs for the purpose of water conservation for weekday use.

3.1.5.3 WE shall release flows from the Michigamme Falls Project, during the period from June 16 through April 9, such that in any day, the minimum flow is not less than 50 percent of the maximum flow on the same day for the protection and enhancement of fish and wildlife resources,

water quality, aesthetic resources and recreation. The minimum and maximum flows shall be measured below the confluence of the Brule and Michigamme Rivers at the USGS gage (No. 0406300).

3.1.5.4 WE shall operate the Michigamme Falls Project, during the period from April 10 through June 15, to re-regulate the Peavy Falls Project to protect and enhance fish spawning. WE shall at all times during this period act to minimize unnatural fluctuations in the outflow from the Michigamme Falls Project by maintaining a discharge from the Michigamme Falls Project, as measured immediately downstream of the project tailrace which approximates the mean daily discharge from the Peavy Falls Project.

p. 19

3.1.6.3 For the protection and enhancement of fish and wildlife resources, water quality, aesthetic resources and recreation, WE shall release from the Twin Falls Project, during the period from June 16 through April 9, a minimum flow into the Menominee River below the project that, in any day, is not less than 50 percent of the maximum flow on the same day as measured immediately downstream of the project tailwater at the USGS gage (No. 04063500) when the auxiliary spillway is not in use. When the auxiliary spillway is in use, WE plant logs shall be used for compliance with the above operation condition.

3.1.6.4 WE shall operate the Twin Falls Project during the period from April 10 through June 15 in a run-of-river mode for the protection of fish spawning in the Menominee River. WE shall at all times during this period release flows, as measured immediately downstream of the project tailwater at the USGS gage (No. 4063500), that approximate the sum of inflows to the project impoundment.

p. 20-21

3.1.7.3 WE shall release from the Kingsford Project, during the period from June 16 through April 9, a minimum flow into the Menominee River below the project that, in any day, is not less than 50 percent of the maximum flow on the same day as measured immediately downstream of the project for the protection and enhancement of fish and wildlife resources, water quality, aesthetic resources and recreation.

3.1.7.4 WE shall operate the Kingsford Project during the period from April 10 through June 15 in a run-of-river mode for the protection of fish spawning in the Menominee River. WE shall at all times during this period release flows, as measured immediately downstream of the project tailwater, that approximate the sum of inflows to the project impoundment.

p. 22

3.1.8.2 WE shall operate the Big Quinnesec Falls Project such that no reduction in weekend flow occurs for the purpose of water conservation for weekday use.

3.1.8.4 WE shall operate the Big Quinnesec Falls Project during the period from April 10 through June 15 in a run-of-river mode for the protection of fish spawning in the Menominee River. The outflow from the project shall be approximately equal to the inflow within the hydraulic capability of the available generating units as defined in the operational plan.

2. Recreation Flows

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 3

D. Recreation

The following will be provided:

1. Whitewater Releases - One 4-hour release of 400 cfs will be provided in September or October (prior to October 15) of each year, the exact timing of which is to be determined by Niagara Mohawk and American Whitewater Affiliation (AWA), in consultation with the Beaver River Advisory Council. Additionally, ramping flows not to exceed 200 cfs will be made two hours before the boating flow release and two hours after the release. The total volume of each release, including ramping flows, shall not exceed 2400 cfs-hrs. The releases at the Moshier Development will be coordinated, to the extent feasible, with the releases at the Eagle and Taylorville Developments.

Notwithstanding the above provisions and those specified for whitewater releases at Taylorville and Eagle elsewhere in this Settlement Offer, the schedule and flows for releases at all three developments may be modified by Niagara Mohawk and AWA, based on the recommendations of the Beaver River Advisory Council., to the extent that any modifications do not exceed the equivalent of 96,600 Kilowatt-hours in lost energy generation represented by the specified whitewater release provisions of this Settlement Offer. This, however, does not limit any newly created opportunities for additional whitewater releases that may arise from future mutually agreed changes to the terms of this Settlement Offer by its signatories.

p. 5

D. Recreation

The following will be provided:

1. Whitewater Releases - Five four-hour releases of at least 200 cfs will be provided in September and October of each year, the exact timing of which is to be determined by Niagara Mohawk and AWA, in consultation with the Beaver River Advisory Council. Additionally, ramping flows not to exceed 100 cfs will be made for one hour before the boating flow release and one hour after the release. The total volume of each release, including ramping flows, shall not exceed 1000 cfs-hrs. The releases at the Eagle Development will be coordinated, to the extent feasible, with the releases at the Taylorville Development.

p. 10

D. Recreation

The following will be provided:

1. Whitewater Releases - Five four-hour releases not-to-exceed 400 cfs will be provided in September and October of each year, the exact timing of which is to be determined by Niagara Mohawk and AWA, in consultation with the Beaver River Advisory Council. Additionally, ramping flows not-to-exceed 200 cfs will be made before and after the boating flow release for a total duration not-to-exceed three hours. The total volume of each release, including ramping flows, shall not exceed 2200 cfs-hrs. The releases at the Taylorville Development will be coordinated, to the extent feasible, with the releases at the Eagle Development.

**Black River Project and Beebe Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 10

2. Flow Stabilization -- Licensee will stabilize flow levels downstream to facilitate whitewater recreation by maintaining run-of-river operation between May 1 and September 30 as described in VII.A., above.

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project

Management Overview

#5 REACH (2.6 miles) - 73 cfs or inflow, inflow will not be less than 57 cfs guaranteed from Harriman; 32, Class 4 whitewater releases from April to October. Provide boater access.

OBJECTIVE: provide whitewater boating opportunity and year-round cold water fishery.

FIFE BROOK REACH (non-project waters, 17.4 miles) - guaranteed year-round flow of 125 cfs; 106, Class 3 whitewater flow releases from April to October. Provide boater access and portages. OBJECTIVE: maintain high quality cold water fishery and whitewater boating opportunity on this long reach.

#3 REACH (0.4 miles) - 100 cfs or inflow; downstream fish passage. OBJECTIVE: protect smallmouth bass habitat, meet town's desire for lower flows for swimming and public use in potholes.

#2 REACH (non-project waters, 9 miles to confluence with Connecticut River) - 200 cfs guaranteed flow; fish passage for Atlantic salmon program. OBJECTIVE: provide quality resident cold water fishery, passage for Atlantic salmon, better summer Class 2 canoeing flows.

p. 12-14

B. Boating Flows

- 1) NEP agrees to implement a schedule of whitewater releases as specified in Appendix A to provide for whitewater recreational opportunities at the Project.
- 2) NEP agrees to meet with representatives of FLOW or its successors and other interested members of the public before January 1 of each year to cooperatively develop release schedules for the coming summer. The proposed annual schedule will be issued for publication in January of each year. In order to account for unforeseen maintenance periods or other special scheduling requests, the final annual schedule will be issued by April 1 of each year following further consultation with FLOW and other interested members of the public. The Parties agree to minimize, to the extent possible, changes in the schedule set on January 1 of each year. The allocation of releases for each month set out in Appendix A may be adjusted by mutual consent of FLOW and NEP after allowing for comment by other interested members of the public provided the total number of annual releases remains the same. NEP and FLOW agree to work cooperatively to disseminate the release schedule to the public.
- 3) NEP agrees to continue to provide a river flow information phone providing recorded river flow information. The river flow information phone shall be updated periodically as practicable, but at a minimum, daily, to provide information on current conditions and the next day's anticipated release schedule. The river flow information phone shall provide estimated flows below Somerset Dam, Deerfield No. 5 Dam, Fife Brook Dam, and Deerfield No. 2 Dam and inflow at Sherman Reservoir and No. 4 impoundment. Information on current and expected spillage amounts, will be provided for each day at all dams except Sherman and Deerfield No. 3, regardless of conditions, but NEP may at its discretion avoid providing inaccurate estimates or forecasts regarding natural spillage.
- 4) The Parties recognize that natural low, or high runoff conditions, mechanical failure, or other emergencies may prevent strict adherence to the annual schedule. In the event that natural low flow conditions restrict NEP from providing electric generation and whitewater releases according to the schedule, NEP will notify and meet with FLOW and the other interested members of the public to cooperatively arrive at a reduced schedule that takes natural conditions into account. NEP will notify the public of the change in its release schedule through the River Information Phone as soon as possible. Scheduled releases will be canceled because of power

generation needs only when performing the scheduled release will, or is reasonably likely to result in, interruption of service to electricity customers. In the event scheduled releases are canceled, they will be included as additional releases over the next two year's schedules.

5) NEP agrees to implement the new and enhanced recreational facilities of particular importance to whitewater recreation as detailed in the recreation plans filed on October 1, 1993, in response to AIR No. 24.

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

Introduction, p. 2

D. Whitewater Releases

_____The signators agree that: releases for whitewater activities will be provided at least five weekends per year. The details of the amount and timing of the releases are highlighted in the attached June 16 and August 9, 1993 meeting minutes.

Attachment 1

MEETING MINUTES

Salmon River Project

FERC Project No. 11408

SUBJECT: Special Releases for Recreation

DATE: June 16, 1993, 9:00 am

PLACE: New York Department of Environmental Conservation, Syracuse, New York

ATTENDEES: Cliff Creech - NYSDEC, Peter Skinner - AWA (et al), Jerry Hargrave - Adirondack Mountain Club, Don Shields - Trout Unlimited, Gregg Carrington - Niagara Mohawk, Gary Schoonmaker - Niagara Mohawk, John Homa - IA, Elizabeth Conners - IA, Todd Waddell - IA.

Areas of Discussion

The purpose of the meeting was to determine if additional recreational releases were possible given the availability of the water resources on the Salmon River basin. The following items were discussed:

1. Given the base flows and the special recreational releases proposed in the license (license proposal), no additional recreational releases could be provided without draining the Salmon River Reservoir. The base flows proposed in the license application are 300 cfs January through April, 200 cfs May through August, and 350 cfs September through December. The three 24-hour recreational releases proposed in the license application and the System-wide Whitewater Recreation Plan were 700 cfs, 1,000 cfs and 1,400 cfs (74,400 cfs-hours total).

All parties agree that draining the Salmon River Reservoir (below elevation 918 feet) was undesirable because the project would have to be down and consequently, downstream base flows would not be available.

2. The New York State Department of Environmental Conservation (NYSDEC) summarized the management goals and objectives for the Salmon River basin. Most of these objectives were highlighted in a letter dated June 14, 1993 from the NYSDEC to the AWA.

3. Given that no other special release can be made as per the license proposal, the NYSDEC agreed to slightly reduce the downstream base flow requirements so that the proposed recreational releases could be properly ramped up (24-hour increments) and ramped down (12-hour increments). See Table 1 (attached) for a comparison of AWA and NYSDEC ramping plans.

4. Given license proposal and assuming a reduction of 15 cfs from each of the monthly base flows, Niagara Mohawk presented Rule Curve 16. Based on the Water Budget Model, Niagara Mohawk determined the volume of water that is available for recreational releases. See Table 2 (attached) for the assumptions used in Rule Curve 16. Given the 17-year period of record (1970 through 1986), it was determined that at a minimum, a total of five weekend releases were possible. These releases were:

Month	Weekend	Flow (cfs)
June	4	400 (half unit)
July	2	750 (one unit - efficient pm)
July	4	750
August	2	750
September	1	750

Based on the management objectives described by the NYSDEC, all special releases should be separated by at least two weeks (unless the releases are small and ramped very slowly) and special releases should not be made the third and fourth weekends in August to prevent the premature migration of salmon. The fourth weekend in July was scheduled to occur concurrently with the "Ringgold Tube Race". The first weekend in September was scheduled to initiate the fall salmon run.

5. During high flow years (when the Salmon River Reservoir was higher than normal), the following allocation schemes (for the "excess" volume of water) were discussed:

- a. Continue the release for an extra day.
- b. Increase the magnitude of the release (one and a half or two units) which would also result in an extra day of releases.
- c. Provide an additional weekend of releases (unscheduled) between the scheduled releases. This option was determined to be the least desirable because of the magnitude (400 cfs) and ramping requirements necessary to protect the downstream ecosystem.

6. The only "unresolved" issues were: (a) the logistics of the paddling feasibility study, (b) what constitutes a high/low flow year, and (c) the details of how releases would be allocated during low/high flow years.

Everyone would like to complete the paddling study this year. Niagara Mohawk agreed to provide the necessary releases at various times and to provide the evaluation forms. The whitewater groups need to talk with their members (July 4 weekend) to determine the best weekend for the first set of releases (350/500 cfs). Niagara Mohawk will contact the whitewater groups when there is enough water available for the last set of releases (750/1400 cfs). A release of one and a half units has been scheduled for August 7, 1993 for the "Ringgold Tube Race". The whitewater groups will be there on August 7, 1993 to evaluate the release.

Attachment 2

MEETING MINUTES

Salmon River Project

FERC Project No. 11408

SUBJECT: Special Releases for Recreation, Salmon River Flow Advisory Team

DATE: August 9, 1993, 9:00 am

PLACE: New York Rivers United Room, New York

ATTENDEES: Cliff Creech - NYSDEC, Dave Bryson - USFWS, Peter Skinner - AWA (et al), Bob Glanville - AWA, Bruce Carpenter - NY Rivers United, Gregg Carrington - Niagara Mohawk

Areas of Discussion

The purpose of the meeting was to discuss the possibility of additional recreational releases given the availability of the water resources in the Salmon River basin. Also, the idea of a Salmon River Flow Advisory Team was discussed. The following items were discussed:

1. Given the base flows and the five weekend recreational releases proposed, no additional recreational releases could be provided without draining the Salmon River Reservoir. All parties understand that draining the Salmon River Reservoir (below elevation 914 feet) was unacceptable because the project would have to shut down and consequently, downstream base flows would not be available.

Given the 17-year period of record (1970 through 1986), it was determined that at a minimum, a total of five weekend releases were possible. These releases were:

Month	Weekend	Flow (cfs)
June	4	400 (half unit)
July	2	750 (one unit - efficient gate)
July	4	750
August	2	750
September	1	750

Based on the management objectives described by the NYSDEC, all special releases should be separated by at least two weeks (unless the releases are small and ramped very slowly) and special releases should not be made the third and fourth weekends in August to prevent the premature migration of salmon. The fourth weekend in July was scheduled to occur concurrently with the "Ringgold Tube Race". The first weekend in September was scheduled to initiate the fall salmon run.

2. AWA had several questions concerning the Water Budget Model (computer program) that was supplied to them on July 26, 1993. Based on the 17 year period analyzed, Niagara Mohawk determined that the proposed base flow and recreational releases could not be increased without draining the reservoir. In addition, the reservoir target elevations could not be lowered (i.e. by recreational releases) without the reservoir being drained. Therefore, based on the results of the Water Budget Model it was concluded that additional scheduled recreational releases could not be made. However, Niagara Mohawk did indicate that unscheduled generation/recreational releases were possible during high flow years and when practical, these unscheduled releases could be made immediately before or after the scheduled recreational releases (i.e. on Fridays or Mondays). This would result in the two-day events being extended to three or more days. The logistics of this would have to be fine-tuned after the implementation of the base flows.

3. Non-routine Operation - The definition of what constitutes a high-flow year and a low-flow year were discussed. Niagara Mohawk indicated that except for March and April, a high-flow period could be considered as any time that the reservoir elevation was greater than one foot above the target elevation (upper action trigger). The upper action triggers for March and April can be considered any time that the reservoir exceeds an elevation of 937 feet. Low flow periods could be considered as any time that the reservoir elevation drops below a particular level (lower action trigger). The monthly lower action triggers were defined as follows:

Month	Trigger Elevation (feet)	Upper Trigger Elevation (feet)	Lower Trigger Elevation (feet)
January	935	936	925
February	932	933	925
March	923	937	920
April	926	937	920
May	936	937	920

June	936	937	920
July	936	937	920
August	935	936	920
September	933	934	918
October	930	931	918
November	930	931	918
December	931	932	925

4. Routine Operation - Routine operation is essentially any time that the reservoir is between the upper and lower action triggers, except emergency conditions. Emergency conditions can be considered any time that the safety of the downstream river users, the hydro facilities, or the environment are in jeopardy. Niagara Mohawk in cooperation with local authorities will determine the necessity of emergencies associated with downstream river users. Niagara Mohawk will determine the necessity of emergencies associated with the safety of the hydro facilities. The New York State Department of Environmental Conservation in consultation with Niagara Mohawk will determine the necessity of emergencies associated with the environment.

Any time that the reservoir is above the target elevations and releases greater than the base flows are possible, Niagara Mohawk will attempt to make the releases before or after the scheduled whitewater releases. However, during peak power demand periods or when spillage is imminent, it may be necessary to make the releases at other times.

General operating guidelines are described in the license application and the Water Budget Model. Normal Elevation (defined within the guidelines) is any time that the reservoir elevation is within one foot of the target elevation (+/-). Generally, additional releases (greater than the base flow) will not be continued when the reservoir level falls below the target elevation (due to the previous days operation).

5. Priorities for non-routine flow management were discussed (handout). Comments and recommendations will be incorporated into a revised list by the NYSDEC.

6. Salmon River flow management advisory team details were discussed (handout). Comments and recommendations will be incorporated into a revised description by the NYSDEC. It was agreed that: (a) the goals and objectives of the advisory team should be consistent with the vision/mission statement promoted by Niagara Mohawk and the resource agencies, (b) the local municipalities will have three representatives on the team and the special interest groups will have two representatives on the team, (c) the terms "consensus" and "majority" used in the description of the team will be replaced with something like "100 percent agreement", and (d) the executive committee, if used, will consist of the NYSDEC and Niagara Mohawk.

7. Exhibit B of the final license application will be affected by changes associated with the proposed recreational (whitewater) releases, (Rule Curve 16) and therefore, the Federal Energy Regulatory Commission should be notified of these changes (as soon as everyone concurs with the proposed operation of the project).

8. The final signed version of the formation of the Salmon River Flow Advisory Team will be forwarded to the FERC.

**Order Issuing New License, City of Watertown, New York (Issued June 16, 1995)
United States Federal Energy Regulatory Commission; Project No. 2442**

Attachment A, A-13-A-17

WHITEWATER FLOW RELEASES INTO THE LOWER BYPASS REACH ISSUE

A 150- to 200-foot-long rapid is located below the New York State (NYS) Route 3 bridge in the lower bypass reach of the Watertown Hydroelectric Project (Figure 3). This rapid is created by a small, natural drop in the river bed at this location and by natural constriction of the limestone river banks at this location. This natural drop in the river bed forms eight to nine successive waves in this rapid.

According to local kayaking instructors, this rapid provides a practice area for whitewater boaters. The waves in this rapid are valued by kayakers because it is a safe area for beginner kayakers to learn kayaking techniques and maneuvers. This set of stationary waves is unique on the Black River because calm water is located on either side of the rapid and a 0.5-mile-long calm pool is located immediately downstream of the rapid, which gives beginner and intermediate kayakers ample room for recovery if they are overturned in the waves and have to exit their boat. According to local kayakers, this whitewater practice area is used most frequently on weeknight evenings.

AGENCY CONSULTATION

Initial consultation began on April 27, 1989, with distribution of the ICP. An initial scoping meeting was held with the agencies on June 25, 1989. Agency comments on the ICP identified bypass flows for recreational boating as a concern. The City distributed its draft application for new license to the agencies on June 14, 1991. In its comments on the draft application, the NYDEC requested an evaluation of flow needs for recreational activities in the bypass reach. The Final License Application was filed with the FERC on December 30, 1991, and distributed to the agencies at the same time.

After reviewing the Final License Application for the Watertown Hydroelectric Project, FERC requested additional information on August 21, 1992, to determine minimum and optimum flows for whitewater boating in the lower bypass reach. FERC also required the City to gather additional recreational use data for the Project.

Because Project construction and personnel turnover interfered with recreation data collection during part of the 1991 recreation season, the City began collecting daily recreation surveys in September 1992. The City filed the *Supplemental Recreation Report for the Watertown Hydroelectric Project* on November 17, 1992, which contained partial data for the 1991 recreation season and complete data for the 1992 recreation season. The City continued its survey efforts and collected data for the 1993 recreation season which was included in the *Whitewater Boating, study for the Watertown Hydroelectric Project* (see study description below).

On February 2, 1993, the City filed a request with the FERC for an extension of time to complete the Whitewater Boating Study due to difficulties encountered in regulating flows to specific levels. These difficulties were encountered because of record high precipitation during summer 1992 and difficulty in coordinating regulated releases with owners of hydroelectric projects located upstream of the Watertown Hydroelectric Project.

The FERC granted the City's request for an extension of the deadline for the Whitewater Boating Study on February 25, 1993. The FERC required the City to file three-month study progress reports with the Secretary of the Commission. The City complied with this requirement.

On June 18, 1993, the City began contacting by telephone agency representatives, whitewater recreation organizations, local commercial whitewater outfitters, and local kayaking instructors to set up a whitewater Boating Study scoping meeting. A letter formally requesting attendance was sent to these entities on July 12, 1993. The Whitewater Boating Study design meeting was held on July 22, 1993, in Watertown, New York. Participants included representatives from the following agencies and organizations:

- New York State Office of Parks, Recreation, and Historic Preservation (NYPRHP)
- New York State Department of Environmental Conservation
- New York Rivers United (NYRU)
- Adirondack River Outfitters
- Fort Drum Outdoor Recreation Center
- T.I. Adventures
- City of Watertown
- R.W. Beck, Consultant to the City

The American whitewater Affiliation and the FERC were invited but unable to send representatives (see Tab 3 for correspondence). At the July 22 meeting, the meeting participants agreed on the scope of the Whitewater Boating Study and scheduled the study for August 2, 1993.

As scheduled, the Whitewater Boating Study was conducted on August 2. Seven kayakers representing all ability levels participated in the study and five flows were kayaked and evaluated by the boaters. These flow releases included 1,200 cfs (flow of the day), 900 cfs, 600 cfs, 250 cfs, and 145 cfs (entirely dam and Delano Island leakage-no spillage). Participants filled out evaluation forms for each flow level and video was shot of the entire study which included taped interviews of the kayakers.

The video and the *Whitewater Boating Study for the Watertown Hydroelectric Project* were filed with FERC, and served on the resource agencies, all parties to the licensing, and the study participants on October 29, 1993.

RESOLUTION AND SETTLEMENT

On April 1, 1994, the City filed its response to FERC's January 14, 1994, correspondence requesting additional information (AIR). A summary of issues is presented at Tab 1 of this document. This Settlement presents proposed facilities and resource management measures that have been developed in consultation with resource agencies and other interested parties, including Intervenor. Copies of correspondence documenting concurrence with the City's proposal are included at Tab 3 of this document.

The responses from the study participants seemed to favor p the 600 cfs flow. As the flows increased above this level, references of the experienced kayakers became significant disadvantages to the beginners and intermediate levels. As would be expected, just the opposite was observed as the flows dropped below the 600 cfs level; preferences of beginners and intermediates for some types of practice maneuvers became disadvantages for the experts.

Comments from the study participants in the survey evaluation forms and the videotaped interviews indicate that the 600 cfs flow had sufficient water speed, depth, and wave size to allow experienced-intermediate and advanced kayakers to take full advantage of the wave set. However, less-experienced intermediate and beginner kayakers were able to practice and play more extensively on sections of the wave set at 600 cfs than at the higher flows, although the larger waves were still avoided by the beginner kayakers at 600 cfs.

Based on the Whitewater Boating Study, the recreation use data collected by the City, and consultation with the agencies, whitewater organizations, and instructors, the City believes that a release of up to 600 cfs two times per week (2.5 hours per event) from June through September will provide an enjoyable, learning experience for whitewater boaters. According to the IFIM report, this proposed flow regime will also provide an appropriate environment for fish in the bypass reach. Telephone logs on December 10, 1993, documenting discussion are included at Tab 3 in this Settlement.

On December 2, 1993, NYDEC endorsed the recommendations contained in the *Whitewater Boating Study for the Watertown Hydroelectric Project* as follows: "A schedule for releasing flows for kayaking will be implemented. Upon request to the City's operator located at the water treatment plant, flows will be released through the lower bypass reach for kayakers for 2.5 hours, two evenings per week annually from June through September. Specific flows can be tailored to the skill level of scheduled participants, but not higher than 600 cfs."

The following agencies and organizations were invited to the Whitewater Boating Study design meeting but were unable to attend:

- American Whitewater Affiliation
- FERC

This correspondence was included in the *Whitewater Boating Study for the Watertown Hydroelectric Project* and is also included in Tab 3.

The City received written correspondence supporting the findings and recommendations of the *Watertown Hydroelectric Project* from the following agencies and organizations:

- NYDEC
- Fort Drum Outdoor Recreation Center
- NYRU
- Trout Unlimited

This correspondence is included in Tab 3 of this document.

Correspondence dated June 9, 1994, from the Natural Heritage Institute addresses agreement by NYRU, Trout Unlimited, American Rivers, Inc., and the American whitewater Affiliation. Telephone logs documenting approval by American Rivers, Inc., and American Whitewater Affiliation are included in Tab 3.

The City is awaiting written response concerning the *Whitewater Boating Study for the Watertown Hydroelectric Project* from the NYPRHP. The City has made follow-up contacts to request a written response from the NYPRHP and continues to pursue a formal response.

In its June 9, 1994, letter commenting on the settlement, the USFWS stated that it "does not object to the City's proposal to release up to 600 cfs two evenings per week (two to five hours per evening) from June through September to provide for whitewater boating. On April 29, 1994, the NYDEC provided written confirmation of support for the Settlement.

The approved whitewater flow regime is incorporated in the Settlement. If FERC approves the City's request by August 15, 1995, the whitewater flow releases will be available to kayakers after December 1996, in time for the 1997 recreation season.

BENEFITS TO THE RESOURCE

Implementing the proposed flow regime will ensure that kayakers have flows twice per week for an optimal training and whitewater play experience. According to kayaking instructors, Thursday evenings during the summer is a time when local whitewater boaters gather on various whitewater stretches in the area for practice and play activities (hence the self-designated name "Thursday Night Club").

Under the proposed whitewater flow release schedule, flow releases over the Diversion Dam into the bypass reach can be made by the City on Thursday evenings to coincide with the needs of these local kayakers. Experienced whitewater boaters as well as kayaking instructors with classes of beginner and intermediate kayakers will be able to utilize these flow releases and will be provided with formal kayak access to the lower bypass reach (see Figure 3 - Proposed Portage Route and Whitewater Boating Access).

Any delay in inaugurating improvements to the powerhouse will hinder the ability to reliably control the minimum flow through the bypass reach. Should the City have to operate

using its present antiquated equipment for another three or four years, the possibility of outages and the inability to precisely control releases into the bypass reach may reduce the City's ability to provide a specific flow regime desired by kayakers in the lower bypass reach.

Early approval of the City's proposal by the FERC will ensure that these whitewater flow releases occur at least two to three years earlier than would be the case if the Watertown Hydroelectric Project is included in the Black River multiple project EIS.

Wilderness Shores Settlement Agreement, July 29, 1996**Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)****p. 12****3.1.1. Way Dam and Michigamme Reservoir Project**

3.1.1.1 WE shall release from the Way Project into the Michigamme River the minimum flows described below as measured at the U.S. Geological Survey (USGS) gage (USGS No. 04061500) below the Hemlock Falls Project for the protection of fish and aquatic resources and recreation in the Michigamme River:

January through April	250 CFS
May	400 CFS
June	400 CFS
July	300 CFS
August through December	250 CFS

3. Fishery Flows

(See also Section B.1. Minimum and Maximum Flows above, and Section B. 6. Bypass Flows, below.)

Skagit River Project Offer of Settlement, April 1991**Project No. 553 (Washington)****p. 7****2. Plan Elements**

The Flow Plan addresses flows for the fishery resources in the mainstem Skagit River downstream of Gorge Powerhouse. Its primary purpose is to mitigate the effects of Project operations on salmon and steelhead. During spawning periods and subsequent incubation of eggs and alevins (pre-emergent fry), the effects of Project operations are addressed by limiting maximum flows during spawning, shaping daily flows for uniformity throughout the spawning period, and maintaining minimum flows through the incubation period that are adequate to keep most redds (spawning nests) covered until fry emerge from the gravel. For newly emerged fry, the effects of Project operations are addressed by limiting daily downramp amplitude, maintaining minimum flows throughout the fry protection period that are adequate to cover areas of gravel bar commonly inhabited by fry, and limiting downramping to various rates and time periods depending on the amount of Project discharge to minimize or prevent fry stranding.

Specific sections of the Flow Plan include: (1) provisions to regulate salmon and steelhead spawning and incubation flows for the purpose of protecting spawning redds and offspring; (2) provisions for minimum flows, and daily and seasonal flow fluctuations for the purpose of protecting salmon and steelhead fry; (3) conditions under which the City may have reduced minimum flow requirements; (4) circumstances under which the City has limited flow

control, (5) operating considerations for implementing provisions of the Flow Plan; (6) provisions for field monitoring to determine the accuracy of various models, and to determine alternative spawning and fry protection periods; and (7) compliance requirements that include flow monitoring and recording, and the preparation by the City of semi-annual compliance reports.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 3

E. Flow Release Structures

Flow release structures will be designed to minimize adverse impacts to fish moving downstream and be cost effective and reasonable. Final details of designs, including final locations and the potential need for fish protection and conveyance measures (e.g., plunge pools, piping, etc.), if any, will be based on 1996 field inspections and professional judgement of the USFWS and NYSDEC. Installation will be undertaken by licensees within two years of FERC license issuance.

p. 6

B. Flow Releases

A year-round flow of not less' than 20 cfs will be released through the stoplog section located between the dam and trashracks to provide a downstream fish movement route.

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

p. 2.3-2.4

MPC shall maintain an instantaneous minimum spawning flow of 200 cfs' in the Madison River bypass reach from April 1 through June 30 and maintain an instantaneous minimum flow of 80 cfs in the Madison River bypass reach from July 1 through March 31.

In the Madison River bypass reach, flow reductions from 600 cfs to minimum flow will not exceed 100 cfs per hour. When flows in the bypass reach are less than 600 cfs, flow increases to 600 cfs in the bypass will not exceed 100 cfs per hour except when needed to meet the 1,100 cfs instantaneous minimum flow below Madison Powerhouse (USGS gage 6-410) or to avoid overfilling Madison Reservoir. Downramping rates (river stage reductions) from 2-6 inches/hour may prevent stranding loss of fry and juvenile salmonids. Similar upramping rates (2-6 inches per hour) may maintain more consistent salmonid fry habitat and prevent potential flushing of deposited eggs from spawning gravels.

C. Provide bypass facilities needed to guide juvenile and adult fish migrating downstream past dams and project turbines. Based on the limited information Present leakage flow through (under) Madison Dam is about 46 cfs. Therefore, maintenance of a 200 cfs instantaneous minimum flow in the bypass reach (when turbine water is fully diverted) will require a continuous water spillage of about 154 cfs over Madison Dam. Present leakage flow through (under) Madison Dam is about 46 cfs. Therefore, maintenance of an 80 cfs instantaneous minimum flow in the bypass reach (when turbine water is fully diverted) will require a continuous water spillage of about 34 cfs over Madison Dam.

4. Run of River Flows

(See also Section II.B.1., Minimum and Maximum Flows, above.)

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

p. 1.11-1.12

1. Water Resources
1. Run-of-River Operating Mode
 - A. Ensure Control Rate of Reservoir Drawdown and Average Daily Flows Downstream of the

Project To ensure control rate of reservoir drawdown and flows below the Hebgen Development are adequate to protect or enhance existing aquatic habitat, riparian vegetation, visual resources, and water quality (particularly DO levels), we recommend the following articles, requiring MPC to provide specific average daily flows downstream of the project:

We recommend the following be written as appropriate license articles that require MPC to operate the Hebgen Development as follows:

Typical Operations:

The Hebgen Development is a storage reservoir which will be operated to enhance power production at MPC's eight downstream hydroelectric developments and at the U.S. Bureau of Reclamation's (USBR) Canyon Ferry Hydroelectric Project.

MPC will, subject to the specific exceptions noted under Special Operations, operate the Hebgen Development to maintain a continuous minimum flow of 150 cfs in the Madison River as measured directly downstream from Hebgen Dam at USGS Gauge No. 6-385, a continuous minimum flow of 600 cfs at USGS Gauge No. 6-388 near the Kirby Ranch, and a continuous minimum flow of 1,100 cfs at USGS Gauge No. 6-410 below the Madison Development.

5. Bypass Flows

(See also Section II.B.1 Minimum and Maximum Flows, above.)

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 6

2. Gorge Bypass Reach

The Parties have agreed that the Agreements obviate the need for flows in the Gorge bypass reach for each of the resources covered by the Agreements. Further, the Intervenor agree to support the City's efforts to retain its existing water quality certificate for the Gorge bypass reach or to obtain a new certificate from the State of Washington, Department of Ecology.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 7

A. Bypassed Reach Flows

**Conservation
Provisions:
Stream Flows**

Bypassed reach flows will be provided through a combination of leakage, releases over the dam, and releases through the stoplog structure. Regardless of the portion of the bypassed reach flow attributed to leakage, licensee will provide a flow of not less than 45 cfs through the modified stoplog structure to provide for downstream fish movement. An instream flow of not less than 800 cfs will be provided through walleye spawning season and not less than 245 cfs throughout the remainder of the year. Reduction of flows at the end of walleye season will be in no more than 200 cfs increments at no less than four hour intervals, or as otherwise determined to be needed based on field inspections by licensee, NYSDEC and USFWS which will be conducted during the first year after release structures are installed.

7. Peaking Flows

**Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)**

p. 14

3.1.1.8 WE shall re-establish the required minimum flows during any power outages and automatic shutdown periods of the generator within 30 minutes.

3.1.2.1 WE shall operate the project in a run-of-river mode for the protection of aquatic resources in the Michigamme River. WE shall at all times act to minimize the fluctuation of the impoundment surface elevation by maintaining a discharge from the project so that, at any point in time, flows, as measured immediately downstream of the project tailrace, approximate the sum of inflows to the project impoundment. These flows may be temporarily modified if required by operating emergencies beyond the control of WE, and for short periods upon agreement between WE and the Resource Agencies. If the flow is so modified, WE shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

8. IFIM

See the Order Issuing New License, City of Watertown, New York (Issued June 16, 1995) in section II.B.1. Minimum Flows above.

C. WATER QUALITY

1. State Water Quality Standards

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 13

D. Cooperation

Each and all signators will abide by and support the agreements and understanding commemorated herein in the context of their participation in the Beaver River Project No. 2645

licensing proceeding before the FERC, the 401 water quality certification proceeding before NYSDEC and any other forum, as appropriate.

p. 16

3. This Settlement Offer shall become effective upon the later of: 401 water quality certificate issuance by NYSDEC, or (2) issuance of a new license, consistent with this Settlement, by FERC and acceptance of same by Niagara Mohawk. If a 401 water quality certification or FERC license is issued that results in certificate or FERC license terms inconsistent with the terms of the Settlement Offer, any signator may withdraw pursuant to Paragraph K. 1 of this Settlement Offer. The Settlement Offer, including all mitigative measures and annual contributions to the Beaver River fund, shall remain in effect for the term of the new license and for any annual license issued subsequent thereto, subject to authority reserved by FERC in the new license to require modifications.

p. 17

K. Approval of Settlement

1. The signators have entered into and jointly submit this Settlement Offer with the express conditions that NYSDEC approves and accepts all provisions herein and either issues or waives a 401 water quality certification and that FERC approves and accepts all provisions herein and a new project license for the Beaver River Project consistent with the terms of the Settlement Offer. In the event that either NYSDEC and/or FERC changes, conditions or modifies any contained herein any NYSDEC issued 401 water quality certification or FERC order issuing a new license, whether through its own action or through incorporation of conditions of a 401 water quality certification, the Settlement Offer shall be considered modified to conform to the FERC order unless any to the Settlement Offer within 60 days of NYSDEC's or FERC's action provides written notice by certified mail to the other signators that it objects to the modification, change or condition. The shall then commence negotiations for a period of up to 60 days to resolve the issue and modify the Settlement Offer, as needed. If agreement cannot be reached, then the objecting party may withdraw from the Settlement Offer, without incurring any obligations or benefitting from rights associated with the Settlement Offer. In the event that the Settlement Offer is withdrawn, it shall not to a part of the record of ongoing proceedings.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 12

D. Cooperation

Each and all signatories will abide by and support the agreements and understandings commemorated herein in the context of their participation in the Black River Project No. 2569 and Beebee Island Project No. 2538 licensing proceedings before the FERC, the § 401 water quality certification proceedings before NYSDEC and any other forum, as appropriate.

I. Approval of Settlement

1. The signatories have entered into and jointly submit this Settlement Offer with the express conditions that NYSDEC approves and accepts all provisions herein and either issues or waives § 401 water quality certifications and that FERC approves and accepts all provisions herein and issues new project licenses for the Black River and Beebee Island Projects consistent with the terms of the Settlement Offer. In the event that either NYSDEC and/or FERC changes, conditions or modifies any provision contained herein in any NYSDEC issued § 401 water quality certifications or FERC orders issuing new licenses, whether through its own action or through

incorporation of conditions of § 401 water quality certifications, the Settlement Offer shall be considered modified to conform to the FERC orders unless any signatory to the Settlement Offer within 30 days of NYSDEC's or FERC's action provides written notice by certified mail to the other signatories that it objects to the modification, change or condition. The signatories shall then commence negotiations for a period of up to 90 days to resolve the issue and modify the Settlement Offer, as needed. If agreement cannot be reached, then the objecting party may withdraw from the Settlement Offer, without incurring any obligations or benefitting from rights associated with the Settlement Offer. In the event that the Settlement Offer is withdrawn, it shall not constitute a part of the record of ongoing proceedings.

Consumers Power Company Settlement, November 11, 1992**Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)****p. 15-16**

6.8 Any party to this Settlement may petition the WRC during every fifth year after the signing of this Settlement, to modify the D.O. or temperature limits contained herein and in the State Water Quality Certification to ensure the protection of the public health, welfare, safety, and the natural resources of the State of Michigan, including the fishery resources.

6.9 If CPCo is not in compliance with any water quality limit in this Section, MDNR may assess the following liquidated damages for damages to the natural resources for non-compliances that occur more than two years after installation of the monitoring equipment required in Paragraphs 6.4 and 8.1 or more than three years from license issuance, whichever is earlier. The MDNR shall not assess liquidated damages for any non-compliance under both this Settlement and the Water Quality Certificate. Payment shall be made in the manner and be used for the purposes provided in Paragraph 5.3.

Liquidated damages shall accrue during the pendency of any dispute, but payment of such damages shall be stayed until the dispute is resolved or the WRC issues its final determination in accordance with Section 14, whichever is earlier.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)****p. 5**

E. This Settlement shall become effective upon the later of: a) issuance of a new license, consistent with this Settlement, by FERC; or b) the expiration of any appeal period for §401 Water Quality Certifications issued by Vermont and Massachusetts. If Water Quality Certification is issued by either state that results in license terms inconsistent with the terms of the Settlement, any Party may withdraw pursuant to Section VII of this Agreement. The Settlement shall remain in effect for the term of the new license and for any annual license issued subsequent thereto subject to Authority reserved by FERC in the new license to require modifications.

p. 21**VII. Approval of Settlement; Dispute Resolution**

A. The Parties have entered into and jointly submit this Settlement with the express condition that FERC approves and accepts all provisions herein and issues new project license consistent with the terms of the Settlement. In the event that FERC changes, conditions or modifies any provision contained herein in its order issuing a new license, whether through its own action or through incorporation of conditions of a §401 Water Quality Certification, the

Offer of Settlement shall be considered modified to conform to the FERC order unless any Party to the Settlement within 30 days of FERC's action provides written notice by certified mail to the other Parties that it is withdrawing from the Settlement because of the modification, change or condition. Upon such notification, the Settlement shall be deemed void and withdrawn. In the event that the Offer of Settlement is withdrawn, it shall not constitute a part of the record of this proceeding in either the Massachusetts §401 Water Quality Certificate Proceeding, or the Vermont §401 Water Quality Certificate Proceeding.

In the event that FERC issues a final order that does not include conditions consistent with Sections IV.C (Enhancement Fund) and V. (Project Lands) of this Settlement and regardless of whether this Settlement is withdrawn by a party other than NEP, NEP agrees that it will comply with and implement the terms of Sections IV.C and V as long as the Project receives a new license with operational terms and conditions and financial impacts consistent with the Settlement as filed.

Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)

p. 1.5

Technical Advisory Committee.

MPC shall be responsible to report annually to the FERC on PM&E expenses and accomplishments. MPC shall be responsible to implement PM&E measures.

The Water Quality Monitoring Program and PM&E program will be based on the concept of adaptive management in determining priorities and schedules for funds paid out of the PM&E one-time and annual accounts. This process emphasizes collaboration but still places primary responsibility upon MPC. MPC will bear ultimate responsibility for ensuring that PM&E funds are spent on appropriate PM&E projects that comply with the intent and scope of the new FERC license.

Based upon water quality monitoring results, WQTC members shall be responsible to prioritize and select PM&E projects. MPC will seek to attain consensus among WQTC members in determining appropriate PM&E measures. In the event a consensus cannot be achieved, MPC will submit a written proposal to FERC including WQTC and resource agency comments. WQTC members will have 30 days to submit comments on the proposal to MPC. The MDHES/Water Quality Division will determine whether the MPC proposal is consistent with the requirements of 401 conditions and any applicable state laws or regulations. The FERC will determine whether the MPC proposal is reasonable and consistent with the requirements of the license and any applicable federal laws or regulations.

Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)

p. 6

IV MISCELLANEOUS

A. Water Quality Certification

The NYSDEC and Niagara Mohawk agree that: there are no other areas of concern and that the areas of agreement set forth herein will not become part of the terms and conditions of any subsequently issued §401 water quality certificate for the Salmon River Project (No. 11408), save and except for those matters relating to water quality as set forth in 6 NYCRR Parts 701-704

and which are consistent with the court decisions in Niagara Mohawk v. NYSDEC, - NY2d- (November 11, 1993); Matter of Power Authority v. Williams, 60 N.Y.2d 315; Matter of de Rham v. Diamond, 32 N.Y.2d 34; and PUD No. 1 of Jeff. Co. V. Washington, (if and to the extent decided prior to issuance of the §401 water quality certificate) and which shall be incorporated in any subsequently issued §401 water quality certificate.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 6

2. Gorge Bypass Reach

The Parties have agreed that the Agreements obviate the need for flows in the Gorge bypass reach for each of the resources covered by the Agreements. Further, the Intervenor agree to support the City's efforts to retain its existing water quality certificate for the Gorge bypass reach or to obtain a new certificate from the State of Washington, Department of Ecology.

**Order Issuing New License, City of Watertown, New York (Issued June 16, 1995)
United States Federal Energy Regulatory Commission; Project No. 2442**

p. A-11-A-12

401 CERTIFICATION ISSUE

NYDEC was contacted by the City during first stage consultation regarding its requirements and protocol for a 401 Water Quality Certification application. NYDEC requested that the City draft a letter soliciting 401 Certification accompanied by a copy of the City's Final License Application when it is filed with the FERC. The Final License Application would be used by NYDEC as the 401 Certification application.

AGENCY CONSULTATION

A request for 401 Water Quality Certification was sent to NYDEC by the City on October 23, 1991. NYDEC responded on November 7, 1991, stating that the City must provide 15 copies of the Final License Application, a completed short form EAF, and a completed Joint Application form. The City provided these documents to NYDEC in December 1991. The Application was denied without prejudice by NYDEC by letter dated October 21, 1992, because an IFIM study had not been completed. The City reapplied for a Certificate by application received on January 20, 1993. NYDEC called the new Application incomplete by letter dated February 2, 1993, pending receipt of the IFIM study. Copies of the IFIM study were furnished to NYDEC via certified mail on November 18, 1993.

At the Joint agency meeting on January 13, 1994, Thomas Gorthey, NYDEC, advised the City that NYDEC planned to issue the 01 Certification on January 19, 1994. The City was given a draft of the conditions to review and comment upon. The City provided its comments orally on the 401 Certification conditions to NYDEC on January 13, requesting several changes in conditions. The City was advised that project-specific conditions modifying the general Certification conditions would be the subject of letters sent to individual project applicants.

RESOLUTION AND SETTLEMENT

On April 1, 1994, the City filed its response to FERC's January 14, 1994, correspondence requesting additional information (AIR). A summary of issues is presented at Tab 1 of this document. This Settlement presents proposed facilities and resource management measures that have been developed in consultation with resource agencies and other interested parties, including

Intervenors. Copies of correspondence documenting concurrence with the City's proposal is included at Tab 3 of this document.

The 401 Certification permit for the Watertown Hydroelectric Project was issued to the City by NYDEC on January 14, 1994, and is included in this Settlement.

BENEFITS TO THE RESOURCE

Adherence to the terms and conditions of the 401 Certification will assure that no cumulative impact to water quality in the Black River would occur.

Early approval of the City's proposal by the FERC will ensure proposed environmental protection and enhancement measures become established at least two to three years earlier than will be the case if the Watertown Project is included in the proposed Black River multiple project BIS. Old equipment slated for replacement cannot be considered reliable. Should failures occur, regulating instream flows will become very difficult, if not impossible, with the potential for adverse impacts to aquatic organisms and their habitat as well as to recreational activities.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 11

2.4.2 If the MDEQ fails to issue for each project, within 180 days from the signing of this Settlement, a water quality certificate that is in conformance with Paragraphs 3.0 and 4.0 of this Settlement as applicable to the protection of designation uses and compliance with numerical water quality standards of the State of Michigan, any party may withdraw from this Settlement and need not comply with its terms. The Parties shall have up to 30 days from the date of certificate issuance [or up to 30 days after the end of the 180-day period if fewer than eight (8) certificates are issued], to withdraw from this Settlement. If MDEQ issues water quality certificates in conformance with the above listed sections of this Settlement for all Projects, WE agrees not to contest the issuance of the certificates for those Projects. If MDEQ issues water quality certificates with terms and conditions not contained in the certificates agreed to within this Settlement, WE reserves the right to oppose these added terms and conditions.

2. DO and BOD

(See also water quality Studies and Monitoring, Section II.C.8, below)

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 9

The settlement agreement calls for Carolina Power to consult with Tennessee Wildlife and prepare a plan for monitoring DO levels in the Pigeon River from June 1 through September 30 each year. The monitoring site is to be located approximately one mile downstream of the project powerhouse. The plan is to include the method and frequency of monitoring and a schedule for submitting the results to the Commission and Tennessee Wildlife.

We agree that the monitoring plan contained in the settlement agreement would be beneficial. Tailrace DO monitoring would determine the magnitude and duration of any violations in the state standard for DO that occur and would determine whether natural aeration is sufficient to maintain DO levels at or above the State standard. Accordingly, we are including Article 405

in the license, which requires monitoring of DO one mile downstream of the project powerhouse during the summer low-flow period in order to verify that State standards are being maintained.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 11-18

6.1 CPCo shall study, plan, design, construct, operate and maintain water quality enhancements in accordance with this section. CPCo shall fund capital costs in the amount of \$1.75 million in 1992 dollars (as adjusted for the CPI) for study, planning, design and construction of water quality enhancements, including dissolved oxygen (D.O.) enhancement measures and temperature enhancement measures as described herein. Operation and maintenance costs related to the enhancement measures are not included in the \$1.75 million.

6.2 After installation of water quality monitoring instruments pursuant to Paragraphs 6.4 and 8.1, CPCo will evaluate the water temperature and D.O. data received from the monitoring devices and shall submit a water temperature and D.O. evaluation to the resource agencies. The evaluation shall be for the purpose of determining whether a project will attain the water quality limits specified in Paragraphs 6.5 and 6.6. For those projects that have not attained the water quality limits, the evaluation will also analyze whether the limits can be attained by: 1) increasing the volume of cooler water passing through the plant turbines during the summer months; and/or 2) engineering or operational measures to increase downstream D.O. concentrations. The resource agencies will review the evaluation and provide comments to CPCo within 45 days of receipt. For any project whose compliance with the limits of Paragraphs 6.5 and 6.6 will improve from an increase in cooler water or D.O., CPCo shall provide the name(s) and qualification(s) of recommended consulting firm(s) experienced in the design and installation of measures for: 1) increasing the volume of cooler water to be passed through the project turbines during the summer months; and/or 2) increasing D.O. concentrations through engineering or operational measures, as appropriate, for resource agencies review. Within eighteen (18) months of the resource agencies review, CPCo shall contract with the consulting firm(s) and complete an evaluation of designs, applicability and costs of D.O. and/or water temperature enhancement measures at each hydroelectric project that has not met the applicable water quality limits specified in Paragraphs 6.5 and 6.6. The results of the evaluation shall be provided to the resource agencies for review and comment. If the resource agencies recommend a field test to evaluate a measure for increasing the volume of cooler water or D.O., or recommend installation of such a measure, CPCo shall (subject to the dispute resolution process in Section 14) make application to FERC within 180 days of receipt of the resource agencies recommendation. When FERC approves the field test or the measure, CPCo, within 90 days, shall apply for necessary permits and approvals and begin contracting for the field test or the installation.

6.4 CPCo shall contract with the United States Geological Survey (USGS) pursuant to Paragraph 8.1 for the installation of continuous recording instruments at locations reviewed by the resource agencies both upstream and below the discharge from each of its hydroelectric projects to monitor water temperatures and D.O. concentrations. Water temperature and D.O. data shall be recorded on the hour and be provided to the resource agencies on a quarterly basis.

...

C. Dissolved oxygen concentrations in the project tailwaters shall not be less than 5 milligrams per liter (mg/l) at any time unless CPCo demonstrates to the WRC that these D.O. limits are not attainable through further feasible and prudent measures or the variation between the daily

average and daily minimum D.O. concentrations in the river exceeds 1 mg/l. If the WRC agrees with CPCo's demonstration, D.O. concentrations in project tailwaters shall not be less than 4 mg/l at any time or less than 5 mg/l as a daily average during the warm weather season (June through September) until such time as the WRC causes the preparation and implementation of a comprehensive plan to upgrade these waters to 5 mg/l at any time.

...

C. Dissolved oxygen concentrations in the project tailwaters shall not be less than 7 mg/l at any time unless CPCo demonstrates to the WRC that these D.O. limits are not attainable through further feasible and prudent measures or the variations between the daily average and daily minimum D.O. concentrations in the river exceeds 1 mg/l. If the WRC agrees with CPCo's demonstration, D.O. concentrations in project tailwaters shall not be less than 6 mg/l at any time during the warm weather season (June through September) until such time as the WRC causes preparation and implementation of a comprehensive plan to upgrade these waters to 7 mg/l at any time.

...

B. For non-compliance of D.O. limits:

Dissolved Oxygen

Non-compliance(s) Per Month/Per Project	Licruidated Damages Per Day
1 - 12	\$ 100
13 or more	\$ 200

(1) Damages may only be assessed in any month at any project where D.O. non-compliance has occurred on three or more days in that month. In the event non-compliance occurs on three or more days, damages may be assessed for the first three days and every day thereafter.

(2) Damages in any given month at any project shall not be greater than \$3,000 for D.O. non-compliances.

Missouri/Madison Project Recommended Terms and Conditions, May 1995

Project No. 2188 (Montana)

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Madison Development

(5) Continuing, from 1996-2000, collection of water temperature, dissolved oxygen, and meteorology data in the Madison River from Hebgen Reservoir to Three Forks at established stations.

Cost: \$15,000 per year from 1996 to 2000

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

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4.1.5 WE shall not cause the dissolved oxygen (DO) concentration, measured in the Michigamme, Paint and Menominee Rivers immediately downstream of the Projects covered by this Settlement, to be: (1) less than a daily average of 5 mg/l or 4 mg/l at any time during the warm weather season; or (2) less than 5 mg/l at any other seasonal period. The compliance point for DO for the above dams will be in the tailwater of each dam to include powerhouse and spillway locations, if separate.

...

4.1.8 WE shall continuously monitor temperature on an hourly basis upstream and downstream of all Projects covered by the Settlement. DO levels shall be monitored on an hourly basis from June 1 until September 30 downstream of the Way Dam, Hemlock Falls Dam, Peavy Falls Dam, Michigamme Falls Dam and Lower Paint Dam. DO levels shall be monitored on an hourly basis from June 1 until September 30 above and below the Twin Falls Dam, Kingsford Dam, and Big Quinnesec Falls Dam. If during the impoundment profile sampling (detailed in Paragraph 4.1.10) the impoundments are found to be stratified during May and September, then the DO sampling will commence within five (5) days of stratification detection in May and will continue through October 30 if the impoundments are found to be stratified in September. The location of the upstream and downstream water quality monitoring stations shall be determined in consultation with the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.9 All temperature and DO recording equipment shall be calibrated according to manufacturer's specifications before each unattended monitoring period. Calibration shall be rechecked before any servicing of the probe including cleaning. Temperature data collection devices shall be checked with a National Institute of Science and Technology certified thermometer at the end of each unattended monitoring period. The meter used for DO monitoring shall be serviced and recalibrated at least weekly but more frequently if the meter error is unacceptable with a weekly servicing schedule. Thermometers will be checked concurrently with any servicing or data downloading with a National Institute of Science and Technology certified thermometer. The DO meter error or drift at the end of an unattended monitoring period shall be less than 1 mg/l 70 percent of the time. More frequent service visits shall be scheduled if this criterion is not being met.

4.1.10 WE shall measure temperature and DO in all of the Projects covered by this Settlement. Specifically, surface to bottom vertical profiles of temperature and DO shall be made in the one deepest location in the vicinity of the project intake, every two weeks from June 1 through August 31 and once monthly for the months of February, April, May, September and October. Measurements shall be made at 1.0 meter increments until water temperature is found to change more than 1.0 degrees Centigrade (C) per meter then sampling shall be done at 0.5 meter increments. Temperature and DO measurements shall be replicated at the surface and at the bottom with a replicate measurement system such as a Winkler analysis if a probe is used for profiling. If replicate errors are greater than 1 mg/l for DO or 1.8 F for temperature, then the measurement system shall be evaluated, corrective actions shall be taken, and the measurements shall be repeated. Secchi disk depth measurements shall be made at the same time as the profiling. U.S. Environmental Protection Agency (EPA) approved methods shall be used. Within 30 days, if impoundment DO levels in the vicinity of the intake fall below 5 mg/l in any of the impoundments, WE shall develop a monitoring program for the downstream tailwaters of the affected impoundment for review and approval by the Program Manager of the MDNR, MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.11 WE shall compile and summarize all temperature and DO data in annual written reports provided to the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the WDNR Northeast Region Water Leader. Reports shall be made immediately any time water quality violations are found and when the reading is within 0.5 mg/l DO standards and within 2 F of the temperature standard in any given month. At all other times, water quality data will be provided to the MDNR-MDEQ FERC Coordination Unit and WDNR Northeast Region Water

Leader within five (5) working days of the request. For profile sampling, the results of all measurements shall be submitted including any replicate measurements. For continuous monitoring stations the reports shall include, but not be limited to, the following provisions:

- a) Determination of the daily minimum, daily maximum and daily average DO and temperature for each monitoring station and each day monitored. Data shall not be censored. An accounting shall be made for the entire monitoring period. All data gaps shall be fully explained;
- b) An upstream/downstream comparison of the DO and temperature including the frequency and magnitude of any values that exceed or violate the standard at each station;
- c) An evaluation of the relationship between any observed temperature or DO violations and other environmental factors that were monitored such as time of day, stream flow, sunlight, temperature, chlorophyll level, instream chemistry and operating characteristics of the dam; and
- d) All quality assurance data shall be submitted for each reporting period.

...

4.1.13 After two (2) years of monitoring, WE may send a written request to the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ, and the Northeast Region Water Leader of the WDNR to change the frequency of or eliminate temperature and/or DO monitoring. After receiving written notification from the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ and the Northeast Region Water Leader of the WDNR, alternative monitoring frequencies for temperature and DO may be implemented as determined by the above individuals.

4. Sediments

Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994) United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)

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THE 1994 SETTLEMENT AGREEMENT

The principal terms of the 1994 settlement agreement are as follows:

1. Carolina Power will continue its dioxin sampling program in Waterville Lake until the State of North Carolina rescinds its fish advisory. If the upstream paper company (the source of the dioxin in the reservoir's sediments) terminates its sampling program, Carolina Power will expand its sampling program as described in the Settlement Agreement. The license will reserve to the Commission the right to require Carolina Power to take other actions in the future if the Commission determines such actions to be necessary and in the public interest, and will reserve to Carolina Power the right to seek relief from the requirement to expand its sampling program.

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The settlement agreement also provides that, at the end of the fourth calendar year after the issuance of the new license for the Walters Hydroelectric Project, Carolina Power will file a report with the Commission recommending what further action, if any, should be taken to address dioxin contamination of sediments in the project reservoir. The agreement provides that, after notice and opportunity for hearing and after consultation with the state and federal agencies, and upon a finding that such action is necessary and in the public interest, the Commission may require

Carolina Power to take appropriate action to address dioxin contamination of sediments in the project reservoir.

In areas of Waterville Lake, dioxin-contaminated sediments lie close to the lake's surface. Lowering of the water surface elevation would expose contaminated sediments to the effects of scour and increase the likelihood of these sediments being resuspended into the water column. Therefore, as part of the settlement agreement, Carolina Power has agreed not to allow water in the project reservoir to drop below elevation 2232 feet National Geodetic Vertical Datum (NGVD). Establishing a minimum operating reservoir level will minimize the disturbance of contaminated sediments and will allow natural encapsulation processes to occur. The settlement agreement contains a provision which will allow limited reservoir drawdown below elevation 2232 feet NGVD. The settlement agreement provides that Carolina Power will not be found in violation-of-the minimum reservoir surface water elevation requirement so long as the reservoir does not fall below elevation 2232 feet NGVD for more than 120 hours in any one calendar year, below 2232 feet NGVT) for more than 30 hours in any one seven-day period, or below 2228 feet NGVD at any time.

We agree that establishing a minimum reservoir surface water elevation will help minimize the disturbance of sediments within the reservoir and that this will help improve reservoir water quality by allowing the natural encapsulation of the dioxin contaminated sediments to occur. Accordingly, we will accept the minimum reservoir surface water elevation provision of the settlement agreement and include it in the license as Article 403.

The Walters Project dam is equipped with a low-level outlet structure which is controlled by a Johnson valve on the downstream side of the dam. Operation of the Johnson valve could cause erosion and resuspension of contaminated bottom sediments, which would be released downstream. In 1980, the Johnson valve was used to lower the lake level to inspect the intake structure and diversion tunnel. The opening of the Johnson valve at that time resulted in significant quantities of sediments being released downstream. To prevent such releases in the future, Carolina Power, Tennessee, and North Carolina signed a three party agreement in 1988 which allows operation of the Johnson valve only in emergency situations.

The EA found no technical reason why the 1988 agreement should not be made part of the license. However, the settlement agreement goes beyond the restrictions contained in the three party agreement by requiring Commission approval for any use of the Johnson valve. Therefore, the settlement agreement provides greater protection to the water quality in the Tennessee portion of the Pigeon River from the release of dioxin-contaminated sediments contained in Waterville Lake than is currently available under the three-party agreement. Accordingly, we are including Article 404, which prohibits the use of the Johnson valve unless ordered by the Commission or agreed to in writing by North Carolina and Tennessee Wildlife with the prior approval of the Commission.

(See also the Consumers Power Company Settlement, November 11, 1992 and the Wilderness Shores Settlement Agreement, July 29, 1996 in Section II.C.8, Studies and Monitoring, below.)

5. Metals, Organics and Inorganics

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

In the settlement agreement, the parties have adopted the recommendation made by the staff in the EA, with modifications. The settlement agreement provides that Carolina Power will monitor concentrations of dioxin and furans in edible fillets from predatory and bottom-feeding fishes in the project reservoir. The monitoring will continue until otherwise ordered by the Commission or until North Carolina rescinds its fish consumption advisory for the project reservoir, whichever occurs first. Carolina Power will also file with the Commission the dioxin monitoring reports on the project reservoir now being prepared each year by Champion International. If, in any year, Champion International does not conduct reservoir dioxin sampling, Carolina Power will conduct the sampling.

The settlement agreement also provides that, at the end of the fourth calendar year after the issuance of the new license for the Walters Hydroelectric Project, Carolina Power will file a report with the Commission recommending what further action, if any, should be taken to address dioxin contamination of sediments in the project reservoir. The agreement provides that, after notice and opportunity for hearing and after consultation with the state and federal agencies, and upon a finding that such action is necessary and in the public interest, the Commission may require Carolina Power to take appropriate action to address dioxin contamination of sediments in the project reservoir.

We conclude that monitoring fish tissue levels of dioxin would be useful in confirming the apparent trend of declining dioxin levels in fish from Waterville Lake and the Pigeon River. Monitoring data would be useful to state agencies for determining if and when state health advisories could be lifted. Furthermore, rescinding health advisories (if warranted) may obviate the need for more expensive remediation, efforts such as artificial encapsulation of lake sediments. However, if monitoring indicates that fish tissue levels have not dropped below state advisory limits, or are not declining at a sufficient rate, the Settlement agreement requires Carolina Power to reevaluate the dioxin issue at the end of four years. At that time, the Commission could require Carolina Power to take a more active approach such as some form of encapsulation. Therefore, we are incorporating the provisions of the settlement agreement, stated above, into Article 409 of the new license for the Walters Hydroelectric Project.

In areas of Waterville Lake, dioxin-contaminated sediments lie close to the lake's surface. Lowering of the water surface elevation would expose contaminated sediments to the effects of scour and increase the likelihood of these sediments being resuspended into the water column. Therefore, as part of the settlement agreement, Carolina Power has agreed not to allow water in the project reservoir to drop below elevation 2232 feet National Geodetic Vertical Datum (NGVD). Establishing a minimum operating reservoir level will minimize the disturbance of contaminated sediments and will allow natural encapsulation processes to occur. The settlement agreement contains a provision which will allow limited reservoir drawdown below elevation 2232 feet NGVD. The settlement agreement provides that Carolina Power will not be found in violation-of.-the minimum reservoir surface water elevation requirement so long as the reservoir does not fall below elevation 2232 feet NGVD for more than 120 hours in any one calendar year, below 2232 feet NGVD for more than 30 hours in any one seven-day period, or below 2228 feet NGVD at any time.

We agree that establishing a minimum reservoir surface water elevation will help minimize the disturbance of sediments within the reservoir and that this will help improve reservoir water quality by allowing the natural encapsulation of the dioxin contaminated sediments to occur. Accordingly, we will accept the minimum reservoir surface water elevation provision of the settlement agreement and include it in the license as Article 403.

The Walters Project dam is equipped with a low-level outlet structure which is controlled by a Johnson valve on the downstream side of the dam. Operation of the Johnson valve could cause erosion and resuspension of contaminated bottom sediments, which would be released downstream. In 1980, the Johnson valve was used to lower the lake level to inspect the intake structure and diversion tunnel. The opening of the Johnson valve at that time resulted in significant quantities of sediments being released downstream. To prevent such releases in the future, Carolina Power, Tennessee, and North Carolina signed a three party agreement in 1988 which allows operation of the Johnson valve only in emergency situations.

The EA found no technical reason why the 1988 agreement should not be made part of the license. However, the settlement agreement goes beyond the restrictions contained in the three party agreement by requiring Commission approval for any use of the Johnson valve. Therefore, the settlement agreement provides greater protection to the water quality in the Tennessee portion of the Pigeon River from the release of dioxin-contaminated sediments contained in Waterville Lake than is currently available under the three-party agreement. Accordingly, we are including Article 404, which prohibits the use of the Johnson valve unless ordered by the Commission or agreed to in writing by North Carolina and Tennessee Wildlife with the prior approval of the Commission.

See also the Consumers Power Company Settlement, November 11, 1992 and the Wilderness Shores Settlement Agreement, July 29, 1996 in Section II.C.8. Studies and Monitoring, below.

6. Temperature

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

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6.1 CPCO shall study, plan, design, construct, operate and maintain water quality enhancements in accordance with this section. CPCO shall fund capital costs in the amount of \$1.75 million in 1992 dollars (as adjusted for the CPI) for study, planning, design and construction of water quality enhancements, including dissolved oxygen (D.O.) enhancement measures and temperature enhancement measures as described herein. Operation and maintenance costs related to the enhancement measures are not included in the \$1.75 million.

6.2 After installation of water quality monitoring instruments pursuant to Paragraphs 6.4 and 8.1, CPCO will evaluate the water temperature and D.O. data received from the monitoring devices and shall submit a water temperature and D.O. evaluation to the resource agencies. The evaluation shall be for the purpose of determining whether a project will attain the water quality limits specified in Paragraphs 6.5 and 6.6. For those projects that have not attained the water quality limits, the evaluation will also analyze whether the limits can be attained by: 1) increasing the volume of cooler water passing through the plant turbines during the summer months; and/or 2) engineering or operational measures to increase downstream D.O. concentrations. The resource agencies will review the evaluation and provide comments to CPCO within 45 days of receipt. For any project whose compliance with the limits of Paragraphs 6.5 and 6.6 will improve from an increase in cooler water or D.O., CPCo shall provide the name(s) and qualification(s) of recommended consulting firm(s) experienced in the design and installation of measures for: 1) increasing the volume of cooler water to be passed through the project turbines during the summer months; and/or 2) increasing D.O. concentrations through engineering or operational

measures, as appropriate, for resource agencies review. Within eighteen (18) months of the resource agencies review, CPCO shall contract with the consulting firm(s) and complete an evaluation of designs, applicability and costs of D.O. and/or water temperature enhancement measures at each hydroelectric project that has not met the applicable water quality limits specified in Paragraphs 6.5 and 6.6. The results of the evaluation shall be provided to the resource agencies for review and comment. If the resource agencies recommend a field test to evaluate a measure for increasing the volume of cooler water or D.O., or recommend installation of such a measure, CPCO shall (subject to the dispute resolution process in Section 14) make application to FERC within 180 days of receipt of the resource agencies recommendation. When FERC approves the field test or the measure, CPCO, within 90 days, shall apply for necessary permits and approvals and begin contracting for the field test or the installation.

6.3 CPCO shall develop and implement, in consultation with the resource agencies, a water quality, fish contaminant and sediment quality monitoring program as outlined in Appendix C.

6.4 CPCO shall contract with the United States Geological Survey (USGS) pursuant to Paragraph 8.1 for the installation of continuous recording instruments at locations reviewed by the resource agencies both upstream and below the discharge from each of its hydroelectric projects to monitor water temperatures and D.O. concentrations. Water temperature and D.O. data shall be recorded on the hour and be provided to the resource agencies on a quarterly basis.

6.5 The following water quality limits apply to the Rogers and Hardy Projects when flows are greater than or equal to monthly 95% accedence flows:

A. Monthly average temperature downstream of either project shall not exceed the following temperatures (OF).

J	F	M	A	M	J	J	A	S	O	N	D
38	38	41	56	70	80	83	81	74	64	49	39

B. CPCO shall not warm the Muskegon River below either project greater than a monthly average of 5 Degrees F above the temperature measured upstream of the project.

C. Dissolved oxygen concentrations in the project tailwaters shall not be less than 5 milligrams per liter (mg/l) at any time unless CPCO demonstrates to the WRC that these D.O. limits are not attainable through further feasible and prudent measures or the variation between the daily average and daily minimum D.O. concentrations in the river exceeds 1 mg/l. If the WRC agrees with CPCo's demonstration, D.O. concentrations in project tailwaters shall not be less than 4 mg/l at any time or less than 5 mg/l as a daily average during the warm weather season (June through September) until such time as the WRC causes the preparation and implementation of a comprehensive plan to upgrade these waters to 5 mg/l at any time.

D. CPCO shall prepare operating procedures to address water quality conditions which deviate from the above limits.

6.6 The following water quality limits apply to the Croton, Mio, Alcona, Loud, Five Channels, Cooke, Foote, Hodenpyl and Tippy Projects when flows are greater than or equal to monthly 95% accedence flows:

A. Monthly average temperature downstream of the projects shall not exceed the following temperatures (OF):

J	F	M	A	M	J	J	A	S	O	N	D
38	38	43	54	65	68	68	68	63	56	48	40

B. CPCO shall not warm the river below any project greater than a monthly average of 2 Degrees F above the temperature as measured upstream of the project.

C. Dissolved oxygen concentrations in the project tailwaters shall not be less than 7 mg/l at any time unless CPCO demonstrates to the WRC that these D.O. limits are not attainable through further feasible and prudent measures or the variations between the daily average and daily minimum D.O. concentrations in the river exceeds 1 mg/l. If the WRC agrees with CPCO'S demonstration, D.O. concentrations in project tailwaters shall not be less than 6 mg/l at any time during the warm weather season (June through September) until such time as the WRC causes preparation and implementation of a comprehensive plan to upgrade these waters to 7 mg/l at any time.

D. CPCO shall prepare operating procedures to address water quality conditions which deviate from the above limits.

6.7 The numerical monthly average temperature limits set forth in this Settlement may be exceeded for short periods with approval from WRC when natural water temperatures measured upstream of the project exceed the ninetieth percentile occurrence of natural water temperatures (the monthly average temperatures in Paragraphs 6.5.A and 6.6.A are the ninetieth percentile values plus the temperature increases allowed in Paragraphs 6.5.B and 6.6.B). In all cases, temperature increases shall not be greater than the natural water temperature as measured upstream of the project plus the increase allowed, respectively, in Paragraphs 6.5.B and 6.6.B.

6.8 Any party to this Settlement may petition the WRC during every fifth year after the signing of this Settlement, to modify the D.O. or temperature limits contained herein and in the State Water Quality Certification to ensure the protection of the public health, welfare, safety, and the natural resources of the State of Michigan, including the fishery resources.

6.9 If CPCO is not in compliance with any water quality limit in this Section, MDNR may assess the following liquidated damages for damages to the natural resources for non-compliances that occur more than two years after installation of the monitoring equipment required in Paragraphs 6.4 and 8.1 or more than three years from license issuance, whichever is earlier. The MDNR shall not assess liquidated damages for any non-compliance under both this Settlement and the Water Quality Certificate. Payment shall be made in the manner and be used for the purposes provided in Paragraph 5.3.

Liquidated damages shall accrue during the pendency of any dispute, but payment of such damages shall be stayed until the dispute is resolved or the WRC issues its final determination in accordance with Section 14, whichever is earlier.

A. For accedences of temperature limits:

Liquidated Damages Per Temperature Accedence(s) Per Month/Per Project: \$1,500

(1) Damages may only be assessed at any project where temperature accedence(s) under Paragraphs 6.5.A or 6.6.A have occurred in two or more months in any calendar year. In the event accedences occur in two or more months, damages may be assessed for the first two months of accedence and every month of accedence thereafter.

(2) Damages may only be assessed at any project where temperature accedence(s) under Paragraphs 6.5.B or 6.6.B have occurred in two or more months in any calendar year above the upstream water temperature. In the event accedences occur in two or more months, damages may be assessed for the first two months of accedence and every month of accedence thereafter.

(3) The damages in any given month at any project shall not be greater than \$3,000 for temperature accedences.

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E. Temperature Monitoring

The signators agree that: Niagara Mohawk will establish, operate and maintain a temperature monitor at the Lighthouse Hill Reservoir for NYSDEC's use in managing the fishery resources downstream of Lighthouse Hill. Niagara Mohawk will investigate the feasibility of Niagara Mohawk installing another temperature monitor at the gaging station in Pineville, New York. Likewise, the NYSDEC has indicated that they would establish and operate a temperature monitor in the Salmon River at the Great Lakes Fish Hatchery. Niagara Mohawk will collect and compile temperature data from all temperature monitors.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

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4.1. Water Quality

4.1.1 WE shall not discharge water that violates the water quality standards specified in Paragraphs 4.1.2 through 4.1.5.

4.1.2 WE shall not discharge water that exceeds the following maximum temperature water quality standard in degrees Fahrenheit (F) from the Way, Hemlock Falls, Peavy Falls, Michigamme Falls, Lower Paint, Twin Falls, Kingsford and Big Quinnesec Falls Projects when flows are greater than or equal to the 95 percent accedence.

J	F	M	A	M	J	J	A	S	O	N	D
38	38	41	56	70	80	83	81	74	64	49	39

4.1.3 WE shall not warm the Michigamme, Paint and Menominee Rivers below the Projects covered by this Settlement greater than 5 F above the existing water temperatures measured above the listed Projects.

4.1.4 The measurement points for temperature compliance for all Projects except Way and Hemlock Falls Dams shall be the river above the project impoundment and the tailwater of each dam. The compliance points for the Way and Hemlock Falls Dam complex shall be the Michigamme River above the Michigamme Reservoir and the tailwater of Hemlock Falls Dam.

4.1.8 WE shall continuously monitor temperature on an hourly basis upstream and downstream of all Projects covered by the Settlement. DO levels shall be monitored on an hourly basis from June 1 until September 30 downstream of the Way Dam, Hemlock Falls Dam, Peavy Falls Dam, Michigamme Falls Dam and Lower Paint Dam. DO levels shall be monitored on an hourly basis from June 1 until September 30 above and below the Twin Falls Dam, Kingsford Dam, and Big Quinnesec Falls Dam. If during the impoundment profile sampling (detailed in Paragraph 4.1.10) the impoundments are found to be stratified during May and September, then the DO sampling will commence within five (5) days of stratification detection in May and will continue through October 30 if the impoundments are found to be stratified in September. The location of the upstream and downstream water quality monitoring stations shall be determined in consultation with the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.9 All temperature and DO recording equipment shall be calibrated according to manufacturer's specifications before each unattended monitoring period. Calibration shall be rechecked before any servicing of the probe including cleaning. Temperature data collection devices shall be checked with a National Institute of Science and Technology certified thermometer at the end of each unattended monitoring period. The meter used for DO

monitoring shall be serviced and recalibrated at least weekly but more frequently if the meter error is unacceptable with a weekly servicing schedule. Thermometers will be checked concurrently with any servicing or data downloading with a National Institute of Science and Technology certified thermometer. The DO meter error or drift at the end of an unattended monitoring period shall be less than 1 mg/l 70 percent of the time. More frequent service visits shall be scheduled if this criterion is not being met.

4.1.10 WE shall measure temperature and DO in all of the Projects covered by this Settlement. Specifically, surface to bottom vertical profiles of temperature and DO shall be made in the one deepest location in the vicinity of the project intake, every two weeks from June 1 through August 31 and once monthly for the months of February, April, May, September and October. Measurements shall be made at 1.0 meter increments until water temperature is found to change more than 1.0 degrees Centigrade (C) per meter then sampling shall be done at 0.5 meter increments. Temperature and DO measurements shall be replicated at the surface and at the bottom with a replicate measurement system such as a Winkler analysis if a probe is used for profiling. If replicate errors are greater than 1 mg/l for DO or 1.8 F for temperature, then the measurement system shall be evaluated, corrective actions shall be taken, and the measurements shall be repeated. Secchi disk depth measurements shall be made at the same time as the profiling. U.S. Environmental Protection Agency (EPA) approved methods shall be used. Within 30 days, if impoundment DO levels in the vicinity of the intake fall below 5 mg/l in any of the impoundments, WE shall develop a monitoring program for the downstream tailwaters of the affected impoundment for review and approval by the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.11 WE shall compile and summarize all temperature and DO data in annual written reports provided to the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the WDNR Northeast Region Water Leader. Reports shall be made immediately any time water quality violations are found and when the reading is within 0.5 mg/l DO standards and within 2 Degrees F of the temperature standard in any given month. At all other times, water quality data will be provided to the MDNR-MDEQ FERC Coordination Unit and WDNR Northeast Region Water Leader within five (5) working days of the request. For profile sampling, the results of all measurements shall be submitted including any replicate measurements. For continuous monitoring stations the reports shall include, but not be limited to, the following provisions:

- a) Determination of the daily minimum, daily maximum and daily average DO and temperature for each monitoring station and each day monitored. Data shall not be censored. An accounting shall be made for the entire monitoring period. All data gaps shall be fully explained;
- b) An upstream/downstream comparison of the DO and temperature including the frequency and magnitude of any values that exceed or violate the standard at each station;
- c) An evaluation of the relationship between any observed temperature or DO violations and other environmental factors that were monitored such as time of day, stream flow, sunlight, temperature, chlorophyll level, instream chemistry and operating characteristics of the dam; and
- d) All quality assurance data shall be submitted for each reporting period.

4.1.12 WE shall monitor water, sediment, and fish according to the provisions of Appendix 3. WE may send a written request to the Program Manager for the MDNR-MDEQ FERC Coordination Unit, and Northeast Region Water Leader of the WDNR to change the monitoring frequency, chemical analyses, or target fish species listed in Appendix 3. Alternative monitoring frequencies, chemical analyses or target fish species may be implemented by WE upon written approval of the above individuals.

4.1.13 After two (2) years of monitoring, WE may send a written request to the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ, and the Northeast Region Water Leader of the WDNR to change the frequency of or eliminate temperature and/or DO monitoring. After receiving written notification from the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ and the Northeast Region Water Leader of the WDNR, alternative monitoring frequencies for temperature and DO may be implemented as determined by the above individuals.

4.1.14 As conditions warrant, the monitoring frequencies, methods and locations may be changed at the discretion of the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ and the Northeast Region Water Leader of the WDNR.

4.1.15 If joint MDNR-MDEQ FERC Coordination Unit role is changed, the Program Manager for the MDNR FERC Coordination Unit will provide notice to WE. Upon notice, WE will substitute both the FERC Program Manager for the FERC Coordination Unit and the Chief of the Surface Water Quality Division of the MDEQ where the Program Manager for the FERC Coordination Unit occurs in this paragraph.

7. Control of Noxious Plants

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

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4.7. Nuisance Plant Control

4.7.1 WE shall, after consultation with the Team, file with the application for Commission approval, a nuisance plant control plan to include purple loosestrife and Eurasian water milfoil. The plan shall include, but not be limited to, the following:

- a) annual surveys of all impoundment shoreline to include all project waters and wetlands and 1/4 mile downstream of the project powerhouse;
- b) a survey period including the last week of July and the first week of August unless weather conditions that would affect peak blooming times dictate otherwise;
- c) specific protocols for mapping and estimating stand sizes of exotic plants to include:
 - 1) for purple loosestrife, there should be an estimate of the area of each stand to include percent cover and plant density;
 - 2) for Eurasian water milfoil, the perimeter should be marked around each matted area with floating markers. The mat perimeter should be measured, mat density determined and overall mat thickness estimated using multiple locations within each mat;
 - 3) locations for each species should be permanently marked using a shoreline benchmark with a known GPS coordinates and the actual stands should be delineated on a map using GPS coordinates; and
 - 4) any current and readily available true color aerial photos of the project lands should be used to assist in detecting purple loosestrife.
- d) that all small stands of purple loosestrife shall be physically removed when found in the annual surveys;
- e) provision for an annual consultation with the Resource Agencies on exotic plant data and actions to be taken in the upcoming year. This consultation shall examine if any new exotic plants have been found on the project lands;

- f) a statement that the Resource Agencies are to provide technical assistance for control and/or elimination of exotic plants. WE is the responsible party that will conduct the actual removal of exotic plants upon the request of the Resource Agencies; and
- g) a public education section concerning exotic plants, their impacts and how to control their spread. Advisory signs will be posted at all public access points to project impoundments that identify exotic species of concern and document steps to be taken to prevent the spread of these species. The sign should be developed in consultation with the Resource Agencies. If these exotic species are found in the project lands, the plan should provide for the development and dissemination at all public access point of project specific information on the control and spread of exotic species. This information should be developed, if not available, in consultation with the Resource Agencies.

Appendix 4, p. 7**SPECIFIC MANAGEMENT RECOMMENDATIONS****PROBLEM SPECIES:**

- Wild Parsnip: Found on roadsides in the general area. Annually search for wild parsnip and remove all plants found by hand digging.
- Buckthorn: Found in scattered locations. Remove all plants found by pulling, cutting, or by the use of herbicides.

1. MANAGEMENT TERRESTRIAL AND AQUATIC COMMUNITIES, GEOLOGIC, AND ARCHEOLOGICAL FEATURES.

- a. Removal of plants, plant parts, animals, rocks and minerals, and artifacts is generally not permitted. However, hunting, fishing, trapping, berry picking and nut gathering is permitted. Collecting for scientific purposes may be allowed by Department permit.
- b. Cutting or removal of living or dead trees, standing or down, or other vegetation in forest communities, is generally limited to that essential to meet public safety requirements. Cut material will be left within the natural area. Death of trees due to blowdown, fire, flooding, insects and disease is regarded as a normal natural occurrence. The Department and the property manager may consider deviation from this procedure in the event of large scale mortality, on a case by case basis, with the advice of Council.
- c. Control of plant succession with the use of fire, cutting, Mowing or water level manipulation, may be employed to maintain a particular natural area type, or control of abnormal animal populations may be employed if provided for in this plan.
- d. Introductions of exotic plant and animal species is prohibited. Reintroduction of an extirpated species, or introduction of a species of concern which is known to inhabit a particular community and edaphic condition may be permitted with the advice of the Council and consent of the Department.
- e. Pesticides including herbicides, insecticides, fungicides and biological approval, with Council review, must be obtained for each case should an exception be necessary. Biological control agents are preferred over chemical agents.

8. Studies and Monitoring

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

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6.0 Water Quality

6.1 CPCo shall study, plan, design, construct, operate and maintain water quality enhancements in accordance with this section. CPCo shall fund capital costs in the amount of \$1.75 million in 1992 dollars (as adjusted for the CPI) for study, planning, design and construction of water quality enhancements, including dissolved oxygen (D.O.) enhancement measures and temperature enhancement measures as described herein. Operation and maintenance costs related to the enhancement measures are not included in the \$1.75 million.

6.2 After installation of water quality monitoring instruments pursuant to Paragraphs 6.4 and 8.1, CPCO will evaluate the water temperature and D.O. data received from the monitoring devices and shall submit a water temperature and D.O. evaluation to the resource agencies. The evaluation shall be for the purpose of determining whether a project will attain the water quality limits specified in Paragraphs 6.5 and 6.6. For those projects that have not attained the water quality limits, the evaluation will also analyze whether the limits can be attained by: 1) increasing the volume of cooler water passing through the plant turbines during the summer months; and/or 2) engineering or operational measures to increase downstream D.O. concentrations. The resource agencies will review the evaluation and provide comments to CPCO within 45 days of receipt. For any project whose compliance with the limits of Paragraphs 6.5 and 6.6 will improve from an increase in cooler water or D.O., CPCo shall provide the name(s) and qualification(s) of recommended consulting firm(s) experienced in the design and installation of measures for: 1) increasing the volume of cooler water to be passed through the project turbines during the summer months; and/or 2) increasing D.O. concentrations through engineering or operational measures, as appropriate, for resource agencies review. Within eighteen (18) months of the resource agencies review, CPCO shall contract with the consulting firm(s) and complete an evaluation of designs, applicability and costs of D.O. and/or water temperature enhancement measures at each hydroelectric project that has not met the applicable water quality limits specified in Paragraphs 6.5 and 6.6. The results of the evaluation shall be provided to the resource agencies for review and comment. If the resource agencies recommend a field test to evaluate a measure for increasing the volume of cooler water or D.O., or recommend installation of such a measure, CPCO shall (subject to the dispute resolution process in Section 14) make application to FERC within 180 days of receipt of the resource agencies recommendation. When FERC approves the field test or the measure, CPCO, within 90 days, shall apply for necessary permits and approvals and begin contracting for the field test or the installation.

6.3 CPCO shall develop and implement, in consultation with the resource agencies, a water quality, fish contaminant and sediment quality monitoring program as outlined in Appendix C.

6.4 CPCO shall contract with the United States Geological Survey (USGS) pursuant to Paragraph 8.1 for the installation of continuous recording instruments at locations reviewed by the resource agencies both upstream and below the discharge from each of its hydroelectric projects to monitor water temperatures and D.O. concentrations. Water temperature and D.O. data shall be recorded on the hour and be provided to the resource agencies on a quarterly basis.

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8.0 Stream Gauging and Water Quality Monitoring Facilities

8.1 CPCO shall fund capital costs in the amount of \$500,000 in 1992 dollars (adjusted for the CPI) to construct new or upgrade existing stream flow gauging and water quality monitoring facilities, including telemetry, to support run-of-river operations and monitor water quality at certain CPCO hydroelectric projects covered under this Settlement. Upon approval of the FERC, CPCO shall contract with the USGS for the installation, upgrading, maintenance and

operation of the flow gauging and water quality monitoring stations required under this Settlement.

Appendix 3, p. 75

**WATER QUALITY, SEDIMENT QUALITY AND FISH CONTAMINANT
MONITORING PROGRAM**

A. Water Quality

1. Proposed Locations in the Au Sable River
 - a. Mio, Alcona and Loud above the project, in the impoundment and in the tailwater.
 - b. Five Channels, Cooke and Foote, in the impoundment and in the tailwater.
2. Proposed Locations in the Manistee River
 - a. Hodenpyl above the project, in the impoundment and in the tailwater.
 - b. Tippy above the project (in the Manistee River and Pine River), in the impoundment (below the junction and in both arms) , and in the tailwater; above Stronach and Stronach impoundment (only if Stronach remains).
3. Proposed Locations in the Muskegon River
 - a. Rogers above the project, in the impoundment and in the tailwater.
 - b. Hardy and Croton in the impoundment (in both arms at Croton) and in the tailwater.
4. Samples shall be collected as follows:
 - a. Above impoundment in mid-channel locations.
 - b. Impoundment profile in deepest location.
 - c. Tailwater within 100 meters of outlet in mid-channel.
5. Frequency; samples shall be collected quarterly by seasons for one (1) year during the fifth, tenth, fifteenth, twentieth and twenty-fifth years of the license.
6. Parameters
 - Alkalinity as CaCO₃, mg/l
 - Chlorophyll a, mg/l (only in the impoundment)
 - Color, PCU's
 - Dissolved Sulfate (SO₄), mg/l
 - Hardness as CaCO₃, mg/l
 - Percent Oxygen Saturation
 - pH
 - Secchi Disk, Meters
 - Specific Conductance, umho
 - Total Ammonia, mg/l
 - Total Dissolved Solids, mg/l
 - Total Nitrate, mg/l
 - Total Nitrite, mg/l
 - Total Nitrogen (N), mg/l
 - Total Organic Carbon, mg/l
 - Total Phosphorus (P), mg/l
 - Total Suspended Solids, mg/l
7. Reservoir temperature and D.O. profiles will be collected in the deepest location of each impoundment.
8. Temperature and D.O. Frequency
 - a. Measurements shall be collected in February, June, July and August.

- b. Measurements shall be collected every 0.5 meters.

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

p. 1.3-1.5

A. WATER RESOURCE LICENSE CONDITIONS FOR ALL NINE DEVELOPMENTS

1. Water Quality Monitoring Program

MPC shall file with the FERC by April 1, 1997, for approval, a final Water Quality Monitoring Program for the 2188 projects from the Madison River above Hebgen Reservoir to the Missouri River near Fort Benton. The purpose of this monitoring program is to ensure "... that continued operations will be done in the best practicable manner to minimize harmful effects" (Administrative Rules of Montana (ARM) 16.20.632). The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to water quality.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring,
- c. biomonitoring,
- d. biocontaminant monitoring, and
- e. analysis and interpretation of monitoring results.

The monitoring program shall include a schedule for:

- a. implementation of the program,
- b. reporting and consultation with the Water Quality Technical Committee (WQTC) concerning the annual results from the program, and
- c. filing the results, agency comments, and MPC's response to agency comments with the FERC.

The program shall be approved by the WQTC prior to filing with the FERC, and MPC shall submit to the FERC an updated, WQTC-approved monitoring program every five years on April 1.

2. Water Quality Technical Committee

MPC shall continue to chair the inter-agency 2188 Water Quality Technical Committee (WQTC). WQTC members shall include the following federal and state agencies with resource management responsibilities: U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, U.S. Bureau of Land Management, U.S. Forest Service, MDHES/Water Quality Division, Department of Fish, Wildlife and Parks, and Montana Department of Natural Resources and Conservation.

MPC shall be responsible to:

- a. convene and facilitate WQTC meetings at least semiannually,
- b. provide technical input into the monitoring program,
- c. implement the water quality monitoring program, and
- d. submit an annual, WQTC-approved, report beginning April 1, 1998, to the FERC including:

- (1) summary of monitoring activities,
- (2) data management and analysis,
- (3) compliance with water quality act and administrative rules (ARM 16.20.632),
- (4) program accomplishments,

- (5) monitoring program expenses, and
- (6) projected expenses for the next year.

The WQTC members' duties are to:

- a. review, revise, and comment on the monitoring program and annual reports based upon pilot study and annual results,
 - b. provide adaptive management (see Definitions and the final application at pages E- 1 -9 to E- 1 - 1 1) of the program, and
 - c. oversee the allocation of monitoring p
3. Water Quality Protection, Mitigation, and Enhancement

MPC will submit a water quality protection, mitigation and enhancement program to the FERC on April 1 one year after issuance of the new license. Beginning within two years after issuance of the new license, on January 1 of each year, MPC will administer an annual water quality enhancement account of \$1 2,000 per year. All annual account contributions will be adjusted each year, beginning in 1 993, commensurate with the prior year's Consumer Price Index (CPI). Annual account funds not used by the WQTC in one year may be carried over to the same account on January 1 of the following year or may be transferred within a reasonable period of time (the same year) to a different annual account at the discretion of the affected Technical Advisory Committee.

MPC shall be responsible to report annually to the FERC on PM&E expenses and accomplishments. MPC shall be responsible to implement PM&E measures.

The Water Quality Monitoring Program and PM&E program will be based on the concept of adaptive management in determining priorities and schedules for funds paid out of the PM&E one-time and annual accounts. This process emphasizes collaboration but still places primary responsibility upon MPC. MPC will bear ultimate responsibility for ensuring that PM&E funds are spent on appropriate PM&E projects that comply with the intent and scope of the new FERC license.

Based upon water quality monitoring results, WQTC members shall be responsible to prioritized and select PM&E projects. MPC will seek to attain consensus among WQTC members in determining appropriate PM&E measures. In the event a consensus cannot be achieved, MPC will submit a written proposal to FERC including WQTC and resource agency comments. WQTC members will have 30 days to submit comments on the proposal to MPC. The MDHES/Water Quality Division will determine whether the MPC proposal is consistent with the requirements of 401 conditions and any applicable state laws or regulations. The FERC will determine whether the MPC proposal is reasonable and consistent with the requirements of the license and any applicable federal laws or regulations.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 29-32

4.1.7 WE shall, after consultation with the Team, file with the application for Commission approval a water quality monitoring plan to ensure that the above water quality limits are maintained. The monitoring plan shall include the provisions stated in Paragraphs 4.1.8 through 4.1.14.

4.1.8 WE shall continuously monitor temperature on an hourly basis upstream and downstream of all Projects covered by the Settlement. DO levels shall be monitored on an hourly basis from June 1 until September 30 downstream of the Way Dam, Hemlock Falls Dam, Peavy Falls Dam,

Michigamme Falls Dam and Lower Paint Dam. DO levels shall be monitored on an hourly basis from June 1 until September 30 above and below the Twin Falls Dam, Kingsford Dam, and Big Quinnesec Falls Dam. If during the impoundment profile sampling (detailed in Paragraph 4.1.10) the impoundments are found to be stratified during May and September, then the DO sampling will commence within five (5) days of stratification detection in May and will continue through October 30 if the impoundments are found to be stratified in September. The location of the upstream and downstream water quality monitoring stations shall be determined in consultation with the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.9 All temperature and DO recording equipment shall be calibrated according to manufacturer's specifications before each unattended monitoring period. Calibration shall be rechecked before any servicing of the probe including cleaning. Temperature data collection devices shall be checked with a National Institute of Science and Technology certified thermometer at the end of each unattended monitoring period. The meter used for DO monitoring shall be serviced and recalibrated at least weekly but more frequently if the meter error is unacceptable with a weekly servicing schedule. Thermometers will be checked concurrently with any servicing or data downloading with a National Institute of Science and Technology certified thermometer. The DO meter error or drift at the end of an unattended monitoring period shall be less than 1 mg/l 70 percent of the time. More frequent service visits shall be scheduled if this criterion is not being met.

4.1.10 WE shall measure temperature and DO in all of the Projects covered by this Settlement. Specifically, surface to bottom vertical profiles of temperature and DO shall be made in the one deepest location in the vicinity of the project intake, every two weeks from June 1 through August 31 and once monthly for the months of February, April, May, September and October. Measurements shall be made at 1.0 meter increments until water temperature is found to change more than 1.0 degrees Centigrade (C) per meter then sampling shall be done at 0.5 meter increments. Temperature and DO measurements shall be replicated at the surface and at the bottom with a replicate measurement system such as a Winkler analysis if a probe is used for profiling. If replicate errors are greater than 1 mg/l for DO or 1.8 F for temperature, then the measurement system shall be evaluated, corrective actions shall be taken, and the measurements shall be repeated. Secchi disk depth measurements shall be made at the same time as the profiling. U.S. Environmental Protection Agency (EPA) approved methods shall be used. Within 30 days, if impoundment DO levels in the vicinity of the intake fall below 5 mg/l in any of the impoundments, WE shall develop a monitoring program for the downstream tailwaters of the affected impoundment for review and approval by the Program Manager of the MDNR/MDEQ FERC Coordination Unit and the Northeast Region Water Leader of the WDNR (for those projects which are border projects).

4.1.11 WE shall compile and summarize all temperature and DO data in annual written reports provided to the Program Manager of the MDNR-MDEQ FERC Coordination Unit and the WDNR Northeast Region Water Leader. Reports shall be made immediately any time water quality violations are found and when the reading is within 0.5 mg/l DO standards and within 2 F of the temperature standard in any given month. At all other times, water quality data will be provided to the MDNR-MDEQ FERC Coordination Unit and WDNR Northeast Region Water Leader within five (5) working days of the request. For profile sampling, the results of all measurements shall be submitted including any replicate measurements. For continuous monitoring stations the reports shall include, but not be limited to, the following provisions:

- a) Determination of the daily minimum, daily maximum and daily average DO and temperature for each monitoring station and each day monitored. Data shall not be censored. An accounting shall be made for the entire monitoring period. All data gaps shall be fully explained;
- b) An upstream/downstream comparison of the DO and temperature including the frequency and magnitude of any values that exceed or violate the standard at each station;
- c) An evaluation of the relationship between any observed temperature or DO violations and other environmental factors that were monitored such as time of day, stream flow, sunlight, temperature, chlorophyll level, instream chemistry and operating characteristics of the dam; and
- d) All quality assurance data shall be submitted for each reporting period.

4.1.12 WE shall monitor water, sediment, and fish according to the provisions of Appendix 3. WE may send a written request to the Program Manager for the MDNR-MDEQ FERC Coordination Unit, and Northeast Region Water Leader of the WDNR to change the monitoring frequency, chemical analyses, or target fish species listed in Appendix 3. Alternative monitoring frequencies, chemical analyses or target fish species may be implemented by WE upon written approval of the above individuals.

4.1.13 After two (2) years of monitoring, WE may send a written request to the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ, and the Northeast Region Water Leader of the WDNR to change the frequency of or eliminate temperature and/or DO monitoring. After receiving written notification from the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ and the Northeast Region Water Leader of the WDNR, alternative monitoring frequencies for temperature and DO may be implemented as determined by the above individuals.

4.1.14 As conditions warrant, the monitoring frequencies, methods and locations may be changed at the discretion of the Program Manager for the FERC Coordination Unit for the MDNR and MDEQ and the Northeast Region Water Leader of the WDNR.

4.1.15 If joint MDNR-MDEQ FERC Coordination Unit role is changed, the Program Manager for the MDNR FERC Coordination Unit will provide notice to WE. Upon notice, WE will substitute both the FERC Program Manager for the FERC Coordination Unit and the Chief of the Surface Water Quality Division of the MDEQ where the Program Manager for the FERC Coordination Unit occurs in this paragraph.

Appendix 3

Water Quality Parameters

Water/Sediment/Fish Monitoring Requirements

Water Monitoring Requirement

Monitoring Locations:

1. Michigamme River above the Michigamme Reservoir
2. Fence River above the Michigamme Reservoir
3. Deer River above the Michigamme Reservoir
4. Michigamme Reservoir
5. Michigamme River immediately downstream of the Way Dam Powerhouse and Spillway
6. Hemlock Falls Impoundment
7. Michigamme River immediately downstream of the Hemlock Falls Impoundment
8. Michigamme River above Peavy Pond
9. Peavy Pond
10. Paint River above Lower Paint Impoundment
11. Lower Paint Impoundment

12. Paint River immediately below Lower Paint Impoundment
13. Paint Diversion immediately below Lower Paint Impoundment
14. Michigamme River immediately below the Peavy Falls Dam Powerhouse
15. Michigamme Falls Impoundment
16. Michigamme River immediately below Michigamme Falls Impoundment
17. Menominee River above the Twin Falls Impoundment
18. Twin Falls Impoundment
19. Menominee River immediately below Twin Falls Impoundment
20. Pine River above Kingsford Impoundment
21. Kingsford Impoundment
22. Menominee River immediately below the Kingsford Impoundment
23. Big Quinessec Falls Impoundment
24. Menominee River immediately below Big Quinessec Falls Impoundment

Sites 2 and 3 can be dropped if an acceptable empirical relationship between the values for the water quality parameters at these sites and the values at Site 1 can be developed. Site 8 can be dropped if an acceptable empirical relationship between the values for the water quality parameters at this site and the values at Site 7 can be developed. Site 16 can be dropped if an acceptable empirical relationship between the values for the water quality parameters at this site and the values at Site 15 and the Brule Tailwater Site can be developed. Site 19 can be dropped if an acceptable empirical relationship between the values for the water quality parameters at this site and the values at the Pine Project Tailwater can be developed. A two (2) year test period will be provided to allow for the development of these relationships.

Sample Collection

1. Above impoundments: in mid-channel locations.
2. Impoundment profile in the deepest location in the vicinity of the project intake.
3. Tailwater: within 100 meters of the outlet in a location to assure total immersion during tile unattended monitoring period.

All sites must be approved by the FERC Program Manager and the Northeast Region Water Leader of WDNR. If joint FERC Coordination Unit role is changed, the Program Manager for the FERC Coordination Unit will provide notice to WE and WE will substitute both the FERC Program Manager for the FERC Coordination Unit and the Chief of the Surface Water Quality Division of the MDEQ where the Program Manager for the FERC Coordination Unit occurs.

Parameters and Monitoring Frequency:

<u>Parameter*</u>	<u>Frequency</u>
Alkalinity	Quarterly every fifth year
Chlorophyll a	"
Color (PCU)	"
Dissolved Sulfates	"
Percent Oxygen Saturation	"
pH (S.U.)	"
Hardness	"
Secchi Depth (m)	"
Specific Conductivity (umhos)	"
Total Ammonia	"
Total Dissolved Solids	"
Total Nitrates	"
Total Nitrites	"

Conservation Provisions: Water Quality

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Total Nitrogen	"
Total Organic Carbon	"
Total Phosphorus	"
Total Suspended Solids	"
Temperature Profile (F)**	"
Dissolved Oxygen Profile**	"

* All units are mg/l unless otherwise indicated

** Temperature and dissolved oxygen profiles are only required for the impoundment monitoring locations. Profiles should be taken by sampling every 1.0 meter at the deepest location within the Impoundment until the temperature changes are greater than 1.0 C per meter then 0.5 meter will be the sampling interval.

Temperature and Dissolved Oxygen Profiles

1. Measurements shall be monthly collected in February, April, May, September and October, and biweekly from June 1 through August 31.
2. Measurements shall be collected every 1.0 meter until the temperature changes are greater than 1.0 C per meter then 0.5 meter will be the sampling interval.
3. Continuous monitoring of the temperature shall be conducted on a 1 hour frequency above and below all projects unless modified as noted above. DO shall be monitored at the sites noted above on at least a 1 hour frequency during June, July, August and September unless the impoundments are found to be stratified during May and September as stated above.

Sediment Monitoring Requirements

Monitoring Locations:

Three samples shall be collected in the deepest location of each of the following impoundments:

1. Michigamme Reservoir
2. Hemlock Falls Impoundment
3. Peavy Pond
4. Lower Paint Impoundment
5. Michigamme Falls Impoundment
6. Twin Falls Impoundment
7. Kingsford Impoundment
8. Big Quinnesec Falls Impoundment

Parameters and Monitoring Frequency

Samples shall be collected for the following parameters once in the twentieth (20) year of the license.

Parameter*

Oil and Grease

Percent Volatile Solids

Total Arsenic

Total Barium

Total Cadmium

Total Chromium

Total Copper

Total Lead

Total Manganese

Total Mercury

Total Nickel

Total Nitrogen

Total Organic Carbon

Total Phosphorus

Total Selenium

Total Silver

Total Zinc

Acid Volatile Sulfides

PCB

* All units are mg/kg unless otherwise indicated.

(See also Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188, in section II.C.1.. State Water Quality Standards)

D. RECREATION

1. Access

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

FERC Offer of Settlement, p. 3-4

B. ANGLER ACCESS - LAKE MICHIGAN

In order to address Subpart C of the August 11, 1987 FERC Order Modifying Mitigation Plan, this FERC Agreement provides for the establishment of angler access and related facilities in the City of Ludington and at Port Sheldon as further described in Appendix A or at other facilities agreed upon by the parties. These projects are to be designed and constructed in accordance with the provisions of the Americans With Disabilities Act, 42 U.S.C. §1201, *et seq.* The approximate capital cost of these projects is \$659,000. Should Consumers Power Company be unable to complete any of these projects due to Force Majeure as defined in Section IV, J hereto, then the Scientific Advisory Team will be responsible for overseeing the development by Consumers Power Company of appropriate and reasonably cost-equivalent alternatives, subject to the dispute resolution procedures herein and FERC review and approval as necessary. It is assumed that the projects described in Appendix A will involve a period of time to complete, not exceeding three years. If at the end of said three-year period the Appendix A projects are not completed, the Scientific Advisory Team will determine what, if any, time extensions are appropriate, subject to the dispute resolution procedures herein and FERC review and approval as necessary.

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 3-4

2. Canoe/Boat Take-out on Moshier Impoundment - Niagara Mohawk will provide a canoe take-out at the downstream end of the Moshier impoundment. The canoe take-out will be located on the southwest corner of the impoundment near the end of the existing access road. The portage trail from this takeout will use this access road and connect to the existing canoe portage trail near the powerhouse.

Vehicular access along the pipeline will not be provided except by permit for handicapped and scheduled whitewater releases. The at the Soft Maple campsite will provide access on an as-needed basis.

3. Canoe Put-in at Moshier Tailrace - Niagara Mohawk will consult with the Adirondack Mountain Club (ADK) to make minor improvements to the canoe portage facilities. Specifically, the width of the foot bridge along the portage may need to be improved.
4. Bypassed Reach Access Trail - Niagara Mohawk has to keep the existing bypassed (south side only - the trail crosses the bypassed three quarters of the way up the bypassed reach) and the canoe route access trail brushed. Other than the installation of trail markers, the trail will remain primitive and unimproved. The existing trail markers will be replaced with new trail markers designed and placed in consultation with ADK.
5. Pepperbox Wilderness Access Trail - This trail will be brushed by Niagara Mohawk.
6. Other - A kiosk will be installed near the existing Niagara Mohawk/NYSDEC parking lot located near the Moshier powerhouse. The kiosk will provide a map and a description of the Beaver River canoe route, portage, and foot trails.

p. 5-6

2. Rock Climbing - When the section of the bypassed reach that contains the cliffs and rock ledges (halfway down the northerly side of the bypass reach and known as "Eagle Canyon") is acquired, NYSDEC will provide access for rock climbing and other associated recreational activities. Niagara Mohawk will provide access to this area via the existing canoe portage trail located along the lower section of the south side of the bypassed reach.
3. Bypassed Reach Access Trail - Niagara Mohawk will keep the existing access trail along the south side of the bypassed reach brushed. Other than the installation and maintenance of trail markers, the trail will remain primitive and unimproved.
4. Other - The Niagara Mohawk road along the pipeline will be open to the public. Niagara Mohawk will work with the ADK to make minor improvements to the canoe put-in located near the tailrace of the powerhouse and to design and place the trail markers.

p. 7

D. Recreation

The following will be provided:

1. Boat Launch at Proposed Campground - The boat launch at the proposed campground will be a car-top launch and not a ramped/trailer launch as in Niagara Mohawk's FERC license application.
2. Island Campgrounds - The campgrounds on the islands will be primitive.
3. Canoe Put-in at Soft Maple Tailrace - Niagara Mohawk will consult with the ADK to make minor improvements to the canoe portage facilities.
4. Bypassed Reach Access Trail - Niagara Mohawk will keep the access trail along the south side of the bypassed reach brushed. Other than the installation of trail markers, the trail will remain primitive and unimproved.

p. 8

D. Recreation

No additional recreational facilities will be required beyond those already provided in the license application and AIR responses filed with FERC.

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D. Recreation

The following will be provided:

1. Canoe Route - Niagara Mohawk will consult with the ADK to design the canoe route portages.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 4

L. Access

Any access granted or acquired for recreational purposes in the context of this Settlement will be for general public use and not restricted to fishing.

p. 6

1. Portage Trail -- License will provide a portage trail on licensee's lands from the existing cartop boat launch on the north shore to a put-in below the tailrace, details to be determined in consultation with members of the Black River Advisory Council.
2. Cartop Boat Launches -- Licensee will provide overland access to a new cartop boat launch at the downstream end of the new portage trail described in III.C.I., above. Licensee will also continue to provide access to and parking at the existing cartop boat launch as this will serve as the starting point of the new portage trail.

p. 7

1. Cartop Boat Take-out/Put-in at Deferiet Impoundment Licensee will provide a new cartop boat put-in/take-out on the north shore of the Deferiet impoundment above the existing boat barrier, to include a 6 to 8 car capacity parking area with access from NYS Route 3.
2. Cartop Boat Put-in at Deferiet Bypassed Reach -- Licensee will provide a canoe put-in approximately 200 feet below the Deferiet dam. Signs here shall warn of downstream whitewater associated with use of this put-in.
3. Recreational Access to the Black River at Deferiet Bypass/Tailrace Confluence -- Licensee in cooperation with the Village of Deferiet will support cooperative development of recreational access to the Black River on Village of Deferiet and licensee's land about 8,000 feet downstream of the dam, subject to approval of licensee's plans submitted to the Village of Deferiet and cooperation of the Village of Deferiet in making their lands available for the public.
4. Portage Trail -- Licensee will provide a portage trail across the headgate structure between the impoundment take-out and the bypass put-in.
5. South Shore Access -- The existing access along the south shore of the Deferiet impoundment will be maintained as is.

p. 8

V. KAMARGO DEVELOPMENT

B. Recreation

The following will be provided (see also Kamargo map in Attachment 3):

1. Portage -- Licensee will provide cartop boat portage accommodations described below:
 - a. Licensee will provide a cartop boat take-out from the impoundment at the upstream end of Poors Island between the Kamargo dam and canal headgate structure;
 - b. Licensee will provide a new cartop boat put-in at the power canal immediately downstream of the canal headgate structure;
 - c. Licensee will allow cartop boat passage down a portion of the power canal where water velocities are slow, and will install a new boat barrier and cartop boat take-out on the Poors Island side about 1,600 feet down the power canal from the canal head gate structure in the vicinity of the 23 kv transmission line crossing;

- d. Licensee will provide a foot trail from the power canal take-out connecting to the proposed Poors Island Recreation Area trail system;
 - e. Licensee will provide parking for 4 to 6 cars near the Poors Island access bridge approximately 300 feet from the canal take-out;
 - f. Licensee will provide a sign near the power canal take-out directing boaters to the cartop boat put-in near the Village of Black River overlook; and 9-Licensee's proposal for a cartop boat take-out on the north shore is withdrawn.
2. Cartop Boat Put-In Licensee will provide a new cartop boat put-in upstream of the Main Street bridge adjacent to the Village of Black River overlook and will modify the area to allow site access.
 3. Other -- Licensee will permit shoreline fishing on Poors Island and the north and south shorelines of the power canal upstream of the boat barrier described in V.8.1.c., via lands owned or controlled by the licensee.

p. 9**VI. BLACK RIVER DEVELOPMENT****B. Recreation**

The following will be provided (see also Black River map in Attachment 3):

1. Cartop Boat Launch and Take-out -- Licensee will provide a cartop boat launch and take-out downstream from the site shown in the application. At least four parking spaces will be provided along Huntington Street on licensee's land. Additional parking will be provided as described in VI.B.4. Handicapped (wheelchair) access will be also provided at this location.
2. Cartop Boat Put-in -- Licensee will provide a cartop boat put-in as far upstream in the bypass reach as possible.
3. Portage Trail -- Licensee will provide a portage trail using Huntington Road and an existing rough dirt road close to the bypass reach.
4. Other --
 - (a) Licensee will provide additional parking south of NYS Route 3 and east of the NYS Route 3 bridge. Licensee will maintain parking at the existing picnic area along the bypass reach south of NYS Route 3.
 - (b) Licensee will remove the present security fence but will install a protective railing at the present overlook and picnic area and in other locations where licensee deems such necessary for reason . able protection of the public.

p. 10**C. Recreation**

The following will be provided (see also Sewalls map in Attachment 3):

1. Cartop Boat Access -- Licensee will provide a new cartop boat take-out point at the river overlook on the south shore of the Sewalls impoundment. Signage will be provided at the take-out point to provide direction to potential downstream put-in locations.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 73**B. BOATING ACCESS SITES**

1. Where necessary, upgrade toilet/restroom facilities to meet current public health and safety standards and the provisions of the ADA of 1991.
2. Where necessary, provide concrete car/trailer boat launching ramp(s).

3. Where necessary, provide for a barrier-free skid pier adjacent to the concrete ramp.
4. Provide for adequate entrance road(s) and organized parking with gravel or paved surface.
5. Develop and implement a directional, informational and safety sign plan.
6. All existing and proposed boat dockage locations shall be reviewed by CPCO in consultation with the resource agencies and park management.
7. Public use fees for all such facilities shall be reviewed by CPCO in consultation with the resource agencies and park management.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)****Management Overview**

#5 REACH (2.6 miles) - 73 cfs or inflow, inflow will not be less than 57 cfs guaranteed from Harriman; 32, Class 4 whitewater releases from April to October. Provide boater access.

OBJECTIVE: provide whitewater boating opportunity and year-round cold water fishery.

FIFE BROOK REACH (non-project waters, 17.4 miles) - guaranteed year-round flow of 125 cfs; 106, Class 3 whitewater flow releases from April to October. Provide boater access and portages. OBJECTIVE: maintain high quality cold water fishery and whitewater boating opportunity on this long reach.

p. 11-12

A. NEP has proposed a comprehensive Recreational Plan which has been submitted to the FERC on October 1, 1993. NEP agrees to implement the plan, and install, operate and maintain the recreational facilities, existing and proposed, as described in this Plan and in accordance with the schedule provided therein. NEP agrees to provide free access with no charge or fees to the water and undeveloped Project land. NEP may charge reasonable user fees to recover the actual costs providing and operating either its developed public recreation facilities or other facilities that may be provided in the future which do not provide primary or sole direct access to the water or undeveloped Project lands.

2. Facilities**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)****p. 1**

Recreational facilities, as described in Niagara Mohawk Power Company's FERC license application and Additional Information Request (AIR) responses filed with FERC, will be provided at each applicable development according to any applicable schedules provided in those documents. Any exceptions or additions are described under the Recreation section for each development listed in this Settlement Offer. Existing recreational facilities, as described in the application, will be maintained.

p. 7**D. Recreation**

The following will be provided:

1. Boat Launch at Proposed Campground - The boat launch at the proposed campground will be a car-top launch and not a ramped/trailer launch as in Niagara Mohawk's FERC license application.

2. Island Campgrounds - The campgrounds on the islands will be primitive.
3. Canoe Put-in at Soft Male Tailrace - Niagara Mohawk will consult with the ADK to make minor improvements to the canoe portage facilities.
4. Bypassed Reach Access Trail - Niagara Mohawk will keep the access trail along the south side of the bypassed reach brushed. Other than the installation of trail markers, the trail will remain primitive and unimproved.

p. 8

D. Recreation

No additional recreational facilities will be required beyond those already provided in the FERC license application and AIR responses filed with FERC.

**Black River Project and Beebe Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 5

M. Recreation Facilities and Consultation

Recreational facilities, as described in the above-referenced FERC new license applications and any Additional Information Request (AIR) responses filed with FERC, will be provided at each applicable development within two years of effective date of license issuance. Any exceptions or additions are described under the Recreation section for each development listed in this Settlement Offer (and are generally indicated on maps for each development, included as Attachment 3). Indicated recreational facilities will be located on licensees' existing lands unless otherwise noted. Existing recreational facilities as described in the applications will be maintained unless otherwise noted herein.

Recreation enhancements will be developed in consultation with individual members of the Black River Advisory Council (described in Attachment 1).

p. 7

6. Other -- (a) Licensee will provide a whitewater hazard warning sign at the headgate for downstream boaters.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 16-18

In the settlement agreement, Carolina Power has agreed to implement the following proposals:

- (1) improving the canoe launch area below the project powerhouse;
- (2) constructing certain fishing access trails in the project area, and constructing a new one-half-mile-long segment of Rube Rock Trail to connect existing hiking trails;
- (3) improving picnicking, parking, playground, and restroom facilities near the project powerhouse;
- (4) constructing a visitor information center (kiosk) near the project powerhouse;
- (5) providing a parking area and information aide (map board and signs) at the Harmon Den day use area;
- (6) installing a warning siren at the project dam that would sound when releases are to be made from the dam;
- (7) installing warning signs to alert the public about possible releases of water from the project dam and to inform them of what actions to take when the siren sounds at the dam;

- (8) "bear-proofing" trash containers at recreation areas within the project boundary;
- (9) installing gates across new project access roads to deter poaching of bears by hunters;
- (10) continuing current policies regarding shoreline/reservoir management and use of the community building near the project powerhouse;
- (11) providing funding and design assistance totaling \$193,000 to the Forest Service to develop an overnight horse camp at Harmon Den within the Pisgah National Forest; and
- (12) monitoring recreational activity on project lands and waters to determine whether existing facilities are adequately meeting recreational needs.

The settlement agreement also reserves to the Commission the right to require Carolina Power to develop canoe/boat portage facilities adjacent to the project reservoir after the State Of North Carolina has totally rescinded its 1988 fish consumption advisory for the project reservoir. The portage facilities would consist of an access road, parking and turn-around areas, and a trail to the inlet area of Stevens Creek.

The EA states that recreational opportunities within the project boundaries are limited to the areas around the reservoir and the powerhouse. The land area around the reservoir is relatively small (a buffer zone of fourteen feet above the highwater line). The EA states that the Forest Service and the National Park Service indicate that improvements in horse camping opportunities on adjacent federal lands represent the greatest recreational need in the project area. The proposed funding of improvements to the Harmon Den horse camp, within the Pisgah National Forest, will provide a cost-effective means of helping to meet the recreational needs of the area. Accordingly Article 413 requires Carolina Power to provide \$193,000 in funding and design assistance to the Forest Service to develop the Harmon Den facility, which will be administered by the Forest Service.

We believe that the 12 recreational proposals described above are appropriate and cost-effective and will provide additional opportunities for public participation in the area's most popular recreational activities. Therefore, as specified in Articles 411, 412, 413, 415, and 416, we are requiring the licensee to implement these proposals.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 6-8

4.4 CPCo shall fund capital costs in the amount of \$2.5 million in 1992 dollars (adjusted for the Consumers Price Index (CPI)) for study, planning, design and construction of additional recreational facilities or facility improvements in accordance with the Plans. Operation and maintenance (O&M) costs related to the Land Management Plans are not included in the \$2.5 million. The O&M costs of \$132,000 for MDNR and \$183,000 for USFS managed facilities identified in Appendix A shall be remitted to the respective resource agencies by October 1 annually, upon license issuance, for use in the ensuing fiscal year. The resource agencies O&M costs are in 1992 dollars to be adjusted annually based on the CPI. No later than December 1 of each year after issuance of the new licenses pursuant to this Settlement, the MDNR and USFS will provide CPCO with a written statement of the prior year's O&M costs for the MDNR and USFS managed facilities identified in Appendix A and the next year's payment by CPCO shall be adjusted to reflect any unexpended amounts from a previous year.

4.5 Candidate new recreational facilities and proposed improvements to existing recreational facilities, are listed in Appendix A. The final list of recreational facility improvement and construction will be developed in the recreation section of the Land Management Plans based on:

Appendix A; compatibility with other aspects of the Land Management Plans listed in Paragraph 4.2; consultation with the resource agencies, the NPS, and the public; and the ongoing CPCO recreation use study being conducted in response to the FERC additional information requests dated May 21, 1992.

4.6 Prior to issuance by CPCO of any new leases (in this Settlement "leases" shall include licenses CPCO may grant for the use of project lands) or renewals of existing leases of hydroelectric project lands as defined by Section 10, CPCO shall consult with the resource agencies.

4.7 CPCO shall develop a revised lease instrument(s), in consultation with the resource agencies, to provide for management control of each lease. CPCO shall develop the instruments in accordance with applicable government standards, USFS special use permits and applicable Appendix B requirements. CPCO shall obtain resource agencies review of the lease instruments prior to use.

4.8 CPCO shall develop a lease inspection form based on the revised lease instrument provided for in Paragraph 4.7. CPCO shall subsequently inspect each leased recreational facility for compliance with the revised lease instrument provided for in Paragraph 4.7. These comprehensive inspections shall be completed within 18 months of each project's license issuance.

4.9 CPCO shall upgrade existing lease instruments to requirements specified in Paragraph 4.7 and shall require each lessee to upgrade facilities to meet the revised lease conditions as soon as practicable, but for leases that expire prior to January 1, 1994, not later than 10 years after each project's license issuance.

Appendix B

A. CAMPGROUNDS

1. Where necessary, upgrade toilet/restroom facilities to meet current public health and safety standards and the provisions of the Americans with Disabilities Act of 1991 (ADA).
2. Develop plans for providing a target 100 ft greenbelt between the water's edge and campsite locations where practical.
3. Consolidate existing multiple dock sites in a central location(s). The numbers and locations of dockage sites will be determined in consultation with the resource agencies and park management.
4. Develop a plan to reduce the number of seasonal sites and conversion of these sites to provide for additional transient camping with a limited stay of up to three (3) weeks. The appropriate mix of seasonal/transient sites will be determined in consultation with the resource agencies and park management.
5. Develop and implement a sign plan for each campground facility. For recreational facilities listed in Appendix A, the plan should ensure public access.
6. Require that each campground be licensed in accordance with state requirements and that copies of license(s) be provided to CPCO annually.

B. BOATING ACCESS SITES

1. Where necessary, upgrade toilet/restroom facilities to meet current public health and safety standards and the provisions of the ADA of 1991.
2. Where necessary, provide concrete car/trailer boat launching ramp(s).
3. Where necessary, provide for a barrier-free skid pier adjacent to the concrete ramp.
4. Provide for adequate entrance road(s) and organized parking with gravel or paved surface.
5. Develop and implement a directional, informational and safety sign plan.
6. All existing and proposed boat dockage locations shall be reviewed by CPCO in consultation with the resource agencies and park management.

7. Public use fees for all such facilities shall be reviewed by CPCO in consultation with the resource agencies and park management.

C. SWIMMING BEACH/PICNIC AREAS

1. Where necessary, provide toilet/restroom/change house facilities that meet current public health and safety and the provisions of the ADA of 1991.

2. Provide for the annual placement and maintenance of adequate safety buoys to delineate the perimeter of the swimming area(s).

3. Provide for adequate entrance road(s) and organized parking with a gravel or paved surface.

4. Public use fees for all such facilities shall be reviewed by CPCO in consultation with the resource agencies and park management.

5. Develop and implement a directional, informational and safety sign plan.

D. MARINAS

1. Where necessary, upgrade toilet/restroom facilities to meet current public health and safety standards and the provisions of the ADA of 1991.

2. Where necessary, provide watercraft sewage pump-out and disposal facilities that meet health and safety standards.

3. Provide a plan for safe and adequate dockage facilities. Proposed dockage plans shall be submitted to the resource agencies for review.

4. Provide for adequate entrance road(s) and parking with a gravel or paved surface.

5. Require that each marina facility is licensed in accordance with state requirements and copies of license(s) are provided to CPCO annually.

6. Public use fees for all such facilities shall be reviewed by CPCO in consultation with the resource agencies and park management.

7. Develop and implement a directional, informational and safety sign plan.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. 12

A. NEP has proposed a comprehensive Recreational Plan which has been submitted to the FERC on October 1, 1993. NEP agrees to implement the plan, and install, operate and maintain the recreational facilities, existing and proposed, as described in this Plan and in accordance with the schedule provided therein. NEP agrees to provide free access with no charge or fees to the water and undeveloped Project land. NEP may charge reasonable user fees to recover the actual costs of providing and operating either its developed public recreation facilities or other facilities that may be provided in the future which do not provide primary or sole direct access to the water or undeveloped Project lands.

p. 14

5) NEP agrees to implement the new and enhanced recreational facilities of particular importance to whitewater recreation as detailed in the recreation plans filed on October 1, 1993, in response to AIR No. 24.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

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B. THE DETROIT EDISON COMPANY PROJECTS AND LAND TRANSFER

Upon the effectiveness of the Settlement, The Detroit Edison Company shall begin the process to provide for the acquisition, development, operation and maintenance of the fishing access facilities as set forth in Appendix D. The net present value of the cost of such facilities to The Detroit Edison Company is approximately \$10.458 million and the net present value of the cost for the State of Michigan to provide like facilities is approximately \$24.7 million.

Appendix D**SECTION A CONSTRUCTION OF PUBLIC ACCESS ON EDISON PROPERTY****GENERAL OVERVIEW**

Detroit Edison Company will complete or arrange to have completed the following construction on land it owns at its Power Plant Properties. All projects to be completed subject to environmental or permitting problems. Company assumes risks of cost overruns, but shall not be required to engage in any additional activities even if those listed are completed at a cost below estimate. The Detroit Edison Company shall make its best efforts to obtain such necessary environmental approvals and permits. "Best efforts" shall include, but not be limited to, the submission of timely and administratively complete applications and the submission of any additional information requested by the permitting authority.

A predetermined amount has been allocated to each project. Unused funds from projects which cannot, because of environmental or permitting problems be completed, shall be allocated to remaining projects, as agreed by both parties.

Total allocated costs include NPV of O&M, insurance, project construction and other related costs.

Detroit Edison will complete or arrange to have completed the construction activities listed in APPENDIX D and for those projects on Edison's property only will be responsible for their operation and maintenance for the life of the agreement.

All construction to meet current Americans With Disabilities Act Specifications.

**I. HARBOR BEACH POWER PLANT
OVERVIEW**

This power plant is currently used only during peak use periods. It is located within the breakwater facility of Harbor Beach. The intensive use around the plant and shallow water conditions do not lend itself to boating or shore fishing. The deep warm water discharge area of the plant is a popular fishing location and needs access. A former Coast Guard Station is located to the South of the plant. Additional shore fishing is needed within this harbor facility. There are two locations which anglers currently fish. The first location is near the warm water discharge area and the second by the plant's access road. Both locations should be developed.

PROJECT DESCRIPTION**HARBOR BEACH POWER PLANT****Area #1: Discharge Canal**

- Provide access to approximately 250 lineal feet of canal bank fishing along West Bank.
- Develop Three (3) fishing nodes along the 250 lineal feet of bank.
- Develop asphalt walkway between each fishing node.
- Provide Two (2) Vault Toilets at old U.S. Coast Guard garage.*
- Upgrade U.S. Coast Guard roadway.*
- Provide car parking at U.S. Coast Guard roadway and turnaround.*
- Develop cross-over between U.S. Coast Guard garage area and the DECO property.*

* Requires negotiation with and approval from U.S. Coast Guard.

Area #2: Harbor Peninsula

Conservation Provisions: Recreation

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- Provide access to approximately 900 lineal feet of shoreline.
- Develop One (1) fishing node at the point.
- Develop asphalt walkway.
- Provide adjacent car parking with handicap spaces.

ALLOCATED COST \$ 770,487

II. MARYSVILLE POWER PLANT

OVERVIEW

This is an active power plant located on the St. Clair River in the City of Marysville, four miles South of Port Huron. A company park is located next to the facility that provides shore access to "employees only." An off shore oil unloading terminal for Great Lake Shipping and connecting ice boom are located at the river's edge.

PROJECT DESCRIPTION

MARYSVILLE POWER PLANT

Edison Park

- Provide access to approximately 300 lineal feet of shoreline by extension of existing bulkhead.
- Develop asphalt walkways and ramps.
- Provide car parking adjacent to Gratiot Avenue.
- Develop toilet facilities at the parking area.
- Allow the use of existing picnic shelter.
- Provide direct access off Gratiot Avenue.

ALLOCATED COST \$ 871,578

III. MONROE POWER PLANT

OVERVIEW

The Monroe Power Plant is an active generating facility located on Lake Erie, two miles south of the Sterling State Park Boating Access Site and one mile north of the Bolles Harbor Access Site. The Sterling facility provides access for 300 car/trailer units while Bolles Harbor provides access for 290. This is an area of high boating activity with each facility filling to capacity during the peak of the fishing season.

The Power Plant sits on a large piece of property and fronts on three water bodies; the River Raisin to the north, Lake Erie to the east and Plum Creek Bay to the south.

The plant's water intake and the shipping channel is located on the River. This intensive use does not lend itself to boating or shore fishing access. Water depths and coal storage along Lake Erie also limits access potential.

The plant's warm water discharge into Plumb Creek and property to the south of the plant could provide anglers year-round shore fishing access.

PROJECT DESCRIPTION

MONROE POWER PLANT

Area #1: Discharge Canal

- Provide access to approximately 2,000 lineal feet of bank fishing along West Bank.
- Develop Ten (10) fishing nodes along the 2,000 lineal feet of shoreline.
- Provide Six (6) parking areas with handicap spaces.
- Develop asphalt walkway between each fishing node.
- Provide Vault Toilets at Two (2) fishing nodes.
- Provide direct access from Front Street.

Area #2: Plum Creek (South Shore)

- Provide access to approximately 1,000 lineal feet of bankfishing.
- Develop Five (5) fishing nodes.

Conservation Provisions: Recreation

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- Develop a 72 foot wide Boat Launch Ramp.
- Provide adjacent parking for car/trailer combination.
- Provide adjacent parking for cars including handicap spaces.
- Provide Vault Toilets at Boat Launch Ramp and at centrally located node.
- Develop asphalt walkway between each fishing node.
- Provide direct access from Dunbar Road.

ALLOCATED COST \$3,373,454

IV. DELRAY POWER PLANT

OVERVIEW

The Delray facility has not been in operation for years and a number of structures have been salvaged or removed.

The site is 1,300' long with 710' frontage on the Detroit River. A concrete walled intake channel 100' wide by 600' long is located on the north property line, the remaining shoreline has a concrete and steel cap. The boiler room building, and a 100' x 400' office building on Jefferson Avenue along with a number of smaller buildings remain on site.

Historic Fort Wayne (federal ownership) borders the Delray site to the north. River Rouge's Belanger Park is located one mile south and Detroit's Riverside Park is located one mile north. Riverside provides shore fishing and boat access for 128 and Belanger 200.

The entire shoreline at the Delray facility has been protected by a steel sheet wall. This shoreline should be made accessible to the public for bank fishing and the discharge canal can be modified to include a new boating access site with parking. Make modifications for accessible fishing and development of a parking lot suitable to handle 50 cars and 50 car/boat trailer combinations.

PROJECT DESCRIPTION

DELRAY POWER PLANT

Detroit, Michigan

- Provide access to approximately 450 lineal feet of shoreline along existing Detroit River bulkhead,
- Develop a 54 foot wide Boat Launch Ramp in the Discharge Canal.
- Provide adjacent parking for car/trailer combination.
- Provide adjacent parking for cars including handicap spaces.
- Develop asphalt walkway along Detroit River bulkhead (approximately 450 feet).
- Provide Vault Toilets at Boat Launch Ramp.
- Provide direct access and entry road from Jefferson Avenue.

ALLOCATED COST \$1,384,481

TOTAL ALLOCATED COST FOR SECTION A \$6,400,000

SECTION B CONSTRUCTION OF PUBLIC ACCESS ON NON-EDISON PROPERTY

GENERAL OVERVIEW

Except as noted below, The Detroit Edison Company will complete or arrange to have completed, on non-Edison owned property, the construction described below. All projects to be completed subject to environmental or permitting problems, and shall conform to current Americans With Disabilities Act Specifications. Detroit Edison shall not be responsible for operational maintenance, insurance, etc. after completion of construction.

I. ELIZABETH PARK (WAYNE COUNTY GRANT)

OVERVIEW

Detroit Edison's Trenton Channel Power Plant is located south of Wayne County's Elizabeth Park. Intensive use on the power plant shoreline prohibits boating or shore fishing on plant property.

This proposal will provide a fund amount of \$157,500 to the County to be used as a match for state or federal recreational grant programs. This fund will provide for additional recreational fishing access on the Detroit River. It will fund development of all or part of this project.

Elizabeth Park has an updated boat launch, parking for 215 car/trailers, a 52 slip transient marina that opened in the Summer of 1993, and an unconstructed area for bank fishing on both the Detroit River and Slocum Creek.

Wayne County's Marine Safety Patrol office is located there along with moorage of a number of their boats. In the Winter, a patrol boat is moored in the warm water discharge of the Detroit Edison Trenton Channel Power Plant.

PROPOSED USE OF FUNDS**ELIZABETH PARK**City of Trenton, Wayne County

- Build up to 1,000 feet of fishing boardwalk with parking for up to 100 cars along the Detroit River on park property.

ALLOCATED COST (Funding) **\$ 157, 500**

Note: Company shall pay this amount either (1) as a match for state or federal recreational grant program to provide for additional recreational access at this site, or (2) to fund development of all or part of this project, up to a maximum of \$157,500.

II. BELANGER PARK (CITY OF RIVER ROUGE)**OVERVIEW**

The River Rouge Power Plant is active and located on the confluence of the Detroit and Rouge Rivers. Zug Island is located across the Rouge and the plant neighbors Belanger Park to the south.

The River Rouge Power Plant does not lend itself to public access due to intensive plant operations on the river. Neighboring Belanger Park should be upgraded for public fishing and boating, for direct access to the Detroit River.

Belanger Park is operated by the City of River Rouge. This park is in need of major upgrading and site repairs. Belanger Park currently provides limited boating and shore fishing access to the Detroit River.

Detroit Edison assumes the risk of cost overruns for the project, but shall not be required to engage in additional activities if those listed here are completed at a cost below the allocated cost.

PROJECT DESCRIPTION**BELANGER PARK**River Rouge, Michigan

- Improve accessibility to approximately 580 lineal feet of shoreline along the existing Detroit River bulkhead.

- Develop a 54 foot wide Boat Launch Ramp and improve canal.

- Improve car/trailer combination parking area.

- Improve car parking and add handicap spaces.

- Develop asphalt walkways between bulkhead and parking.

- Renovate/Demolish Three (3) existing buildings.

ALLOCATED COST **\$ 750,000**

TOTAL ALLOCATED COST FOR SECTION B **\$ 907,500**

SECTION C DETROIT EDISON'S ACQUISITION PROJECTS**GENERAL OVERVIEW**

A number of power plant properties offered little potential for additional Great Lake public boating or fishing opportunities. An alternative to this type of development would include the acquisition and donation to the DNR new properties capable of accommodating additional Great Lake public access.

I. HARRISON TOWNSHIP LAND PURCHASE**PROJECT DESCRIPTION**

* Acquire property on Lake St. Clair for additional Great Lake boating access. Harrison Township, Macomb County.

Maximum purchase price for a site to accommodate up to 175 car/trailers.

\$1,914,000

II. FAIRHAVEN ACQUISITION**OVERVIEW**

Acquire additional property for an additional 150 car/trailer parking lot near the DNR's Fairhaven Great Lake Boating Access Site located in Macomb County. This property would be acquired and donated to the DNR.

PROJECT DESCRIPTION

* Acquire property near the Fairhaven BAS in Macomb County.

Maximum purchase price

\$

500,000

TOTAL ALLOCATED COST SECTION C

\$2,

414, 000

NOTES TO SECTIONS A, B, AND C

- 1) Amounts allocated to Fairhaven and Harrison purchase will be pooled (total \$2,414,000) to buy both properties.
- 2) Total subject to risks noted, but the Company shall not be required to engage in any additional construction or acquisition activities if those listed are completed at a cost below allocated costs.
- 3) Detroit Edison will complete the above construction, acquisition, and funding activities. Detroit Edison shall not be responsible for the operation or maintenance of the activities on non-Edison land.

3. Studies and Monitoring

Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)

p. 5

M. Recreation Facilities and Consultation

Recreational facilities, as described in the above-referenced FERC new license applications and any Additional Information Request (AIR) responses filed with FERC, will be provided at each applicable development within two years of effective date of license issuance. Any exceptions or additions are described under the Recreation section for each development listed in this Settlement Offer (and are generally indicated on maps for each development, included as Attachment 3). Indicated recreational facilities will be located on licensees' existing lands unless

otherwise noted. Existing recreational facilities as described in the applications will be maintained unless otherwise noted herein.

Recreation enhancements will be developed in consultation with individual members of the Black River Advisory Council (described in Attachment 1).

Consumers Power Company Settlement, November 11, 1992**Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)****p. 6-7**

4.3 The Recreation Management Sections of the Plans will be developed by CPCO in consultation with the resource agencies and local communities, and shall address future recreation needs over the term of the new licenses including lease management, use administration, facility development, resource protection, operation and maintenance of recreational facilities, recreation signing and site plans.

4.5 Candidate new recreational facilities and proposed improvements to existing recreational facilities, are listed in Appendix A. The final list of recreational facility improvement and construction will be developed in the recreation section of the Land Management Plans based on: Appendix A; compatibility with other aspects of the Land Management Plans listed in Paragraph 4.2; consultation with the resource agencies, the NPS, and the public; and the ongoing CPCO recreation use study being conducted in response to the FERC additional information requests dated May 21, 1992.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)****p. 11-12****IV. Recreation and Aesthetic Issues**

A. NEP has proposed a comprehensive Recreational Plan which has been submitted to the FERC on October 1, 1993. NEP agrees to implement the plan, and install, operate and maintain the recreational facilities, existing and proposed, as described in this Plan and in accordance with the schedule provided therein. NEP agrees to provide free access with no charge or fees to the water and undeveloped Project land. NEP may charge reasonable user fees to recover the actual costs of providing and operating either its developed public recreation facilities or other facilities that may be provided in the future which do not provide primary or sole direct access to the water or undeveloped Project lands.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)****p. 13-17****F. RECREATION AND AESTHETICS SETTLEMENT AGREEMENT****1. General Intent**

The Settlement Agreement on Recreation and Aesthetics (Visual Quality) is intended to resolve all issues related to the effects on recreation and visual quality by the Project, as currently constructed, for the period October 28, 1977 through the duration of the Settlement Agreement. The Settlement Agreement includes a Recreation Plan and a Visual Quality Mitigation Plan. A separate Memorandum of Agreement (MOA) is entered into by the City, the National Park

Service, and the North Cascades Institute (not a party to these proceedings) regarding the single largest element of the recreation plan, the North Cascades Environmental Learning Center. The Settlement Agreement establishes implementation procedures for both plans. In addition, the City will support implementation by dedicating part of the time of a new professional staff person to implement the plans.

2. Plan Elements

Under the Settlement Agreement, the City has agreed to carry out numerous measures at the Project intended to mitigate and enhance recreational opportunities and the visual quality of Project facilities. The following briefly summarizes the specific measures in the two plans:

a. Recreation Plan

The Recreation Plan provides that the City will fund a number of measures in the Project area to mitigate for the adverse impacts of reservoir level variations and to enhance recreational opportunities elsewhere in the Ross Lake National Recreation Area and on the Skagit Wild and Scenic River.

The total cost of the Skagit Project Recreation Plan is approximately \$17,000,000 over the term of the license, in 1990 dollars.

Continuing measures

The Recreation Plan provides for the City to continue providing a number of recreational opportunities and services in the Project Area.

These include:

- * Conducting Skagit Tours, serving 10,000 persons per year',
- * Operating the Newhale visitor contact station, including rehabilitation of the facility, serving thousands of visitors each year,
- * Operating Diablo Lake tugboat/ferry service, providing access to Ross Lake and Ross Lake Resort for hundreds of persons per year, including many with canoes and other small boats to be portaged to Ross Lake;
- * Maintaining picnic and playground facilities open to the public in Newhale and Diablo;
- * Maintaining the Ladder Creek Falls flume behind the Gorge powerhouse; and
- * Maintaining and replacing, if necessary, the electric supply cable to Colonial Creek campground on Diablo Lake.

The City will also continue to meet its obligations under the Treaty between the United States and Canada. This Treaty provides in part for the City to make monetary contributions for recreation purposes in the Project Area through the Skagit Environmental Endowment Commission.

Mitigation measures

The City will fund a number of measures to mitigate for the impacts of Project operations on recreation facilities on the Project reservoirs - Ross, Diablo, and Gorge Lakes. These measures include:

- * Increasing the ability of boaters to access Ross Lake at Hozomeen by extension of the ramps to a lower elevation;
- * Increasing accessibility of Ross Lake boat-in campgrounds by improvement of their docks; and
- * Improving accessibility of Diablo and Gorge Lakes by improvements of boat ramp facilities on each reservoir.

The Plan allocates \$733,000 of City funds for these measures.

Enhancement measures-initial funding

The most significant new recreational facility to be funded by the City under the Plan is a North Cascades Environmental Learning Center (Learning Center) proposed for either Diablo Lake (the preferred site) or a site next to the National Park Service Visitor Center. The Learning Center will have an initial overnight capacity of 40 students and 12 faculty and designed for expansion to an overnight capacity of 60 students and 18 faculty. The Learning Center will be built by the City on federal land and initially operated by the North Cascades Institute, a non-profit educational organization, under the guidance of an oversight committee consisting of representatives of the City, the National Park Service and the operator. The City and the National Park Service will cooperate in support of Learning Center operations; the City, by providing substantial ongoing program support funding, and the National Park Service, by provision of sewer and water utilities and other support.

The City will also fund all or part of a number of other recreational facilities, and related infrastructure, both improvements and new construction. These facilities include:

- * Interpretive facilities
- * Goodell Creek raft access site
- * Darmation Creek boat-in picnic site
- * Marblemount boat access site
- * Hozomeen area water supply system
- * Gorge Creek overlook
- * Thunder Lake handicap access fishing site
- * Thunder Knob trail
- * Happy Flats Panther Creek trail
- * Desolation-Hozomeen trail
- * Black Peak overlook and rest area
- * Steelhead county park
- * Lower Sauk River boat access site
- * Suiattle River boat access site
- * Rocky Creek River access site

All of the foregoing measures are scheduled to begin by year seven of the new license period. The interpretive facilities are funded at five year intervals throughout the new license period. The Plan provides for expenditures by the City of over \$11,000,000 to implement these measures; \$9,000,000 of that amount is for the Learning Center.

Enhancement measures-ongoing studies and funding

In order to provide for growth of recreational use of the Project area the City will provide funding throughout the new license period to address new recreation needs. These measures include:

- * Recreation use and needs assessments every five years;
- * Bicycle use and needs assessment;
- * Capital funding of implementation of the needs identified through the assessments in consultation with National Park Service and the U.S. Forest Service, as appropriate; and
- * Recreation facilities operation and maintenance support for National Park Service and U.S. Forest Service throughout the new license period.

On June 18, 1993, the City began contacting by telephone agency representatives, whitewater recreation organizations, local commercial whitewater outfitters, and local kayaking instructors to set up a whitewater Boating Study scoping meeting. A letter formally requesting attendance was sent to these entities on July 12, 1993. The Whitewater Boating Study design meeting was held on July 22, 1993, in Watertown, New York.

Participants included representatives from the following agencies and organizations:

New York State Office of Parks, Recreation, and Historic Preservation (NYPRHP)

New York State Department of Environmental Conservation

New York Rivers United (NYRU)

- Adirondack River Outfitters

Fort Drum Outdoor Recreation Center

T.I. Adventures

City of Watertown

- R.W. Beck, Consultant to the City

The American whitewater Affiliation and the FERC were invited but unable to send representatives (see Tab 3 for correspondence). At the July 22 meeting, the meeting participants agreed on the scope of the Whitewater Boating Study and scheduled the study for August 2, 1993.

As scheduled, the Whitewater Boating Study was conducted on August 2. Seven kayakers representing all ability levels participated in the study and five flows were kayaked and evaluated by the boaters. These flow releases included 1,200 cfs (flow of the day), 900 cfe, 600 cfs, 250 cfs, and 145 cfs (entirely dam and Delano Island leakage-no spillage). Participants filled out evaluation forms for each flow level and video was shot of the entire study which included taped interviews of the kayakers.

The video and the *Whitewater Boating Study for the Watertown Hydroelectric Project* were filed with FERC, and served on the resource agencies, all parties to the licensing, and the study participants on October 29, 1993.

Wilderness Shores Settlement Agreement, July 29, 1996**Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)****p. 46****6. Recreation****6.1. Recreation Plan**

6.1.1 Within 12 months of licensure, WE shall, after consultation with the Team, file for Commission approval a recreation plan for the projects covered by this Settlement. The plan shall: (1) provide for the recreational facilities described in Appendix 8; (2) provide flexibility for the Team to modify and schedule recreational facilities development; (3) provide for Team oversight of O&M of the recreational facilities discussed in this Settlement; (4) provide a review of the recreational program by the Team and invited Parties at six (6) year intervals or to coincide with FERC Form 80 reviews to review the program; (5) provide an annual meeting to discuss and review the recreational program; (6) assure that all recreational developments shall meet the development standards listed in Appendix 8; (7) provide an implementation schedule; and (8) provide for the acquisition of applicable state, federal and local permits.

E. WATERSHED PROTECTION

1. Riparian Areas and Buffer Zones

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project October 5, 1994; Project No. 2323 (Massachusetts)

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E. NEP agrees to conduct its timber management programs in accordance with the guidelines attached as Appendix C and with the following goals: the protection of riparian zones along rivers and lakes; protection of visual quality within important public viewsheds and along trail corridors; limited use of clearcutting; minimizing interference with low impact recreational use and enjoyment; and the preservation of wildlife habitat.

Appendix C

Statement of Intent

The provisions stated below establish specific guidelines for the protection of important biological and recreational resources on NEP's Deerfield Project forested lands. The intent is to allow NEP to retain flexibility in its forest management operations while ensuring that lands critical to maintaining aquatic and terrestrial wildlife habitat, recreational experiences, and long-term productivity are protected.

NEP agrees to conduct its timber management programs in accordance with the following goals:

Protect riparian zones along rivers and lakes.

Protect visual quality within important public viewsheds and along trails. Protect fragile or highly erodible soils.

Prevent excessive nutrient depletion of low productivity soils.

Provide appropriate application of the clearcutting reproduction method. Protect and manage wildlife habitat for all species that may be reasonably expected to occur on project lands.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

5.1.5. Erosion Plans

Within 18 months of the issuance of the Projects' licenses, WE shall, after consultation with the Team, file with the Commission for approval a plan to remediate stream and impoundment shoreline erosion sites caused by the operation of the Projects. One (1) plan shall be developed for each project. The plans shall include: (1) a determination of the area of influence; (2) an erosion site inventory; (3) an assessment of erosion control alternatives; (4) an implementation schedule for all remediation efforts; (5) periodic future shoreline erosion inventories; and (6) remediation of future erosion control problems caused by the project operation.

Missouri/Madison Project Recommended Terms and Conditions, May 1995

Project No. 2188 (Montana)

2. Wetland/Riparian Enhancement

In accordance with the National Wetlands Policy of no net loss of wetlands function and value, MPC shall fund annual "on-the-ground" riparian habitat protection and enhancement measures to mitigate impacts from all nine Development operations or related construction activities as determined by the Missouri-Madison River Wildlife Technical Advisory Committee (TAC), including measures described for the wildlife biologist using adaptive management.

Cost: \$30,000 per year for riparian habitat protection and enhancement in the Missouri-Madison River System from Hebgen Reservoir to Fort Peck Reservoir, Montana.

All Developments**3. Wetland/Riparian Enhancement Plan**

Areas with wetlands or -riparian vegetation are relatively scarce and provide important habitat for many wildlife species.

MPC shall prepare a wetland/riparian enhancement plan after consultation with the Fish and Wildlife Service (FWS) and other appropriate agencies. MPC shall include documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the FERC. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

Any wetland/riparian enhancement plan, at a minimum, shall include:

- a. details of the final design of protective measures to enhance wetland/riparian habitat.
- b. a plan for monitoring the effectiveness of the measures designed to protect and enhance wetlands, which includes steps to be taken in the event the measures are not effective in protecting the wetlands, including, but not necessarily limited to, modifying the measures or establishing or enhancing additional wetlands;
- c. a proposal to provide recommendations to the agencies and the FERC for alternative wetland mitigation due to project construction and operation, if monitoring indicates that the implemented wetland establishment or enhancement is not successful; and
- d. schedules for establishing or enhancing of wetlands, for filing the results of the monitoring program, and for filing recommendations for alternative wetland mitigation.

(1.8-1.9)

(3) Funding annual "on-the-ground" wildlife habitat protection and enhancement measures as determined by the Missouri-Madison River Wildlife TAC, including measures described for the wildlife biologist using adaptive management.

Cost: \$50,000 per year for wildlife habitat protection and enhancement in the Missouri-Madison River System from Hebgen Reservoir to Fort Benton, Montana.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

5.1.4. Comprehensive Land Management Plan (CLMP)

Within 18 months of the issuance of the Projects' licenses, WE shall, after consultation with the Team, file with the Commission for approval CLMPs covering all company owned land included within the boundaries of the Projects. The CLMPs shall include: (1) an implementation schedule; (2) provisions for annual planning and review meetings; (3) provisions for the establishment of a riparian buffer zone managed for old growth forest; and (4) the provisions of the Wildlife Management Plan as described in Paragraphs 4.6 and 4.7.

(See also, Skagit River Project Offer of Settlement, April 1991, in Section II.F.2 Habitat Protection and Acquisition.)

2. Wetlands

Salmon River Project Settlement Offer, December 9, 1993 Project No. 11408 (New York)

p. 3

C. Wetlands Reservoir Fluctuation

The signators agree that: the effects of the various operating modes on the reservoir levels are adequately evaluated in the *Water Budget Model* dated May 5, 1993 and the *Phase I - Preliminary Data Analysis, Reservoir Fluctuation Study* dated July 14, 1993. Phase 2 of the reservoir fluctuation study is scheduled to be completed by December 31, 1993. (Preliminary results from the field work indicate that the water level stabilization proposed as part of Rule Curve 16 will be adequate to protect and enhance the reservoir wetlands.)

The signators agree: to investigate the feasible alternatives for the provision of water level stabilization for the wetland located north of the Lighthouse Hill Reservoir if the water levels in the wetland are hydraulically controlled by the water level in the reservoir as determined by the Phase 2 reservoir fluctuation study.

(See also, Skagit River Project Offer of Settlement, April 1991 in Section F.2. Habitat Protection and Acquisition, below.)

(See also, Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project, in Section F.1. Management Plans, below.)

(See also, Missouri/Madison Project Recommended Terms and Conditions, May 1995, in Section E.2. Riparian Areas and Buffers Zones, above.)

3. Channel Morphology

Missouri/Madison Project Recommended Terms and Conditions, May 1995 Project No. 2188 (Montana)

p. 1.16

MPC shall file every three years for approval a Fisheries Monitoring Plan for the Madison River from Hebgen Reservoir to Three Forks. The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to fisheries resources.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring, such as fish populations, streambed morphology, aquatic insect populations, etc; and
- c. analysis and interpretation of monitoring results.

4. Sediment and Debris Transport

See Consumers Power Company Settlement, November 11, 1992 Appendix C, Monitoring, and the Wilderness Shores Settlement Agreement in Section II.C.8., Studies and Monitoring, above.

5. Conservation Easements

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project October 5, 1994; Project No. 2323 (Massachusetts)

p. 17

V. Project Lands

A. NEP agrees to grant term conservation easements to qualified government or nongovernment land management organizations to provide for the continued preservation in a natural state of the lands within the Project owned by NEP in fee, and certain other lands owned by NEP in fee (Non-project Lands) downriver of Fife Brook Dam and the No. 2 development and along the river corridor. The grant of conservation easements on Non-project Lands shall be conditioned on FERC's approval that the Non-project Lands be added to the Project Lands and be treated as Land in Utility Use for accounting purposes. The intent of the conservation easements is to protect the scenic, forestry and natural resources of the lands from uses which would conflict with the preservation of these resources. No uses will be made of the land subject to the conservation restriction that are inconsistent with its intent, except as otherwise provided herein. The restrictions will allow for continued use of the property for forestry, educational, non-commercial recreation, open space and electric transmission and generation purposes. Subdivision of the property will not be allowed except when necessary to carry out one of the aforementioned purposes and only when consistent with the intent of the easements, including (1) maintaining forestry management units that maintain the potential and current productivity of the lands for commercial forestry and (2) preventing the fragmentation of wildlife habitat. The lands subject to this section are approximately as shown on a map attached as Appendix S. The holders of the conservation easements will be selected by NEP, CLF and AMC, and each party may in its sole discretion withhold its approval of said selection. The holders of the conservation easements shall not transfer the easements without the consent of NEP, CLF and AMC and each party may in its sole discretion withhold its approval of said transfer. Said conservation easements will run for the term of the new license and shall not be subordinated to any mortgage, lien, or similar encumbrance except said easements shall be subject to the terms of the General and Refunding Mortgage Indenture and Deed of Trust between New England Power Company and the New England Merchants National Bank dated January 1, 1977, as supplemented from time to time (the G&R Indenture). Said easements shall be subject to existing rights of third parties, if any. NEP agrees to continue the restrictions contained in the conservation easements during any annual licenses issued subsequent to the expiration of the new license and to renew the conservation easements for the term of the license in subsequent relicensing proceedings provided that, and to the extent that, the Project is relicensed under terms and conditions not inconsistent with the conservation easements and such that the Project continues to be an economically beneficial source of power relative to other available resources.

The Parties agree that, in future relicensing proceedings, renewal of the conservation easements will be considered as proposed enhancement and not as past mitigation.

B. NEP agrees to grant a term conservation easement to a qualified government or nongovernment land management organization for the lands within the Bear Swamp Project, L.P. No. 2669 for the remaining term of the Bear Swamp License. Said conservation easement will be similar in form and intent to those described in Section V.A above but shall end absolutely at the expiration of the current license for the Bear Swamp Project, and shall be subject to the G&R Indenture and existing rights of third parties, if any. The Conservation Easements granted under this paragraph shall not be subject to the provisions of Section V.D, below. The lands subject to this section are approximately as shown on a map attached as Appendix S.

C. NEP agrees to reimburse the easement holders' reasonable costs for monitoring and enforcing the terms of the conservation easement.

D. NEP agrees to grant the holders of the conservation easements described in Section V.A, an option to purchase at the then fair market value (but in no case an amount less than the original acquisition cost) the lands subject to the easement which are not required for electrical generation and transmission purposes, then existing approved or with regulatory approvals pending. Said option is to be exercisable if the conservation easements are not renewed at the termination of the new license. This option to buy shall be subject to the G&R Indenture and receipt of all regulatory approvals. The option shall become exercisable upon the termination of the conservation easements and for six months thereafter, which may be extended by mutual agreement for up to two years upon a demonstration of a good faith effort to bring the transaction to a timely completion.

E. NEP agrees to conduct its timber management programs in accordance with the guidelines attached as Appendix C and with the following goals: the protection of riparian zones along rivers and lakes; protection of visual quality within important public viewsheds and along trail corridors; limited use of clearcutting; minimizing interference with low impact recreational use and enjoyment; and the preservation of wildlife habitat.

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 4

E. Land Transfers and Conservation

The sand and gravel rights along the south side of the bypassed reach and the fee title for the acreage between the sand and gravel rights and the pipeline parcel's northerly FERC project boundary will be provided to NYSDEC (see Attachment 1). Furthermore, a 25 foot wide conservation easement (see Attachment 1) around the will be provided to NYSDEC to maintain the wilderness characteristics of the area. Fair market value will be paid for the land and easements through the upfront money provided by Niagara Mohawk to the river fund, as described in Attachment 2.

**Consumers Power Company Settlement, November 11, 1992
Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)**

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**APPENDIX B
LAND/LEASE MANAGEMENT REQUIREMENTS**

A. CAMPGROUNDS

2. Develop plans for providing a target 100 ft greenbelt between the water's edge and campsite locations where practical.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

Courts and Non-FERC Agencies, Appendix E

If the cultural resource assessment indicates that cultural or archaeological resources, the excavation or removal of which would require a permit under any state or federal law providing protection to cultural resources, the Trustees shall consider the recommendations of federal, state or tribal officials and adopt those measures which are reasonably necessary to protect the cultural resources identified, including the reservation of a conservation easement or historical preservation easement in the deed or other instrument conveying an interest in such property.

As used in this section, the term "cultural resources" includes, but is not limited to, "aboriginal antiquities" protected under the Aboriginal Records and Antiquities Act, MCLA 299.51 and "archaeological resources" defined in the Archaeological Resources Protection Act, 16 USC §470aa, et seq.

3. Prior to authorizing the sale, lease or exchange of any trust property described in Exhibit 2 of Appendix C, the Trustees shall, in consultation with the Scientific Advisory Team, determine if any such properties have fishery values associated with the Lake Michigan fishery or other significant ecological values relating to the protection and enhancement of the fishery resources of the Great Lakes. If the Scientific Advisory Team determines that any of the trust properties have fishery values associated with the Lake Michigan fishery or other significant values related to the fishery resources of the Great Lakes, the Trustees shall adopt those measures necessary to protect the fishery or other fishery-related values identified, including the reservation of a conservation easement in the deed, other instrument conveying an interest in such properties, or other legal measures necessary to protect these values.

4. The Little River Band of Ottawa shall have an exclusive option to Purchase the Trust properties described in Exhibit 2-A of Appendix C, which are located in Dickson and Brown Townships in Manistee County for a period of three (3) years following the execution of this Declaration of Trust. The purchase price for such lands shall be no more than 90% of the negotiated value for such lands as described in Exhibit 2-A of Appendix C. The properties subject to this "Option to Purchase" may be purchased by or for the Tribe or in the name of the Tribe's nominee for the benefit of the Tribe. Insofar as consistent with applicable law, the requirements described in paragraph 2 of this section shall not apply to those lands upon which the Tribes exercise their option to purchase.

Subsequent to the transfer of title of the Properties described in Exhibit 2-A of Appendix C, the Trustees shall execute a Memorandum of Option Agreement evidencing this "Option to Purchase," which shall be filed with the Register of Deeds for Manistee County.

5. Notwithstanding the Option to Purchase set forth in paragraph 4, the Trust may sell the lands described in Exhibit 2-A to the United States Forest Service within the three (3) years following the execution of this Declaration of Trust, provided, however the Little River Band of Ottawa shall have a right of first refusal for thirty (30) days after notice from the United States Forest Service of its intent to purchase said lands.

p. 5

A. Land Management

The signators understand that: through *The Comprehensive Land Management Program for the Salmon River Properties* Niagara Mohawk will provide to the NYSDEC: (1) permanent easements to all NYSDEC fishing access locations along the Salmon River downstream of the Lighthouse Hill Development, (2) fishing easements along most of Niagara Mohawk's property on the lower Salmon River downstream of the Lighthouse Hill Development, (3) a 200-foot-wide conservation easement along the downstream river corridor, (4) other easements such that a trail system can be developed along the entire river corridor, and Niagara Mohawk will sell to the NYSDEC (directly or through a third party): (5) the area South of the Salmon River Reservoir, (6) the area surrounding and including the Salmon River Falls, and (7) the existing angler parking areas and one additional area downstream of the Lighthouse Hill Development. These properties are outside the FERC project boundaries.

Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)

p. 8

2. Plan Elements

The City will make available a total amount of \$17,000,000 from which both the acquisition of wildlife habitat lands and habitat enhancement will be funded. The large majority of the money will be used to acquire property rights (preferably in fee simple) in order to preserve wildlife habitat in the upper Skagit River and South Fork Nooksack River valleys. Lands have been selected that possess riparian areas and corridors, wetlands, and mature forest communities; have eagle usage or provide elk winter range; and/or are adjacent to other protected lands. The City will begin to secure some of the identified lands in advance of the receipt of the new license. The City will implement a continuing program to retain some of the acquired lands in the Nooksack basin in early successional stages in order to provide winter forage for elk. Some low-intensity habitat enhancement and manipulation measures may also be employed (e.g., wetland habitat restoration) in several locations. The Agreement establishes the procedures by which monies are allocated and lands are selected and acquired.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

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5.1.3. Kingsford Project Lands Disposition

Use, management and disposition of 1366 acres of project lands within the Kingsford Project boundary and located in Wisconsin as detailed in Appendix 4 are subject to a perpetual easement and conditions described in the Articles of Dedication (Appendix 4) granted by WE on _____ and approved by the FERC on _____, accepted by WDNR on _____, and approved by the FERC on _____.

5.1.4. Comprehensive Land Management Plan (CLMP)

Within 18 months of the issuance of the Projects' licenses, WE shall, after consultation with the Team, file with the Commission for approval CLMPs covering all company owned land included within the boundaries of the Projects. The CLMPs shall include: (1) an implementation schedule; (2) provisions for annual planning and review meetings; (3) provisions for the establishment of a riparian buffer zone managed for old growth forest; and (4) the provisions of the Wildlife Management Plan as described in Paragraphs 4.6 and 4.7.

p. 44**5.2.2. Quiver Falls Tract**

For the term of this Settlement, WE agrees to retain ownership of a minimum of 4,000 acres of its real estate holdings along the Menominee River in Menominee County, Michigan; and, Marinette County, Wisconsin identified as the Quiver Falls Tract and described in Appendix 5. WE will manage the Quiver Falls Tract for old growth and biodiversity, and will not develop this tract. WE shall allow public access to these lands when compatible with overall land management goals which are to be determined in consultation with the Team. WE may purchase, trade, lease and/or obtain conservation easements from contiguous properties to adjust the size and configuration of the Quiver Falls Tract to enhance its landscape scale attributes.

p. 45**5.2.5. Sturgeon Lands Non-Riparian Corridor**

Sturgeon Project lands and other non-project lands that are outside the riparian corridor will be identified by the Team as upland properties. Upland properties adjacent to the riparian corridor can have limited development that meets a high standard of environmental and aesthetic quality. The standard for these adjacent upland properties shall be developed in consultation with the Team. If WE chooses to sell or trade upland properties during the term of the Settlement, WE will offer the property to the Parties for purchase at the full market value, based on an appraisal, with a decision required within a specified period of time after the offer is made. If WE ultimately decides to sell the property after the Parties have declined to purchase and the market price is less than 50 percent of the value reported in each appraisal, WE will re-offer the property at market price to the Parties, with a decision required within a specified period of time. Minor land sales of less than ten (10) acres involving encroachments and easements are exempt from these provisions.

Appendix 4**ARTICLES OF DEDICATION**

(Non-DNR)

Spread Eagle Barrens State Natural Area

Pursuant to s. 23.27 and s. 23.29, Stats., the Wisconsin Electric Power Company (Grantor) hereby conveys to the State of Wisconsin, Department of Natural Resources (Grantee), for One Dollar and other good and valuable consideration, a perpetual easement in the following, described property hereinafter called the Spread Eagle Barrens State Natural Area, and more particularly described as

follows:

Florence County

Township 39 North, Range 18 East

Section 24: Government Lots 1, 2, and S.

Township 39 North, Range 19 East

Section 18: The Southern Half of the Southwest Quarter (S, 12. SW/4), and the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4).

Section 19: The Southwest Quarter (SW 1/4), - the Northern Half of the Southeast Quarter (N 1/2 SE 1/4), and Government Lots 1, 2, 3, 4, 5, and 6.

Section 20: The Northeast Quarter of the Northeast Quarter (NE1/4 NE 1/4), the Northern Half of the Southwest Quarter (N1/2 SW1/4), and Government Lots 1, 2, 3, 4, 5, 6, 7, and 8.

Section 21: Government Lots 1, 2, 3, 4, 5, and 6.

Section 22: Government Lot 4.

Section 28: The Southern Half of the Northwest Quarter (S1/2 NW1/4), the Northwest Quarter of the Southwest Quarter (NW1/4 SW1/4), and Government Lots 1, 2, 3, 4, 5, 6, and 7.

Section 33: The Western Half of the Southwest Quarter (W1/2 SW1/4), the Southeast Quarter of the Southwest Quarter (SE1/4 SW1/4), Government Lots 1, 2, and 3. Government Lot 4, excepting the east 660 feet of Government Lot 4. Also dedicating the south 330 feet of the east 660 feet of Government Lot 4, and that part of Government Lot 5 lying west of a north and south line beginning at a point in the south line of Section 33, which point is 2,135.7 feet east of the quarter section corner in said south section line, and extending north through said Lot 5 to the meander shore of the Menominee River.

Subject to all rights, restrictions, and easements of record, containing 1791.8 acres more or less.

PUBLIC PROPOSE

This easement is being conveyed for the purpose of dedicating the subject property as a State Natural Area to promote public awareness, appreciation, understanding, and respect for Wisconsin's natural heritage and to preserve the natural values associated with the property.

NATURAL VALUES

The Spread Eagle Barrens State Natural Area is a natural area with a high level of importance to the people of Wisconsin and has the following described natural values.

This site is the core of the largest and highest quality pine barrens/bracken grassland ecosystem remaining in northeastern Wisconsin. In addition to providing habitat for plant and animal species requiring large areas of these natural community types, Spread Eagle Barrens protects several species rare to Wisconsin. They include loggerhead shrike, northern harrier, upland sandpiper, grasshopper sparrow, Henslow's sparrow, bobcat, skillet clubtail dragonfly, sharp-tailed grouse, water starwort, and ternate grape fern.

PERMANENT PROTECTION AND AUTHORIZATION

The Grantee is authorized to protect the natural values of the Spread Eagle Barrens State Natural Area and to restrict any use of the natural area which is inconsistent with, or injurious to, its natural values. By this dedication, the Grantee is authorized to establish use zones, to control uses within these zones, and to limit the number of persons using a zone in the Spread Eagle Barrens State Natural Area. Further, the Grantee is authorized by this dedication to classify the Spread Eagle Barrens State Natural Area as a Research Natural Area and may establish special use regulations therein.

The Grantor reserves the right to establish such additional use restrictions as are necessary to protect vegetation, soils, animals, plants, and other biotic and abiotic components from damage. Such restrictions shall be established with the advice and written consent of the Grantee.

The Grantor shall neither use, conduct, nor permit any activity on the above-described property, or transfer, lease, or convey any interest in the subject property which would be inconsistent with the dedication or injurious to the natural values of the property. The following projects may be allowed within the Spread Eagle Barrens State Natural Area in accordance with plans and specifications approved in writing by the Grantor and Grantee.

1. Restoration and maintenance of the pine barrens/bracken grassland ecosystem will require harvesting of timber as prescribed by the Management Plan for the Spread Eagle Barrens State Natural Area. The Grantor shall receive any revenue generated from timber sales on the subject property as a result of timber harvest.

2. The Grantee acknowledges that some of the lands described herein are part of the Grantor's Kingsford Hydroelectric Project licensed by the U. S. Federal Energy Regulatory Commission (Project Number 2131). In the event that use of the Grantor's Kingsford Hydroelectric Project lands under the terms of the FERC license are inconsistent with this dedication, the project use and FERC license shall be controlling.

Any other habitat or natural community alterations or improvements to, or development of, the property may be under-taken with the written approval of both the Grantor and Grantee, provided that no development, construction, or improvements shall be inconsistent with the intent of s.

23.29, Stats. and these Articles of Dedication.

STEWARDSHIP

The Grantee agrees to manage the Spread Eagle Barrens State Natural Area for the public benefit and shall provide the continuing stewardship for permanent protection of the natural values described herein, except that all or part of the stewardship responsibility may be assigned to the Grantor, as follows:

None at this time.

The Management Plan for the Spread Eagle Barrens State Natural Area, as adopted by the Grantee, is incorporated into the Articles of Dedication by reference herein.

ACCESS

The Grantee, its agents, officers, and employees, shall have the right to enter upon the above described property for the purposes of inspection and discharging its stewardship responsibilities. Public access shall be granted for the purpose of hunting, fishing, hiking, canoeing, nature study, and other uses as may be specified in the Management Plan that are consistent with the preservation of the natural values associated with the land or to facilitate stewardship or administration. Camping and use of motorized recreational vehicles are prohibited except where permitted in the Management Plan.

NOTIFICATION OF SALES AND TRANSFERS

The Grantor agrees to provide the Grantee with at least 30 days notice in writing, before any sale, transfer, or conveyance of the above-described property or any interest in the above-described property.

The Grantor agrees to inform any successor in interest of these Articles of Dedication and that these articles run with the land and are binding on successors.

AMENDMENT/WITHDRAWAL

These Articles of Dedication are permanent and irrevocable and shall run with and bind the land in perpetuity and may not be amended or revised, nor may the above-described property be withdrawn from the State Natural Area system, unless and until the provisions of s. 23.29, Stats. are met.

ACCEPTANCE

The Grantee hereby accepts this dedication and holds the Spread Eagle Barrens SNA in trust for the people of the State of Wisconsin under the provision of said Wisconsin Statutes.

6. Cultural Resources

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

7.1 CPCo shall provide a total of \$1 million in 1992 dollars (adjusted for the CPI) to provide for historical and archaeological (cultural) resource evaluation, mitigation and enhancement activities. All such activities will be conducted in accordance with the provisions of the "Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council On Historic Preservation (Council) , The USDA Forest Service Huron-Manistee National Forests And The Michigan State Historic Preservation Officer (SHPO) And Consumers Power Company For The Management Of Historic Properties Affected By Consumers Power Company Hydroelectric Projects" and "Programmatic Agreement Among The Federal Energy Regulatory Commission, The Advisory Council On Historic Preservation, The Michigan State Historic Preservation Office, And Consumers Power Company For The Management Of Historic Properties Affected By Consumers Power Company Hydroelectric Projects." Each Programmatic Agreement will provide for compliance with requirements of Section 106 of the National Historic Preservation Act, as amended, by outlining general provisions for the treatment of historic properties and requiring CPCo to prepare cultural Resource Management Plans (CRMPs) for each project covered by this Settlement in consultation with the USFS, the SHPO and the Council.

7.2 Costs for development of the CRMPs and completion of remaining prelicense Phase I Archaeological Surveys are not included in the \$1 million.

7.3 CPCo shall utilize the funds identified in Paragraph 7.1 to implement the CRMPs. Each CRMP will provide for: future identification needs, the proper management of any identified or unidentified cultural property, cultural resource activity reporting requirements, procedures for the treatment and disposition of cultural and human remains and cultural resource interpretive activities. Within twelve months of new license issuance for each project and prior to filing for FERC approval in accordance with the Programmatic Agreement, CPCo will submit each CRMP to the SHPO, USFS where applicable, and the Council for review.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

Courts and Non-FERC Agencies, Appendix E, p. 8-9

2. Prior to authorizing the sale, lease or exchange of any of the Properties described in Exhibit 2 of Appendix C, the Trustees shall give notice of the proposed transfer to the MDNR, State Historic Preservation Officer, U.S. Forest Service, the Bureau of Indian Affairs and representatives of any local Indian Tribe or Tribes to afford such entities the opportunity to perform a cultural resource assessment of any such Property.

If the cultural resource assessment indicates that cultural or archaeological resources, the excavation or removal of which would require a permit under any state or federal law providing protection to cultural resources, the Trustees shall consider the recommendations of federal, state or tribal officials and adopt those measures which are reasonably necessary to protect the cultural resources identified, including the reservation of a conservation easement or historical preservation easement in the deed or other instrument conveying an interest in such property.

As used in this section, the term "cultural resources" includes, but is not limited to, "aboriginal antiquities" protected under the Aboriginal Records and Antiquities Act, MCLA 299.51 and "archaeological resources" defined in the Archaeological Resources Protection Act, 16 USC §470aa, et seq.

Skagit River Project Offer of Settlement, April 1991

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**E. CULTURAL RESOURCES (ARCHAEOLOGICAL AND HISTORIC RESOURCES)
SETTLEMENT AGREEMENT**

1. General Intent

The Settlement Agreement on Cultural Resources between the City, the National Park Service and the Tribes is intended to resolve all issues related to the effects of the Project, as currently constructed on archaeological and historic resources for the period October 28, 1977 (expiration of the previous license) through the duration of the Settlement Agreement. The Settlement Agreement incorporates the City's Cultural Resources Mitigation and Management Plan, which includes both the Archaeological Resources Mitigation and Management Plan and the Historical Resources Mitigation and Management Plan. Procedures are established for the implementation and continuing oversight of the plans and measures and for consultation with the Washington State Historic Preservation Officer.

2. Plan Elements

The City will make available an estimated \$1,465,000 for the purpose of funding the archaeological measures and programs in the Settlement Agreement and Cultural Resources Plan. The monies for the archaeological measures are estimated amounts. The eligible resources will require mitigation; however, the choice of measures and methods to be used and the monetary amounts necessary for mitigation and management of the archaeological resources will be determined and negotiated by the Parties and the Washington State Historic Preservation Officer upon the completion of the field evaluations and testing of identified sites (tentatively in 2 to 3 years). The Archaeological Resources Plan will be completed no later than 1994. The cost estimates for archaeology are the best evaluation by archaeology professionals in the National Park Service of the likely results of the remaining field studies and the probable mitigation and management needs of the resources. Based on the actual results of the remaining field evaluations and the determinations by and negotiations between the Parties, the monies necessary to mitigate adverse impacts may be somewhat higher or lower than these estimates. Thus, these amounts are neither minimum nor maximum expenditure levels but rather are best estimates of the monies that will be needed to accomplish the mitigation of the final list of eligible archaeological resources.

The City will develop the Archaeological Resources Plan and its implementing Memorandum of Agreement- and future updates to the existing Memorandum of Agreement with the National Park Service-in cooperation with the National Park Service, the Washington State Historic Preservation Officer, the Upper Skagit Tribe, the Sauk-Suiattle Tribe, and the Swinomish Indian Tribal Community. The Plan will be developed so as to be consistent with tribal rights and to address their concerns. The Tribes will also be consulted and included in the development of archaeological study plans and in mitigation planning and implementation.

The City has already provided \$70,000 to the National Park Service for the purpose of inventorying, evaluating, and documenting the historic resources of the Project Area beyond the normal documentation requirements. The City will make available an additional \$282,000 for the purpose of documenting, protecting, mitigating, and interpreting historic building and engineering resources in the Project Area, as described in the Historic Resources Mitigation and Management Plan that has been prepared by the City in consultation with the National Park Service and the Washington State Historic Preservation Officer.

The Historic Resources Plan defines a set of standards and procedures for the preservation and treatment of historic structures and resources at the Project. Categories of actions or activities

that might affect the historic resources are defined and are tied back to the applicable standards and procedures.

A three-level procedure is established for the review and mitigation of activities (such as rehabilitation or alteration) that might affect historic resources. These levels correlate roughly with the level of intensity and size of the project, and integrate with the Capital Improvements Program (CAP) and other planning processes of the City.

The City will develop a set of Skagit Maintenance Guidelines to provide more detailed, resource- and task-specific guidance for the protection and maintenance of the historic resources. A computerized database will be developed to assist in the tracking and recording of activities and measures that are applied to these historic resources.

A cooperative program will be developed jointly by the City and the NPS for in-house training of City and NPS personnel in preservation techniques and to provide continuing information and assistance in these techniques and issues.

Historic Structure reports will be prepared by the City for two historic buildings in Newhalem for which either major rehabilitation or demolition are being considered, along with an historic landscape report for the Ladder Creek Gardens, for which rehabilitation activities may be proposed in the near future. An historic landscape assessment will also be prepared by the City for the grounds in Newhalem.

The City will develop several program measures and products to enhance the understanding and appreciation of the historic resources of the Area. Additional historic material will be integrated into the existing Skagit Tours program during the regular course of review and revision of this nationally recognized program. A self-guiding walking tour and brochure will be developed for the Newhalem area.

Four of the City's interpretive exhibits and displays in the Project Area will receive a comprehensive review and reassessment and will subsequently be revitalized. A new, fifth interpretive display will be developed by the City at the incline lift waiting station.

The City will produce, in conjunction with the National Park Service, one or more interpretive brochures which will use some of the documentation developed by the City and National Park Service. The City will also provide funding for the preservation of historic photographs which are in the keeping of the City's Engineering Department.

The City has concluded a Memorandum of Agreement with the Washington State Historic Preservation Officer (National Park Service concurring) which implements the Historic Resources Mitigation and Management Plan under the National Historic Preservation Act. A similar agreement will be concluded to implement the Archaeological Resources Plan once that plan has been developed.

The Intervenor agrees that the City's performance of the obligations detailed within the Settlement Agreement and the Cultural Resources Plan constitutes adequate cultural resources protection and satisfactory mitigation for archaeological and historic resources impacts caused by the Project, as currently constructed, for the period October 28, 1977 through the duration of this Settlement Agreement. The Intervenor agrees that such performance by the City will satisfy its obligations for historic and archaeological resources under the Federal Power Act and the National Historic Preservation Act (including Section 106) for purposes of relicensing of the Project.

The Intervenor agrees to participate fully and in a timely manner in the conduct of the various technical, administrative, and decision-making activities, committees and procedures that are detailed in the Settlement Agreement and the Historic Resources Mitigation and Management Plan. The National Park Service will conduct and complete the archaeological field studies and

**Conservation
Provisions:
Wildlife
(non-
fishery)
Protections**

evaluations under the existing Memorandum of Agreement with the City to provide archaeological and historic survey and evaluation services and expertise. The National Park Service and the City will jointly plan and fund a seminar series on historic preservation topics as described in the Settlement Agreement and the Historic Resources Mitigation and Management Plan.

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H. TRADITIONAL CULTURAL PROPERTIES SETTLEMENT AGREEMENT

1. General Intent

Three substantively identical agreements are being executed by the City, one with each of the tribal intervenors. The three Traditional Cultural Properties Settlement Agreements are intended to resolve all mitigation issues related to Traditional Cultural Properties for the Project, as currently constructed, for the period October 28, 1977 through the duration of the Settlement Agreements. Included in each Settlement Agreement is a mitigation plan providing for further studies and monetary payments. The Settlement Agreements provide implementation procedures, including coordination among the three similar plans. In addition, the City will support implementation by dedicating part of the time of a new professional staff person to plan implementation.

2. Plan Elements

The Agreements provide for the City to fund studies to complete an inventory of traditional cultural properties in the Project Area, including Project impacts on these properties. The City will spend up to \$250,000 on this inventory, with possible additional contributions from the affected federal land management agencies, primarily the National Park Service.

The City will also fund cultural activities of the three Tribes in lieu of on-site mitigation measures. Over an eight-year period, each tribe will receive \$1,233,338 in 1990 dollars.

F. WILDLIFE (non-fishery) PROTECTION

1. Management Plans

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

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10.5 Upon the National Forest System lands included within the hydroelectric project boundary as described above, the obligation of CPCo for management activities shall be limited to those activities specifically agreed to through the land management plan process outlined in Section 4 except as required pursuant to the Federal Power Act. Such responsibilities will be jointly agreed to by USFS and CPCo on an activity basis and shall generally include, but not be limited to: joint

wildlife habitat enhancement activities, joint recreational facility improvements, and joint watershed improvement projects performed in cooperation with the USFS; the dissemination of information to recreation users regarding recreational opportunities and regulations; and providing information to USFS managers about recreation user statistics and observed violations of applicable regulations. CPCo shall not be responsible for injury to any person or persons within said project boundary that results solely from actions or inactions of USFS.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. Appendix C

Forest Management Guidelines

Statement of Intent

The provisions stated below establish specific guidelines for the protection of important biological and recreational resources on NEP's Deerfield Project forested lands. The intent is to allow NEP to retain flexibility in its forest management operations while ensuring that lands critical to maintaining aquatic and terrestrial wildlife habitat, recreational experiences, and long-term productivity are protected.

NEP agrees to conduct its timber management programs in accordance with the following goals:
Protect riparian zones along rivers and lakes.

Protect visual quality within important public viewsheds and along trails. Protect fragile or highly erodible soils.

Prevent excessive nutrient depletion of low productivity soils.

Provide appropriate application of the clearcutting reproduction method. Protect and manage wildlife habitat for all species that may be reasonably expected to occur on project lands.

Management Provisions

In addition to goals, objectives and the associated policies and practices outlined in the New England Electric System Companies' Forest Management Plan, dated 12/28/84, NEP shall manage lands associated with the Deerfield River Project L.P. 2323 and the additional non-project lands covered under this Settlement consistent with the following provisions:

Riparian Protection

- No commercial harvesting within 100' of shorelines associated with the East Branch and mainstem of the Deerfield River, including all reservoirs to a point below Deerfield Number 2 Station known as Stillwater Bridge. Logging operations shall comply with the Vermont Wetland Rules where applicable.
- Areas within a zone of 100'-200' from the shores of the Deerfield as outlined immediately above, and areas within 50' of permanent streams, ponds or non-forested wetlands, shall be restricted from removing more than 50% of the basal area over any 10-year period and designed to leave a well distributed age class of trees which are evenly dispersed.
- These zones shall be extended 50' in width if slopes exceed an average of 35% over the entire buffer.

Visual Aesthetics

- Stands that are within the viewshed of major public use areas (rivers, lakes, hiking trails, and highways) shall be managed, to the extent possible, so as to minimize visual degradation and maintain aesthetic quality.

Soil Erosion

- No harvesting shall be performed on any SCS-classified histosols (bog soils).

- For soils listed by SCS as having severe equipment limitations due to wetness (i.e., poorly drained soils) and soils rated severe for erosion hazard, harvesting shall be limited to winter periods when the soil is frozen or utilizing a suitable alternative harvesting method and plan which prevents erosion.

Site Productivity, Nutrient Depletion

- For stands in which the site indices (SI) for existing desirable and management species are below SI-40, no whole-tree harvesting will be allowed (i.e., stem-only harvesting).
- For stands in which the site indices for existing desirable and management species are between SI-40 and SI-60, whole-tree harvesting will be limited to partial cuts removing no more than 50% of the basal area over any 10-year period and designed to leave a well distributed age class of trees which are evenly dispersed.
- All dead woody debris (both standing and down) shall be left on-site. The following exceptions are recognized: 1) The salvage of merchantable dead material resulting from fire, insect outbreak, large-scale windthrow, or other major disturbances; 2) The removal of dead material for firewood or other purposes on an individual noncommercial basis at the discretion of NEP.

Clearcutting

- Clearcuts will be limited to a maximum of 20 acres in size for stem-only harvests and 10 acres for whole-tree harvests.
- No more than 25% of any management block shall be clearcut over any 20-year period.
- Clearcutting is prohibited on soils rated severe for erosion hazard when slopes are greater than 25 % measured over a distance of 100 feet or more.
- All clearcuts will be separated by strips at least 300' in width in which no more than 50% of the basal area may be removed over any 10-year period. Additional harvesting within the buffers may take place when regeneration of desirable species is well-established in the adjacent clearcut but no sooner than 10 years after the initial harvest.
- Definitions and Standards: A "clearcut" is any timber harvesting operation greater than 2 acres in size which results in either of the following two conditions: 1) the average residual basal area of trees over 6' in diameter is less than 30 square feet per acre, or 2) the average residual basal area of trees over 1' in diameter is greater than 30 square feet per acre and the average residual area of trees over 6' in diameter is less than 10 square feet per acre.

Regeneration will be considered well-established when 60% of 1/500-acre plots distributed across the harvest area contain at least one healthy, well-formed tree at least 51 tall.

Wildlife Management

Wildlife management considerations shall be included in all stand management prescriptions and shall be consistent with measures outlined in the Wildlife Enhancement Report filed as Appendix E13 of NEP's application to relicense the Deerfield River Project and with suggestions provided by State or Federal wildlife management personnel or management guides. NEP shall comply with silvicultural standards for deer wintering yards established by the State of Vermont if the harvesting occurs in a deer yard as mapped by the Vermont Department of Fish & Wildlife.

Future, Alternative, Desirable Management

- NEP shall abide and follow the above-listed provisions. However, over the 40-year term of this Settlement, unforeseen circumstances, future management techniques, public policy and alternative, desirable resource considerations may justify and require actions otherwise prevented by the above listed provisions. NEP shall continue to manage its forest land in an ethical steward-like manner, and shall not alter this philosophy. Alternatives and exceptions to the above provisions shall only be enacted if other, presently unforeseen, desirable resource management objectives dictate such and the goals outlined in Paragraph V-E of the Settlement

are met. If NEP wishes to pursue such exceptions and/or alternatives, however, it first shall amend the forest management plan and/or guidelines with the approval of the easement Holder.

Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)

p. 1.6

1. General License Conditions Related to Project Construction

At least 90 days before the start of any land-clearing or land-disturbing activities, MPC shall file with the FERC, for approval, a wildlife mitigation plan which provides mitigation for the loss of specific habitat and shall include, but not be limited to: (1) identification of the type of habitat to be used for replacement; (2) a map showing the location and number of acres of habitat to be used for replacement; (3) a plan to manage the habitat to optimize its value to wildlife; (4) a monitoring program to determine the effectiveness of the plan; (5) a schedule for filing the monitoring results with the FERC; (6) a construction schedule that avoids disturbance to wildlife; (7) revegetation of disturbed areas with native plant species beneficial to wildlife as soon as practicable after completion of construction at a particular site and not later than a particular month and day of a particular year; and (8) procedures to maintain the transmission line right-of-way for the benefit of wildlife resources.

MPC shall prepare the plan after consultation with appropriate agencies, each Federal agency with managerial authority over any part of project lands, and other interested entities. MPC shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the FERC. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

p. 1.7-1.10

4. Wildlife PM&E Plan

The wildlife PM&E plan will include:

- a. evaluation of potential impacts of project operation on wetlands, upland habitat, state-designated rare plant species, and wildlife (particularly species considered important because of their commercial or recreational value, and state-designated rare species);
- b. consultation with the Fish and Wildlife Service and the state fish and wildlife agency regarding potential adverse impacts and recommended measures to reduce the severity of these impacts; and
- c. proposal to implement appropriate PM&E as part of MPC's project, including:
 - (1) Funding habitat enhancement for waterfowl (ducks, geese, and swans) and other migrant (neotropical) birds using Hebgen Reservoir and the Upper Madison River. Proposed activities include enhancement of key riparian zones, development of breeding pair pond habitat for ducks near the reservoir, and construction of shallow marsh habitat to provide important breeding habitat for ducks, shorebirds, and water-related species during periods when the main reservoir is drawn down.

Cost: \$140,000 one-time contribution for the Missouri-Madison River System from Hebgen Reservoir to Fort Benton, Montana.

- (2) Funding a wildlife biologist over the license term to implement and monitor proposed Hebgen Development PM&E activities as determined by the Missouri-Madison River Wildlife

Technical Advisory Committee (TAC), which will be composed of state and federal agency personnel who are responsible for resources within the project area. Activities of the wildlife biologist as directed by the Missouri-Madison Wildlife TAC may include, but are not limited to: 1) coordinating and preparing Bald Eagle Management Plans and monitoring the bald eagle population; 2) protecting and enhancing riparian habitat around Hebgen Reservoir and along the upper Madison River; 3) conducting time-series (trend analysis) studies of macrophyte, waterfowl, and other migrant bird abundance in Hebgen Reservoir at three to five year intervals over the license term; and 4) securing federal and private matching funds for wildlife protection and enhancement.

Cost: \$50,000 per year for 1.0 FTE wildlife biologist and \$30,000 per year for 1.0 FTE wildlife field technician for the entire Missouri-Madison River system (Hebgen Reservoir to Fort Benton, Montana). Operation and maintenance expenses will be funded at \$25,000 per year for the wildlife biologist and \$15,000 for the wildlife technician. One-time wildlife equipment and materials will be funded at \$25,000.

(3) Funding annual "on-the-ground" wildlife habitat protection and enhancement measures as determined by the Missouri-Madison River Wildlife TAC, including measures described for the wildlife biologist using adaptive management.

Cost: \$50,000 per year for wildlife habitat protection and enhancement in the Missouri-Madison River System from Hebgen Reservoir to Fort Benton, Montana.

5. Monitor the Effectiveness of PM&E Plan to Enhance Wildlife Resources

MPC shall file every three years for approval a Wildlife Monitoring Plan for the Missouri-Madison River from Hebgen Reservoir to Fort Benton. The monitoring program shall be designed to collect information that will help define reasonable operation of the projects relative to wildlife resources.

The monitoring program shall include:

- a. short-term monitoring of maintenance activities and special project operations,
- b. long-term trend monitoring, and
- c. analysis and interpretation of monitoring results.

The monitoring program shall include a schedule for:

- a. implementation of the program,
- b. reporting and consultation with the Missouri-Madison River Wildlife TAC concerning the annual results from the program, and
- c. filing the results, agency comments, and Licensee's response to agency comments with the FERC.

The program shall be approved by the Missouri-Madison River Wildlife TAC prior to filing with the FERC.

MPC shall prepare the plan after consultation with the appropriate agencies and interested entities. MPC shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the commission. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

6. Raptor-Proof Transmission Line Design

Transmission line poles provide attractive perch and nest sites for raptors (birds of prey).

Transmission lines, however, can constitute an electrocution hazard for raptors and other birds large enough to simultaneously touch two energized wires or other metal hardware. Relatively

simple design considerations involving: (1) pole configuration, (2) spacing of conductors, (3) grounding practices, and (4) providing perch sites can effectively minimize the risk of electrocution.

All new construction or reconstruction will be designed according to the most recent accepted raptor protection guidelines (i.e., Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1981, Raptor Research Report No. 4, published by the Raptor Research Foundation, Inc). MPC shall consult with the Fish and Wildlife Service, the Montana Department of Fish, Wildlife and Parks, and the appropriate land management agency(s) in adopting these guidelines, and shall develop and implement a design that will provide adequate separation of energized conductors, groundwires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards.

MPC will consult with appropriate federal and state fish and wildlife agencies about the proposed transmission line design, and within 90 days after completion of construction, MPC shall file as-built drawings of the transmission line with the FERC.

Following are the recommendations for the management of osprey and other pole nesting raptors we would like to see written as appropriate articles (Appendix B-Osprey Nest Management Plan).

A preliminary assessment of the hazard of transmission line crossings of the Madison-Missouri River to birds was submitted to the FERC on October 17, 1994. The transmission lines identified in the report as being hazardous as well as other potentially hazardous lines will be monitored for electrocution/collision impacts. Once hazardous lines have been identified, MPC will:

- a. develop specific mitigation measures to protect migratory birds;
- b. develop an implementation schedule for the protective measures;
- c. develop a plan and schedule to monitor the effectiveness of the plan's mitigative measures.

Skagit River Project Offer of Settlement, April 1991 Project No. 553 (Washington)

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D. WILDLIFE SETTLEMENT AGREEMENT

1. General Intent

The Wildlife Settlement Agreement between the City and various Parties is intended to resolve all issues related to the effects on wildlife resources of the Project, as currently constructed, for the period of October 28, 1977 (expiration of the previous license) through the duration of the Settlement Agreement. The Settlement Agreement incorporates the Wildlife Habitat Protection and Management Plan. The Wildlife Management Review Committee is established to provide general oversight and direction concerning plan implementation. In addition, the City agrees to establish a new environmental staff position at least partly dedicated to wildlife purposes.

2. Plan Elements

The City will make available a total amount of \$17,000,000 from which both the acquisition of wildlife habitat lands and habitat enhancement will be funded. The large majority of the money will be used to acquire property rights (preferably in fee simple) in order to preserve wildlife habitat in the upper Skagit River and South Fork Nooksack River valleys. Lands have been selected that possess riparian areas and corridors, wetlands, and mature forest communities; have eagle usage or provide elk winter range; and/or are adjacent to other protected lands. The City will begin to secure some of the identified lands in advance of the receipt of the new license. The City will implement a continuing program to retain some of the acquired lands in the Nooksack

basin in early successional stages in order to provide winter forage for elk. Some low-intensity habitat enhancement and manipulation measures may also be employed (e.g., wetland habitat restoration) in several locations. The Agreement establishes the procedures by which monies are allocated and lands are selected and acquired.

The City will provide continuing support during the term of the new license to interagency wildlife and ecosystems research and monitoring efforts in the North Cascades with emphasis on research that will enhance the knowledge and practice of wildlife protection and management in the Project Area and Ross Lake National Recreation Area. In support of this mission, the City will make an annual payment of \$50,000 for the purpose of funding wildlife and environmental research and studies. A five member Wildlife Research Advisory Committee will solicit and review the research proposals and select the projects for funding. The City will make an annual payment of \$20,000 to support the long-term monitoring of wildlife and environmental resources in the North Cascades National Park Service Complex. The City will also fund the inventory and monitoring of bald eagle activity and design and equip a North Cascades research facility in the Project Area.

As part of the City's support of the North Cascades Environmental Learning Center (see the Recreation and Aesthetics section), an annual payment of \$20,000 for the term of the license will be provided by the City to the Center to further the development of public knowledge and understanding of the values and issues in wildlife and ecosystems management and protection in the Project Area and the North Cascades Area.

A memorandum of understanding will provide the procedural framework for consultation with the National Park Service regarding management activities on the City's non-residential fee title lands in the Ross Lake National Recreation Area that are not part of the Project Area. The Settlement Agreement also describes the procedures by which the implementation of the Plan will be periodically reviewed, and establishes a Wildlife Management Review Committee to provide this review and oversight.

The Intervenor agree that the City's performance of the obligations detailed within the Agreement and Plan constitutes adequate wildlife resources protection and satisfactory mitigation for wildlife impacts caused by the Project, as currently constructed, for the period October 28, 1977 through the duration of this Agreement. The Intervenor agree that such performance by the City will satisfy its obligations under the Federal Power Act, the Fish and Wildlife Coordination Act, and the Wild and Scenic River Act for purposes of relicensing of the Project. The Intervenor agree to participate fully and in a timely manner in the conduct of the various technical, administrative, and decision-making activities, committees and procedures that are detailed in the Agreement and Plan.

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

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4.6. Wildlife Enhancement

4.6.1 WE shall, after consultation with the Team, file with the Commission for approval a wildlife enhancement plan for the Projects following the schedule in Paragraph 2.3.9. The wildlife enhancement plan shall include sections on wildlife enhancement measures and bald eagle protection and management, and shall be integrated with the provisions of overall Comprehensive Land Management Plan (CLMP) described in Paragraph 5.1.4.

4.6.2 The wildlife enhancement section shall include, but is not limited to, the following provisions and specific measures for:

- a) management including enhancement of wildlife habitat;
- b) the protection of environmentally sensitive areas;
- c) cavity nesting birds by leaving all standing dead trees which do not directly impact safety or project operation including timber harvest;
- d) osprey nesting platforms on the each impoundment, as appropriate;
- e) waterfowl enhancement on each impoundment to include nesting structures or other measures, as appropriate;
- f) vegetative plantings for wildlife, as appropriate;
- g) a buffer zone around all riparian lands using the appropriate management techniques to achieve old growth forests;
- h) the addition of woody debris to riparian areas to provide additional habitat;
- i) the protection and enhancement of habitat for any Federal or State listed threatened, endangered or sensitive (T/E/S) species;
- j) an annual review of the status of T/E/S species and modification of the CLMP based upon this examination;
- k) annual consultation with the Team on the status of wildlife populations and the measures to be performed to manage and enhance wildlife populations; and
- l) the maintenance of all wildlife enhancement structures.

4.6.3 WE shall implement a Bald Eagle Protection Plan on project lands that includes, but is not limited to, the following measures:

- a) specifically coordinate with the MDNR, WDNR and FWS on all aspects of the plan;
- b) the FWS and WDNR Bald Eagle Management Guidelines;
- c) responsibility for updating nest site locations on project land maps;
- d) a protocol for communications among the affected WE staff on bald eagle management interactions with forestry and recreational activities;
- e) schedule annual planning meetings with resource agency personnel to discuss land management issues that impact bald eagle management and other T/E/S species. The meeting shall occur soon after the annual bald eagle nest surveys are completed and the Resource Agencies have updated information. The meeting shall cover how WE will implement the guidelines in that given year;
- f) reimbursement of the WDNR and MDNR up to \$1 000 per year (in 1996 dollars adjusted annually in the year of payment for changes in the CPI) for flight time over the Projects to identify bald eagle nest locations and collect productivity data. The Resource Agencies shall directly bill charges;
- g) provisions to obtain all information necessary to implement the Bald Eagle Management Plan including, but not be limited to, identifying of bald eagle feeding, perching, and roost areas. Such information needs shall be identified, as necessary, during the annual wildlife consultation meeting; and
- h) requirement additional analysis of the causative problems, in consultation with the Team, if bald eagle productivity drops below a three year running average of 1.0 young per occupied nest or consecutive two years of zero production. The analysis could range from a simple consultation session where nest failure could be easily identified to conducting additional surveys to determine the cause of the nest failure. If productivity problems are determined to be caused by project operations, land management activities, and/or recreation activities, then remedial measures will need to be developed and implemented. The annual productivity review shall be conducted

during the annual wildlife consultation. This measure will help ensure that the bald eagle restoration goal of 1.0 young per occupied nest is achieved and allow for flexible management.

2. Habitat Protection and Acquisition

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project October 5, 1994; Project No. 2323 (Massachusetts)

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E. NEP agrees to conduct its timber management programs in accordance with the guidelines attached as Appendix C and with the following goals: the protection of riparian zones along rivers and lakes; protection of visual quality within important public viewsheds and along trail corridors; limited use of clearcutting; minimizing interference with low impact recreational use and enjoyment; and the preservation of wildlife habitat.

Appendix C

Statement of Intent

The provisions stated below establish specific guidelines for the protection of important biological and recreational resources on NEP's Deerfield Project forested lands. The intent is to allow NEP to retain flexibility in its forest management operations while ensuring that lands critical to maintaining aquatic and terrestrial wildlife habitat, recreational experiences, and long-term productivity are protected.

NEP agrees to conduct its timber management programs in accordance with the following goals:
Protect riparian zones along rivers and lakes.

Protect visual quality within important public viewsheds and along trails. Protect fragile or highly erodible soils.

Prevent excessive nutrient depletion of low productivity soils.

Provide appropriate application of the clearcutting reproduction method. Protect and manage wildlife habitat for all species that may be reasonably expected to occur on project lands.

Missouri/Madison Project Recommended Terms and Conditions, May 1995 Project No. 2188 (Montana)

p. 1.6

1. General License Conditions Related to Project Construction

At least 90 days before the start of any land-clearing or land-disturbing activities, MPC shall file with the FERC, for approval, a wildlife mitigation plan which provides mitigation for the loss of specific habitat and shall include, but not be limited to: (1) identification of the type of habitat to be used for replacement; (2) a map showing the location and number of acres of habitat to be used for replacement; (3) a plan to manage the habitat to optimize its value to wildlife; (4) a monitoring program to determine the effectiveness of the plan; (5) a schedule for filing the monitoring results with the FERC; (6) a construction schedule that avoids disturbance to wildlife; (7) revegetation of disturbed areas with native plant species beneficial to wildlife as soon as practicable after completion of construction at a particular site and not later than a particular month and day of a particular year; and (8) procedures to maintain the transmission line right-of-way for the benefit of wildlife resources.

MPC shall prepare the plan after consultation with appropriate agencies, each Federal agency with managerial authority over any part of project lands, and other interested entities. MPC shall include with the plan documentation of consultation, copies of comments and recommendations

on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. MPC shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the FERC. If MPC does not adopt a recommendation, the filing shall include MPC's reasons, based on project-specific information.

(1.8-1.9)

(3) Funding annual "on-the-ground" wildlife habitat protection and enhancement measures as determined by the Missouri-Madison River Wildlife TAC, including measures described for the wildlife biologist using adaptive management.

Cost: \$50,000 per year for wildlife habitat protection and enhancement in the Missouri-Madison River System from Hebgen Reservoir to Fort Benton, Montana.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

1. General Intent

The Wildlife Settlement Agreement between the City and various Parties is intended to resolve all issues related to the effects on wildlife resources of the Project, as currently constructed, for the period of October 28, 1977 (expiration of the previous license) through the duration of the Settlement Agreement. The Settlement Agreement incorporates the Wildlife Habitat Protection and Management Plan. The Wildlife Management Review Committee is established to provide general oversight and direction concerning plan implementation. In addition, the City agrees to establish a new environmental staff position at least partly dedicated to wildlife purposes.

p. 8-9

2. Plan Elements

The City will make available a total amount of \$17,000,000 from which both the acquisition of wildlife habitat lands and habitat enhancement will be funded. The large majority of the money will be used to acquire property rights (preferably in fee simple) in order to preserve wildlife habitat in the upper Skagit River and South Fork Nooksack River valleys. Lands have been selected that possess riparian areas and corridors, wetlands, and mature forest communities; have eagle usage or provide elk winter range; and/or are adjacent to other protected lands. The City will begin to secure some of the identified lands in advance of the receipt of the new license. The City will implement a continuing program to retain some of the acquired lands in the Nooksack basin in early successional stages in order to provide winter forage for elk. Some low-intensity habitat enhancement and manipulation measures may also be employed (e.g., wetland habitat restoration) in several locations. The Agreement establishes the procedures by which monies are allocated and lands are selected and acquired.

The City will provide continuing support during the term of the new license to interagency wildlife and ecosystems research and monitoring efforts in the North Cascades with emphasis on research that will enhance the knowledge and practice of wildlife protection and management in the Project Area and Ross Lake National Recreation Area. In support of this mission, the City will make an annual payment of \$50,000 for the purpose of funding wildlife and environmental research and studies. A five member Wildlife Research Advisory Committee will solicit and review the research proposals and select the projects for funding. The City will make an annual payment of \$20,000 to support the long-term monitoring of wildlife and environmental resources in the North Cascades National Park Service Complex. The City will also fund the inventory and

monitoring of bald eagle activity and design and equip a North Cascades research facility in the Project Area.

As part of the City's support of the North Cascades Environmental Learning Center (see the Recreation and Aesthetics section), an annual payment of \$20,000 for the term of the license will be provided by the City to the Center to further the development of public knowledge and understanding of the values and issues in wildlife and ecosystems management and protection in the Project Area and the North Cascades Area.

A memorandum of understanding will provide the procedural framework for consultation with the National Park Service regarding management activities on the City's non-residential fee title lands in the Ross Lake National Recreation Area that are not part of the Project Area. The Settlement Agreement also describes the procedures by which the implementation of the Plan will be periodically reviewed, and establishes a Wildlife Management Review Committee to provide this review and oversight.

The Intervenor agree that the City's performance of the obligations detailed within the Agreement and Plan constitutes adequate wildlife resources protection and satisfactory mitigation for wildlife impacts caused by the Project, as currently constructed, for the period October 28, 1977 through the duration of this Agreement. The Intervenor agree that such performance by the City will satisfy its obligations under the Federal Power Act, the Fish and Wildlife Coordination Act, and the Wild and Scenic River Act for purposes of relicensing of the Project. The Intervenor agree to participate fully and in a timely manner in the conduct of the various technical, administrative, and decision-making activities, committees and procedures that are detailed in the Agreement and Plan.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)
(See Section I. Trust Funds, below)**

3. Aesthetics

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

Appendix C

Visual Aesthetics

- Stands that are within the viewshed of major public use areas (rivers, lakes, hiking trails, and highways) shall be managed, to the extent possible, so as to minimize visual degradation and maintain aesthetic quality.

**Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)**

p. 3

D. Minimum/Aesthetics Flows

The signatories agree that: releases into the Bennetts Bridge bypassed reach will be provided for aesthetic and environmental purposes. The releases at the Bennetts Bridge dam will be 24-hours-per-day and will be 20 cfs July through September and 7 cfs for the remainder of the

year. The top of the Salmon River Falls will be modified with natural ledge material to distribute the flow over the falls.

The signators agree that: no releases into the Lighthouse Hill bypassed reach will be made for aesthetic or environmental purposes.

**Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)**

p. 16-17

b. Visual Quality Mitigation Plan

The Visual Quality Mitigation Plan provides for improvements of the visual quality of Project facilities. The main areas of concern were Project structures near the three dams, and the transmission line rights-of-way extending from the Project Area into Snohomish County.

The City estimates the total cost of the Skagit Project Visual Mitigation Plan at approximately \$7,500,000 over the term of the license, in 1990 dollars.

Mitigation measures

The City will undertake measures to mitigate for Project impacts on visual quality in the Project area. These measures include:

- Repainting of various Project facilities in less visually contrasting colors on the normal maintenance cycle, such as transmission towers, surge tanks, and the Gorge Dam Access Bridge;
- Removal of the Diablo person lift; and
- Modification of the Ross Dam Broom Gate Shed to decrease its contrast

Enhancement measures-initial funding

Funding from the Erosion, Wildlife and Visual Quality (Aesthetics) Agreements will go toward the development of a new, larger greenhouse facility at the Project. The increased need for propagation of native plants called for by various measures in these three Agreements led to the need for such a facility.

Other Visual Quality Mitigation Plan elements to be undertaken by the City include:

- Revegetation and landscaping of a former housing area in Newhalem, including a river view trail and picnic facilities;
- Paving and landscaping of a parking area in Newhalem for use by Recreational Vehicles;
- Improvement of the Ladder Creek Falls Trail Parking Area in Newhalem by paving and revegetation;
- Landscaping to increase the screening of the Gorge switchyard; and
- Refill of Ross Lake as early as possible after April 15, in the recreation season to consistent with other resource management constraints.

Enhancement measures-ongoing measures

The Project transmission lines and their attendant rights-of-way are addressed in the Rights-of-Way Vegetation Management Plan, which is a section of the Visual Quality Mitigation Plan. The primary concern is the visibility of the transmission line features from State Route 20 and the Skagit Wild and Scenic River. The City will continue to improve the visual quality of the rights-of-way by vegetation management that permits greater growth than in the past and by giving special treatment to seven target areas identified in one of the visual quality assessment studies.

Other plans

Several Erosion Control Plan elements simultaneously mitigate visual quality impacts. Measures include planting vegetation and placing earth and rock to discourage shoreline erosion.

Similarly, a number of the Recreation Plan measures will improve the visual quality of the Project area by improving landscaping and orienting travelers' views away from Project facilities.

G. RESERVOIR MANAGEMENT

1. Water Levels

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 1-2

H. MOSHIER DEVELOPMENT

A. Reservoir Fluctuations

From July 1 to April 30, the maximum daily reservoir fluctuation will be limited to 1.5 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations 1639.5 and 1641.0 feet with flashboards and elevations 1637.5 and 1639.0 without flashboards.

From May 1 to June 30, in order to protect nests of reservoir spawning fish and of nesting birds, the maximum daily reservoir fluctuation will be limited to 1.0 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations 1640.0 and 1641.0 with flashboards and elevations 1638.0 and 1639.0 without flashboards. If flashboards are down or fail during this period, the flashboards will not be replaced until July 1 or later.

As described in Niagara Mohawk's Beaver River license application to FERC, dated November 25, 1991 (FERC license application), the normal maximum headwater elevation corresponds to the elevation at the top of the flashboards. In the case where flashboards do not exist, the normal maximum headwater elevation corresponds to the top of the spillway crest. Regulation along the Beaver River usually prevents the flashboards from failing due to high water or ice conditions. However, flashboards are usually replaced every three to five years as part of Niagara Mohawk's maintenance program.

Maximum seasonal reservoir fluctuation will be limited to 3.0 feet from the normal maximum headwater elevation. Further, during periods when the daily average inflow below High Falls (Beaver River inflow to Moshier Development plus all intervening tributary flow between Moshier Development and High Falls Development) is less than 250 cfs ("low flow periods"), additional storage at the Moshier Development may be used, in conjunction with storage at the downstream Soft Maple, Effley and High Falls Developments (see sections IV. A, V. A, and IX. A), to supplement the base flow requirements below High Falls (see Section IX.C). During low flow periods, the daily maximum reservoir fluctuation will be limited to 3.0 feet, corresponding to fluctuations between elevations 1638.0 and 1641.0 feet with flashboards. Upon observing the low flow condition described above, Niagara Mohawk will initiate the following:

1. Contact the Hudson River Black River Deregulating District (HRBRRD) and seek HRBRRD assistance in increasing flows, if possible, to address the low flow condition;
2. Document the response from the HRBRRD; and
3. Notify the New York State Department of Environmental Conservation (NYSDEC) and advise of the situation and steps to be taken.

p. 4

III. EAGLE DEVELOPMENT

A. Reservoir Fluctuations

The maximum daily and seasonal reservoir fluctuation will be limited to 1.0 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations

1425.2 and 1426.2 feet with flashboards and elevations 1424.2 and 1425.2 without flashboards. Flashboards will not be erected or replaced during the period May 1 to June 30 so as to protect the nests of reservoir spawning fish and of nesting birds.

p. 6

IV. SOFT MAPLE DEVELOPMENT

A. Reservoir Fluctuations

The maximum daily reservoir fluctuation will be limited to 1.5 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations 1288.4 and 1289.9 feet with flashboards and elevations 1286.9 and 1288.4 without flashboards.

From May 1 June 30, in order to protect nests of reservoir spawning fish and of nesting birds, the maximum daily reservoir fluctuation will be limited to 1.0 feet from the normal maximum headwater elevation. If flashboards are down or fail during this period, the flashboards will not be replaced until July 1 or later.

During periods when the daily average inflow at High Falls is less than 250 cfs ("low flow periods"), additional storage at the Soft Maple Development may be used to supplement the base flow requirements below High Falls (see Section II. A, V. A, IX. A. & C.). During such low flow periods, the daily maximum reservoir fluctuation will be limited to 3.0 feet, corresponding to fluctuations between elevations 1286.9 and 1289.9 feet with flashboards.

p. 7-8

V. EFFLEY DEVELOPMENT

A. Reservoir Fluctuations

The maximum daily reservoir fluctuation will be limited to 1.5 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations 1161.5 and 1163.0 feet without flashboards as there are no flashboards.

During the period from May 1 to June 30, fluctuations will be limited to 1.0 feet in order to protect nests of reservoir spawning fish and of nesting birds. This 1.0 foot fluctuation corresponds to fluctuations between elevations 1162.0 and 1163.0.

During periods when the daily average inflow at High Falls is less than 250 cfs ("low flow periods"), additional storage at the Effley Development may be used to supplement the base flow requirements below High Falls (see Sections H. A, IV. A, IX. A, C). During low flow Periods, the daily maximum reservoir fluctuation will be limited to 3.0 feet, corresponding to fluctuations between elevations 1160.0 and 1163.0 feet.

p. 9

VI. ELMER DEVELOPMENT

A. Reservoir Fluctuations

The maximum daily reservoir fluctuation will be limited to 1.0 feet from the normal maximum headwater elevation. This corresponds to fluctuations between elevations 1107.0 and 1108.0 feet without flashboards as there are no flashboards.

p. 15

H. Conditions For Stillwater Reservoir

The signators reserve for future consideration how any prospective modifications in the current operations of the upstream HRBRRD's Stillwater Reservoir or the Stillwater Hydro Project (FERC Project No. 6743), thereon, might affect the purposes for which the Stillwater Reservoir was and is, as well as the eight downstream hydroelectric facilities of Niagara Mohawk and the natural resources of the environs of those facilities that are the subject of this Settlement Offer.

Signators may amend this Settlement Offer on the basis of such further consideration as may be mutually agreed upon.

With or without such amendment of this Settlement Offer by mutual assent, any signator may seek such further relief from the FERC to enhance the power resources, the flood control and low flow augmentation purposes of the HRBRRD's operation of the Stillwater Reservoir and/or the environmental benefits (including the flow schedule) provided herein for the downstream hydro developments of Niagara Mohawk's Beaver River Hydro Project (FERC Project No. 2645) through such modification in the current operation of the Stillwater Reservoir as the HRBRRD may determine or the FERC may appropriately order for the Stillwater Project No. 6743.

**Black River Project and Beebee Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 3

F. Project Operations

1. For compliance purposes, no impoundment elevation shall drop lower than 0.5 feet below the permanent crest of dam or the top of flashboards dam is so equipped. This condition may be temporarily modified by operating emergencies beyond the control of the licensee or for short periods upon mutual agreement between the licensee and the NYSDEC. The USFWS will be notified of these events by licensee.

Additional operating conditions are described for the Herrings Development (III.A.), the Sewalls Development (VII.A.), and the Beebee Island Project (VIII.A.) .

2. In order to protect nests of reservoir spawning fish and migratory and non-migratory nesting birds, flashboards shall be installed at each development by May 1 or as soon thereafter as safely possible.

3. If the impoundment cannot be maintained within 0.5 feet of the top of the flashboards between May 1 and June 30 because of flashboard problems, licensees will, for ease of communication, alert the local NYSDEC to propose remedial actions. NYSDEC will communicate with the USFWS, and will within 5 business days approve which, if any, remedial actions may be done before June 30. Permission for remedial actions will be granted only upon agreement by both agencies.

p. 6

A. Reservoir Fluctuations

For compliance purposes, the impoundment elevation shall not drop lower than 0.5 feet below the permanent crest of dam, or the top of flashboards if they have been installed. In an effort to further minimize fluctuating flows in the river reach below the Deferiet Development, licensee agrees to use its best efforts to achieve a goal of further reducing impoundment fluctuations at Herrings from 0.5 feet to 0.2 feet during a combination of the following conditions:

- 1) when river flows are between 1400 and 1900 cfs; and
- 2) between the dates of May 1 and October 1.

The degree of success on the part of the licensee in achieving this goal will not be used for regulatory compliance purposes. The licensee will annually report to the Black River Advisory Council on its effectiveness in achieving this goal.

p. 10

A. Reservoir Fluctuations

Licensee will maintain run-of-river operation, as defined in II.C., of the Sewalls Development between May 1 and September 30 whenever river flow is below 2,000 cfs. During such periods of run-of-river operation, licensee may maintain constant spillage flows above the permanent crest elevation to provide run-of-river operation.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 7-8

In area of Waterville Lake, dioxin-contaminated sediments lie close to the lake's surface. Lowering of the water surface elevation would expose contaminated sediments to the effects of scour and increase the likelihood of these sediments being resuspended into the water column. Therefore, as part of the settlement agreement, Carolina Power has agreed not to allow water in the project reservoir to drop below elevation 2232 feet National Geodetic Vertical Datum (NGVD). Establishing a minimum operating reservoir level will minimize the disturbance of contaminated sediments and will allow natural encapsulation processes to occur. The settlement agreement contains a provision which will allow limited reservoir drawdown below elevation 2232 feet NGVD. The settlement agreement provides that Carolina Power will not be found in violation of the minimum reservoir surface water elevation requirement so long as the reservoir does not fall below elevation 2232 feet NGVD for more than 120 hours in any one calendar year, below 2232 feet NGVD for more than 30 hours in any one seven-day period, or below 2228 feet NGVD at any time.

We agree that establishing a minimum reservoir surface water elevation will help minimize the disturbance of sediments within the reservoir and that this will help improve reservoir water quality by allowing the natural encapsulation of the dioxin contaminated sediments to occur. Accordingly, we will accept the minimum reservoir surface water elevation provision of the settlement agreement and include it in the license as Article 403.

**Consumers Power Company Settlement, November 11, 1992
Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)**

p. 37-38

18.0 Rogers Project Reservoir Surface Water Elevation

18.1 During normal operations, CPCO will maintain the reservoir surface water elevation at a nominal operating elevation of 861.3 ft USGS datum. Compliance with run-of-river operation will be based on river flow in accordance with Paragraph 17.1.

19.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Hardy Project to enhance and protect the environment at this project by: minimizing project river regulation impacts on Hardy reservoir habitat; minimizing impacts on reservoir habitat from peaking operation; and maximizing downstream river habitat by the appropriate use of storage. CPCO shall maintain Hardy Reservoir at 822.0 ft USGS datum with \pm 0.5 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance.

p. 44

22.0 Mio Project Reservoir Surface Water Elevation

22.1 During normal operations, CPCO will maintain the reservoir surface water elevation at a nominal operating elevation of 962.6 ft USGS datum. Compliance with run-of-river operation will be based on river flow in accordance with Paragraph 21.1.

p. 46-50

24.0 Alcona Project Reservoir Surface Water Elevation

24.1 During normal operations, CPCO will maintain the reservoir surface water elevation at a nominal operating elevation of 829 ft USGS datum. Compliance with run of river operation will be based on river flow in accordance with Paragraph 23.1.

25.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Loud Project to enhance and protect the environment at this project by minimizing peaking impacts on Loud reservoir habitat. CPCO shall maintain Loud Reservoir at 741.8 ft USGS datum with ± 0.8 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. Headwater elevations shall be recorded every thirty minutes. CPCO shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.8 ft during normal operation. CPCO will modify the Loud Project operation after review by the resource agencies and with FERC approval based on the Foote re-regulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

26.0 Loud Project Reservoir surface Water Elevation

26.1 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 741.8 ft USGS datum. The rates of draw down and refill shall not exceed two (2) ft in a twenty-four (24) hour period.

27.0 Five Channels Project Operation

27.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Five Channels Project to enhance and protect the environment at this project by minimizing peaking impacts on Five Channels reservoir habitat. CPCO shall maintain Five Channels Reservoir at 714.7 ft USGS datum with ± 0.3 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. Headwater elevations shall be recorded every thirty,(30) minutes. CPCO shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.3 ft during normal operation. CPCO will modify the Five Channels Project operation after review by the resource agencies and with FERC approval based on the Foote re-regulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

28.0 Five Channels Project Reservoir Surface Water Elevation

28.1 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 714.7 ft USGS datum. The rates of draw down and refill shall not exceed two (2) ft in a twenty-four (24) hour period.

29.0 Cooke Project Operation

29.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Cooke Project to enhance and protect the environment at this project by minimizing peaking impacts on Cooke reservoir habitat. CPCO shall maintain Cooke Reservoir at 678.5 ft USGS datum with ± 0.5 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. Headwater elevations shall be recorded every thirty minutes. CPCO shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.5 ft during normal operation. CPCO will modify the Cooke Project operation after review of the

resource agencies and with FERC approval, based on the Foote reregulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

30.0 Cooke Project Reservoir Surface Water Elevation

30.1 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 678.5 ft USGS datum. The rates of draw down and refill shall not exceed two (2) ft in a twenty-four (24) hour period.

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project October 5, 1994; Project No. 2323 (Massachusetts)

Management Overview

SOMERSET RESERVOIR - Stable reservoir +/- 1 foot May 1 - July 31. OBJECTIVE: protect loon and waterfowl nesting.

HARRIMAN RESERVOIR - rising or stable level from May 1 - June 15, with provision for emergencies and safety requirements; from June 16 - July 15 the reservoir will drop no more than one foot per day to facilitate black fry habitat and the summer recreation pool. OBJECTIVE: protection of smelt and smallmouth bass spawning and to meet summer surface water recreation needs.

p. 7-8

B. NEP agrees to operate Harriman and Somerset reservoirs as described herein to protect the resource values provided by the reservoirs.

1) The Somerset reservoir will be managed by NEP to maintain a stable reservoir elevation to facilitate loon nesting during the period of May 1 through July 31 in each year. During this period NEP will maintain the reservoir elevation stable within a range of +/- 1 foot.

2) NEP will manage the Harriman reservoir as follows to support rainbow smelt and small mouth bass spawning and early life stages. The reservoir water level will be stable or rising during the period from May 1 through June 15 each year. From June 16 through July 15 the reservoir elevation will drop no more than 1 foot per day.

Missouri/Madison Project Recommended Terms and Conditions, May 1995 Project No. 2188 (Montana)

p. 1.12-1.13

To the extent possible, given the variability of inflows to Hebgen Reservoir, and subject to the minimum flow requirements described above, and the specific exceptions noted under Special Operations, MPC will maintain the elevation of Hebgen Reservoir between 6,530.26 ft. and 6,534.87 ft. (normal full pool) from June 20 through October 1.

In a typical year, MPC will endeavor to operate the Hebgen Development so Hebgen Reservoir will refill to approximately its full pool elevation of 6,534.87 ft. in late-June or early-July. MPC will then endeavor, subject to the minimum flow requirements described above and the specific exceptions noted under Special Operations, to maintain Hebgen Reservoir near its full pool elevation until September 1. Between September 1 and March 31 of a typical year, MPC will, subject to the minimum flow requirements described above and the specific exceptions noted under Special Operations, draft Hebgen Reservoir to approximately elevation 6,524 ft. During this period, as Hebgen Reservoir is being drafted, MPC will endeavor to maintain a uniform discharge from the Hebgen Development to the extent practical, given the variability of inflows to Hebgen Reservoir and subject to the specific exceptions noted under Special Operations. After

April 1 of a typical year, MPC will operate the Hebgen Development, subject to the minimum flow requirements described above and the specific exceptions noted under Special Operations, to refill Hebgen Reservoir to at least elevation 6,530.26 ft. by June 20. Minimum river flows below Hebgen shall take precedence over Hebgen Reservoir elevations throughout the year.

Special Operations:

Except for the specific exceptions described herein, MPC will not purposefully deviate from the Typical Operations, described above, without concurrence from the appropriate resource agencies.

MPC may deviate from the Typical Operations, described above, in emergencies; to accommodate special maintenance or construction requirements; to allow for recovery of archaeological data; for power production purposes during an extended period of extreme drought; or for special biological considerations, with the concurrence of the appropriate agencies.

Except in emergency circumstances, when it is necessary to deviate from the Typical Operations to accommodate special maintenance or construction activities, MPC will consult with the appropriate resource agencies to develop an implementation plan and schedule. Special maintenance or construction activities will be monitored and, if determined necessary by the TAC, a mitigation plan shall be developed by MPC.

Refilling Hebgen Reservoir to at least elevation 6,530.26 ft. may be delayed beyond June 20 in some years to accommodate archaeological data recovery activities.

The Missouri River Coordination Agreement (a contract between MPC and the USSR) requires that the water stored in Hebgen Reservoir be used to enhance downstream power production if extreme drought conditions persist for an extended period. Drafting Hebgen Reservoir for this purpose is only required after all storage in Canyon Ferry Reservoir above elevation 3,769 ft. (28 ft. below Canyon Ferry's normal full pool) has been utilized.

p. 2.2-2.3

During periods when there is no ice cover on the Madison Reservoir, to the extent possible, given the variability of inflows to Madison Reservoir and subject to the specific exceptions noted under Special Operations, MPC will endeavor to maintain the elevation of Madison Reservoir between 4,840 ft. and 4,841 ft. (normal full pool) and to maintain continuous, stable flows in the Madison River immediately below the Madison Development.

During periods when there is an ice cover on Madison Reservoir (generally early December through mid-March) and during periods when the ice cover is breaking up (generally late March through early April), to the extent possible, given the variability of inflows to Madison Reservoir and subject to the specific exceptions noted under Special Operations, MPC will endeavor to maintain the elevation of Madison Reservoir at approximately elevation 4,839 ft.

Special Operations:

Except for the specific exceptions described herein, MPC will not purposefully deviate from the Typical Operations, described above, without concurrence from the appropriate resource agencies.

MPC may deviate from the Typical Operations, described above, in emergencies; to accommodate special maintenance or construction requirements; for power production purposes during an extended period of extreme drought; or for special biological considerations with concurrence from the appropriate agencies.

Except in emergency circumstances, when it is necessary to deviate from the Typical Operations to accommodate special maintenance or construction activities, MPC will consult with the appropriate resource agencies to develop an implementation plan and schedule. Special

maintenance or construction activities will be closely monitored and if determined necessary by the TAC, a mitigation plan shall be developed by MPC.

The Missouri River Coordination Agreement (a contract between MPC and the USBR) requires that the water stored in Madison Reservoir be used to enhance downstream power production if extreme drought conditions persist for an extended period. The maximum required draft for this purpose is to elevation 4,831.5 ft. Drafting Madison Reservoir for this purpose is only required after all of the storage in Canyon Ferry Reservoir and Hebgen Reservoir has been utilized.

Salmon River Project Settlement Offer, December 9, 1993
Project No. 11408 (New York)

p. 3

C. Wetlands/Reservoir Fluctuation

The signators agree that: the effects of the various operating modes on the reservoir levels are adequately evaluated in the *Water Budget Model* dated May 5, 1993 and the *Phase I - Preliminary Data Analysis, Reservoir Fluctuation Study* dated July 14, 1993. Phase 2 of the reservoir fluctuation study is scheduled to be completed by December 31, 1993. (Preliminary results from the field work indicate that the water level stabilization proposed as part of Rule Curve 16 will be adequate to protect and enhance the reservoir wetlands.)

The signators agree: to investigate the feasible alternatives for the provision of water level stabilization for the wetland located north of the Lighthouse Hill Reservoir if the water levels in the wetland are hydraulically controlled by the water level in the reservoir as determined by the Phase 2 reservoir fluctuation study.

Attachment 2

General operating guidelines are described in the license application and the Water Budget Model. Normal Elevation (defined within the guidelines) is any time that the reservoir elevation is within one foot of the target elevation (+/-). Generally, additional releases (greater than the base flow) will not be continued when the reservoir level falls below the target elevation (due to the previous days operation).

Wilderness Shores Settlement Agreement, July 29, 1996
Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 16

3.1.4.1 WE shall maintain the Peavy Falls Reservoir (Peavy Pond) surface elevation between 1282.8 feet and 1283.8 feet NGVD from May 16 through February 28/29.

3.1.4.2 WE shall maintain Peavy Pond surface elevation during the winter drawdown between 1268.8 and 1283.8 feet NGVD from the March 1 to May 15. If weather conditions result in difficulty refilling Peavy Pond by May 15, the refill of the Peavy Pond will take precedence over the refill of Michigamme Reservoir and additional water will be released from Way Dam to refill Peavy Pond in a period to be determined in consultation with the Team.

2. Erosion Control

Consumers Power Company Settlement, November 11, 1992
Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 33-35

16.0 Soil Erosion Control

16.1 CPCo shall develop stream and reservoir bank stabilization and soil erosion control plans for sections of the AuSable, Manistee and Muskegon Rivers influenced by CPCo's hydroelectric projects. CPCo shall provide \$1 million, up to 200,000 in any given year within the first ten years after the execution of this Settlement, in 1992 dollars (adjusted for the CPI) for erosion control work at sites identified by the plans.

16.2 The plans shall include an erosion site inventory, prioritization schedule for erosion control and potential control alternatives and their associated costs. The plans and associated erosion control project implementation schedule shall be developed in consultation with the resources agencies and when, within a project boundary, with approval by FERC.

16.3 CPCo and the resource agencies shall jointly select sites, from the erosion site inventory, for final design and construction. CPCo shall implement the control activity at each identified site. The resource agencies may provide financial assistance and/or participate in construction activities at selected sites.

16.4 CPCo, in cooperation with the resource agencies, shall:

A) Muskegon River - Identify streambank and reservoir soil erosion sites on the Muskegon River from the Rogers Hydroelectric Projects downstream;

B) Manistee River - Utilize the erosion survey performed by the Northwest Michigan Resource Conservation and Development Council in 1986 and other data provided by the resource agencies for soil erosion site identification from Hostenpyl Hydroelectric Project downstream, and; C) AuSable River - Utilize the Soil Erosion Survey for the AuSable River prepared by Huron Pines Resource Conservation and Development Council in 1991 and other data provided by the resource agencies for soil erosion site identification from the Mio Hydroelectric Project downstream.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994: Project No. 2323 (Massachusetts)**

Appendix C

Soil Erosion

- No harvesting shall be performed on any SCS-classified histosols (bog soils).
- For soils listed by SCS as having severe equipment limitations due to wetness (i.e., poorly drained soils) and soils rated severe for erosion hazard, harvesting shall be limited to winter periods when the soil is frozen or utilizing a suitable alternative harvesting method and plan which prevents erosion.

Clearcutting

- Clearcuts will be limited to a maximum of 20 acres in size for stem-only harvests and 10 acres for whole-tree harvests.
- No more than 25% of any management Block shall be clearcut over any 20-year period.
- Clearcutting is prohibited on soils rated severe for erosion hazard when slopes are greater than 25 % measured over a distance of 100 feet or more.
- All clearcuts will be separated by strips at least 300' in width in which no more than 50% of the basal area may be removed over any 10-year period. Additional harvesting within the buffers may take place when regeneration of desirable species is well-established in the adjacent clearcut but no sooner than 10 years after the initial harvest.

- Definitions and Standards: A clearcut is any timber harvesting operation greater than 2 acres in size which results in either of the following two conditions: 1) the average residual basal area of trees over 6' in diameter is less than 30 square feet per acre, or 2) the average residual basal area of trees over 1' in diameter is greater than 30 square feet per acre and the average residual area of trees over 6' in diameter is less than 10 square feet per acre.

Regeneration will be considered well-established when 60% of 1/500-acre plots distributed across the harvest area contain at least one healthy, well-formed tree at least 5' tall.

Future, Alternative, Desirable Management

- NEP shall abide and follow the above-listed provisions. However, over the 40-year term of this Settlement, unforeseen circumstances, future management techniques, public policy and alternative, desirable resource considerations may justify and require actions otherwise prevented by the above-listed provisions. NEP shall continue to manage its forest land in an ethical steward-like manner, and shall not alter this philosophy. Alternatives and exceptions to the above provisions shall only be enacted if other, presently unforeseen, desirable resource management objectives dictate such and the goals outlined in Paragraph V-E of the Settlement are met. If NEP wishes to pursue such exceptions and/or alternatives first shall amend the forest management plan and/or guidelines with the approval of the easement Holder.

Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)

p. 1.12

To the extent possible, given the variability of inflows to Hebgen Reservoir and subject to the specific exceptions noted under Special Operations, and the need for possible flushing flows, MPC will, to the degree practicable, limit flows at USGS Gauge No. 6-388 near Kirby Ranch in accordance with the agreement with the USFS and in consultation with other resource agencies to minimize erosion of the Quake Lake outlet.

Skagit River Project Offer of Settlement, April 1991
Project No. 553 (Washington)

p. 17-19

Other plans

Several Erosion Control Plan elements simultaneously mitigate visual quality impacts. Measures include planting vegetation and placing earth and rock to discourage shoreline erosion. Similarly, a number of the Recreation Plan measures will improve the visual quality of the Project area by improving landscaping and orienting travelers' views away from Project facilities.

G. EROSION CONTROL SETTLEMENT AGREEMENT

1. General Intent

The Erosion Control Settlement Agreement between the City and the National Park Service is intended to resolve all issues related to the effects on soils and slope stability of the Project, as currently constructed, except for those erosion control requirements identified in the archaeological portion of the Settlement Agreement incorporating the Cultural Resources Mitigation and Management Plan for the period October 28, 1977 through the duration of the Erosion Control Settlement Agreement incorporates the Erosion Control Plan. Technical representatives of the City and the National Park Service will provide general oversight and

direction concerning plan implementation. In addition, the City agrees to establish a new environmental staff position at least partly dedicated to erosion control purposes.

2. Plan Elements

As the licensee for the Project, the City has agreed to oversee the implementation of this Agreement. Jointly with the National Park Service, the City will, throughout the new license term, regularly evaluate previous erosion control work and update the work plan for erosion control work to be done in the subsequent years. The City will also construct greenhouse facilities and institute a plant propagation program to supply plant stock for vegetation at erosion control sites.

The National Park Service will have the lead role in most erosion control work and monitoring, primarily at reservoir shoreline sites. It will conduct its work after full consultation and agreement with the City. It will do the erosion control work at most of the sites identified in the Erosion Control Plan and at other sites identified in collaboration with the City during the new license term. The City will do much of the erosion control work at road sites in the Project area.

Erosion control will include passive and active measures. Passive measures will include monitoring of erosion rates and processes at sites where erosion control would be difficult because of a high potential for large mass slump movements of soils or where disturbance would be undesirable (e.g., osprey nesting trees). Active measures will be limited because of the wilderness setting of the Project, which precludes the use of large amounts of concrete, chemically treated lumber, or visually obtrusive structures. Active measures will include vegetation, logs, rock walls, and cribbing. Naturally occurring materials (local earth, rock, timber, and vegetation) that blend with the surrounding site features will be used to minimize the visual impacts of erosion control.

The City will provide funding for this Agreement as follows: (1) \$845,000 for erosion control work during the first nine years of the new license term at the sites specified in the Erosion Control Plan; (2) \$500,000 for erosion control measures at new sites, maintenance, and, if necessary, completion of work at the sites in the Erosion Control Plan; and (3) funding for the greenhouse facilities and the plant propagation program. The City will also fund erosion control at several high priority trail and campground sites up to a maximum of \$99,000 in the years before the new license is issued; interim expenditures will be deducted from erosion control obligations during the new license term.

Wilderness Shores Settlement Agreement, July 29, 1996 Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

p. 43

5.1.5. Erosion Plans

Within 18 months of the issuance of the Projects' licenses, WE shall, after consultation with the Team, file with the Commission for approval a plan to remediate stream and impoundment shoreline erosion sites caused by the operation of the Projects. One (1) plan shall be developed for each project. The plans shall include: (1) a determination of the area of influence; (2) an erosion site inventory; (3) an assessment of erosion control alternatives; (4) an implementation schedule for all remediation efforts; (5) periodic future shoreline erosion inventories; and (6) remediation of future erosion control problems caused by the project operation.

3. Draw Downs

Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994) United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)

p. 7-8

In areas of Waterville Lake, dioxin-contaminated sediments lie close to the surface elevation would expose contaminated sediments to the effects of scour and increase the likelihood of these sediments being resuspended into the water column. Therefore, as part of the settlement agreement, Carolina Power has agreed not to allow water in the project reservoir to drop below elevation 2232 feet National Geodetic Vertical Datum (NGVD). Establishing a minimum operating reservoir level will minimize the disturbance of contaminated sediments and will allow natural encapsulation processes to occur. The settlement agreement contains a provision which will allow limited reservoir drawdown below elevation 2232 feet NGVD. The settlement agreement provides that Carolina Power will not be found in violation of the minimum reservoir surface water elevation requirement so long as the reservoir does not fall below elevation 2232 feet NGVD for more than 120 hours in any one calendar year, below 2232 feet NGVD for more than 30 hours in any one seven-day period, or below 2228 feet NGVD at any time.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

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18.2 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 861.3 ft USGS datum. The rates of drawdown and refill shall not exceed one (1) ft per twenty-four (24) hour period. For maintenance requiring a drawdown of greater than two (2) ft, CPCO will obtain any necessary MDNR permit(s). Copies of the permit application(s) shall be supplied to the resource agencies at the time of application.

p. 38-40

19.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Hardy Project to enhance and protect the environment at this project by: minimizing project river regulation impacts on Hardy reservoir habitat; minimizing impacts on reservoir habitat from peaking operation; and maximizing downstream river habitat by the appropriate use of storage. CPCo shall maintain Hardy Reservoir at 822.0 ft USGS datum with ± 0.5 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. During reservoir drawdown, the change in water surface elevation shall not exceed 1.0 ft in any 24-hour period. Headwater elevations shall be recorded every thirty minutes. CPCo shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.5 ft during normal operation or ± 1 ft in any 24-hour period during reservoir drawdown. CPCo will modify the Hardy Project operation in consultation with the resource agencies, and upon FERC approval based on the Croton re-regulation analysis to be performed for the downstream Croton hydroelectric project as provided for in Section 20.

19.2 Winter reservoir drawdown will occur from early January to approximately the end of April. The maximum permissible drawdown without prior resource agencies concurrence is twelve (12) ft below 822.5 ft USGS datum ± 0.5 ft.

19.3 CPCo shall develop target drawdown and refill rates and operating procedures for the drawdown and refill periods at the Hardy Project as part of the Croton re-regulation study required by Section 20. These target rates and procedures will be utilized by CPCo to establish drawdown and refill durations.

19.4 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 822 ft USGS datum. The normal rates of drawdown and refill shall not exceed one (1) ft per twenty-four (24) hour period. For maintenance requiring a drawdown of greater than two (2) ft, CPCo will obtain any necessary MDNR permit(s). Copies of the permit application(s) shall be supplied to the resource agencies at the time of application.

20.1 The parties agree that the re-regulated operation, as defined below, is the appropriate operational mode at the Croton Project to enhance and protect the environment at this project by maximizing downstream river habitat and minimizing project impacts on the Croton reservoir habitat. CPCo shall operate the Croton Project to re-regulate the operation of the Hardy Project, but under no circumstance shall this result in a loss of the Hardy project as a peaking facility. When Hardy is at full pool, 822.0 ft USGS datum ± 0.5 ft or when Hardy is at minimum pool, 810.5 ft USGS datum ± 0.5 ft, the flows from the Croton Project shall approximately equal the inflows to the Rogers Project plus the inflow from the Little Muskegon River corrected for time of passage and water accretion. During Hardy reservoir drawdown or refill periods, the Croton Project shall release the projected mean daily discharge from Hardy Reservoir plus the inflow from the Little Muskegon River.

p. 47-50

25.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Loud Project to enhance and protect the environment at this project by minimizing peaking impacts on Loud reservoir habitat. CPCo shall maintain Loud Reservoir at 741.8 ft USGS datum with ± 0.8 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. Headwater elevations shall be recorded every thirty minutes. CPCo shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.8 ft during normal operation. CPCo will modify the Loud Project operation after review by the resource agencies and with FERC approval based on the Foote re-regulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

26.0 Loud Project Reservoir surface Water Elevation

26.1 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 741.8 ft USGS datum. The rates of draw down and refill shall not exceed two (2) ft in a twenty-four (24) hour period.

26.2 For maintenance requiring a draw down of greater than two (2) ft, CPCo will obtain any necessary MDNR permit(s). Copies of the permit application(s) shall be supplied to the resource agencies at the time of application.

27.0 Five Channels Project Operation

27.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Five Channels Project to enhance and protect the environment at this project by minimizing peaking impacts on Five Channels reservoir habitat. CPCo shall maintain Five Channels Reservoir at 714.7 ft USGS datum with ± 0.3 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance.

Headwater elevations shall be recorded every thirty, (30) minutes. CPCo shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.3 ft during normal operation. CPCo will modify the Five Channels Project operation after review by the resource agencies and with FERC approval based on the Foote re-regulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

28.0 Five Channels Project Reservoir Surface Water Elevation

28.1 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 714.7 ft USGS datum. The rates of draw down and refill shall not exceed two (2) ft in a twenty-four (24) hour period.

28.2 For FERC required annual maintenance or inspections requiring a reservoir drawdown of up to four (4) ft, MDNR permit(s) are not required. CPCo shall provide prior notification to the resource agencies of such annual maintenance or inspection(s).

28.3 For other maintenance requiring a draw down of greater than two (2) ft, CPCo will obtain any necessary MDNR permit(s). Copies of the permit application(s) shall be supplied to the resource agencies at the time of application.

29.0 Cooke Project Operation

29.1 The parties agree that the project operation, as defined below, is the appropriate operational mode at the Cooke Project to enhance and protect the environment at this project by minimizing peaking impacts on Cooke reservoir habitat. CPCo shall maintain Cooke Reservoir at 678.5 ft USGS datum with ± 0.5 ft fluctuation on a daily basis except during periods of reservoir drawdown, reservoir refill, emergency conditions and maintenance. Headwater elevations shall be recorded every thirty minutes. CPCo shall provide to the resource agencies, a report summarizing all events during the quarter in which the elevation fluctuations exceeded ± 0.5 ft during normal operation. CPCo will modify the Cooke Project operation after review of the resource agencies and with FERC approval, based on the Foote re-regulation analysis to be performed for the downstream Foote hydroelectric project as provided for in Section 31.

30.2 For FERC required annual maintenance or inspections requiring a reservoir drawdown of up to four (4) ft, MDNR permit(s) are not required. CPCo shall provide prior notification to the resource agencies of such annual maintenance or inspection(s).

30.3 For other maintenance requiring a drawdown of greater than two (2) ft, CPCo will obtain any necessary MDNR permit(s). Copies of the permit applications shall be supplied to the resource agencies at the time of application.

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36.2 During periods of maintenance, the reservoir may be drawn down below the nominal operating elevation of 687.4 ft USGS datum. The rates of drawdown and refill shall not exceed one (1) ft per twenty-four (24) hour period. For maintenance requiring a drawdown of greater than two (2) ft, CPCo will obtain any necessary MDNR permit(s). Copies of the permit application(s) shall be supplied to the resource agencies at the time of application.

4. Water Conservation

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

Conservation

Provisions:

Reservoir

Management

3.1.5.2 WE shall operate Michigamme Falls Project such that no reduction in weekend low occurs for the purpose of water conservation for weekday use.

H. PROJECT DECOMMISSIONING AND REMOVAL

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. 18

M. Project Decommissioning

This Settlement Offer does not include any condition relating to decommissioning or dam removal of the Beaver River Project in whole or part. With or without amendment of this Settlement Offer by mutual consent, any signatory may seek such further relief from FERC regarding such decommissioning as FERC may order, recognizing that no signatory to this Settlement Offer has or is advocating decommissioning of the project or any of the project facilities during the term of the new license for the project.

**Black River Project and Beebe Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

p. 16 (Identical to Beaver River Project Settlement Offer above)

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 29-30

PROJECT RETIREMENT

The Commission has issued a Notice of Inquiry (NOI), dated September 15, 1993, requesting comments that address the decommissioning of licensed hydropower projects. The NOI states that the Commission is not proposing new regulations at this time, but is inviting comments on whether new regulations may be appropriate. Alternatively, the Commission may consider issuing a statement of policy addressing the decommissioning of licensed hydropower projects. Following the comment period, the Commission may adopt a policy concerning the decommissioning of licensed hydropower projects. This project may be affected by future actions that the Commission takes with respect to the issues raised in the NOI. Therefore, we have included Article 203, which reserves authority to the Commission to require the licensee to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project.

By including Article 203, the Commission does not intend to prejudge the outcome of the NOI. We are simply including the article so that we, will be in a position to make any lawful and appropriate changes in the terms and conditions of this license, which is being issued during the pendency of the NOI, based on the final outcome of that proceeding.

p. 34

Article 203, The Commission reserves authority, in the context of a rulemaking proceeding or a proceeding specific to this license, to require the licensee at any time to conduct studies, make financial provisions, or otherwise make reasonable provisions for decommissioning of the project. The terms of this article shall be effective unless the Commission, in Docket No. RM93-23, finds that the Commission lacks statutory authority to require such actions or otherwise determines that the article should be rescinded.

Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project

October 5, 1994: Project No. 2323 (Massachusetts)

p. 20-21

VI. Decommissioning

A. NEP acknowledges its responsibility to plan for and seek to collect funds in anticipation of the proper future management of the Project upon retirement from power production. In fulfillment of its responsibility NEP agrees to:

1) within five years after issuance of a new license, complete a study in consultation with the Parties and FERC to identify and estimate the cost of various options for retirement of the Project in the event of (a) a surrender or implied surrender of the License, (b) a denial by the FERC of a subsequent new License, or (c) permanent non-power operation or (d) partial or complete removal of the Project. The project retirement options will be developed in conjunction with an independent licensed professional engineer approved by FERC or its successor.

2) submit said study in a timely fashion to FERC and the Parties for comment and with approval of FERC select the most appropriate likely option for eventual retirement (the "Project Retirement Plan").

3) In its first rate filing after submitting the study to FERC, and in subsequent rate filings if the initial request is denied, seek to recover in its wholesale rates appropriate amounts during the remaining license term to accumulate by the end of the license term, funds sufficient to support the Project Retirement Plan.

The implementation of the Project Retirement Plan would be subject to review and approval by FERC or its successor, or if no longer subject to federal jurisdiction, appropriate state authorities, and could include dam removal, if -found to be the preferred course of action.

B. Funds collected by NEP for the Project Retirement Plan will be handled similarly to other Project depreciation reserves. NEP will file with FERC an annual certification of financial capability demonstrating that NEP has a tangible net worth at least three times the estimated cost of the Project Retirement Plan. If NEP is unable to provide this certification of financial capability NEP will within six months either (a) create a segregated trust fund, into which the full amount of funds previously and subsequently collected to support the Project Retirement Plan would be deposited; or (b) purchase insurance, post a bond, or provide other means previously approved by FERC ensuring that the full amount of funds collected to implement the Project Retirement Plan will be available upon the expiration of the license.

Wilderness Shores Settlement Agreement, July 29, 1996

Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)

7.1 WE acknowledges responsibility for the Projects as long as they remain under WE's ownership. This responsibility includes project removal, perpetual maintenance, and life extension, and shall be ensured through provisions in Paragraphs 7.2, 7.3 and 7.4.

7.2 If WE decides to sell its Projects to a non-WE affiliated entity during the Settlement, WE shall:

- a) sell the Projects as a group except under the conditions in Paragraph 7.5;
- b) prior to a sale, pre-qualify the bidders based on a list of criteria developed in consultation with the Team. Criteria will address the potential buyer's ability to ensure future dam responsibility. Criteria will also include, but not be limited to, a demonstration of financial ability at the time of sale or license transfer, whichever is later; or as a requirement of sale, that a financial

instrument be in place to cover the new owner's financial responsibility. A financial instrument may include liquid assets, insurance, performance bonds, or other recognized instrument equal to the cost of project retirement.

- c) be solely responsible for the decision to sell, the timing, and to whom the Projects are sold. Any sale would be subject to FERC regulations at the time of sale.

7.3 If at any time during the Settlement, WE files a surrender application with FERC for any of these Projects, WE will at the time of application fully fund or provide an equivalent financial instrument to fund the proposed alternative contained in the application. The surrender application is subject to the FERC surrender process and the following conditions:

- a) if FERC advertises for and locates a new owner, the fund or equivalent instrument for the proposed alternative reverts to WE. WE may enter into negotiations for project sale with the potential new owner, and will make good faith efforts to pre-qualify the new owner according to Paragraph 7.2(b).
- b) if FERC accepts the surrender application as proposed and orders WE to initiate the proposed action, WE will comply.

7.4 During the Settlement, WE may continue to engage in life extension activities at these Projects. Life extension includes, but is not limited to, maintenance, repairs, replacement, and site redevelopment.

7.5 At the end of the Settlement, WE may either file an application to relicense, sell or surrender one or all of these Projects using the FERC process. WE shall make its decision on the future of each project one (1) year prior to beginning the next FERC licensing process. Any project sale shall be completed prior to end of the Settlement and under the conditions in Paragraph 7.2.

8. Dam Removal

8. 1. Woods Creek Dam

8.1.1 WE shall remove the dam located on Wood's Creek in Town of Fern, Florence County (described in Appendix 9), within two (2) years after FERC acceptance of the Settlement and in accordance with the provisions defined in an agreement with WDNR in Appendix I 0.

8.1.2 WE shall comply with applicable sections of Chapter 31 of Wisconsin State Statutes in regard to dam abandonment.

8.2. Sturgeon Hydroelectric Project (FERC No. 2471)

8.2.1 WE shall develop a surrender application for the Sturgeon Project in consultation with the Team. WE shall file with the Commission for approval the surrender application, in accordance with provisions of Paragraph 8.4. 1. The project will be removed with FERC approval within seven (7) years after the acceptance of the Settlement by FERC. Two (2) years shall be allowed for plan development and submission to FERC and five (5) years for effecting approved surrender including any required dam removal. A range of removal alternatives will be examined, such that any remaining project structures are not a barrier to fish movement or to recreational craft passage. WE shall remove the project according to the schedule and plan approved by FERC.

8.3. Pine Project (FERC No. 2486)

8.3.1 WE agrees to remove the Pine Project upon the end of the current license period, if the Resource Agencies continue to support removal. The following process shall be used:

- a) In Year 25 of the current license term (Year 2020), WE will begin consultation with the Resource Agencies for the purpose of affirming or modifying the surrender decision to include the removal decision and/or date of the Pine Project removal;

- b) The surrender application will be developed in accordance with the provisions of Paragraph 8.4.1;
- c) WE shall file a surrender application with FERC proposing that the Pine Project be removed at the end of the current license period (Year 2025); and
- d) WE shall remove the project according to the schedule and plan approved by FERC.

8.4. Dam Removal Process

8.4.1 WE shall prepare surrender applications for the Sturgeon and Pine Projects that define the extent of project removal. To develop the surrender application, WE shall:

- a) select a consultant, as necessary, in consultation with the Team to study removal alternatives;
- b) prepare a draft report containing alternatives and cost estimates which is provided to the Team for a 90 day review and input period;
- c) prepare a final report that identifies the selected alternative for filing with the Commission for approval;
- d) obtain necessary permits from the Resource Agencies with assistance from the state and federal resource agencies;
- e) remove the projects, as ordered by FERC; and
- f) retain the decision authority within the removal process

I. TRUST FUNDS

**Beaver River Project Settlement Offer, February 7, 1995 (Amended March 8, 1995)
Project No. 2645 (New York)**

p. Attachment 2

THE BEAVER RIVER AND ADVISORY COUNCIL

Niagara Mohawk will provide \$80,000 within one year of FERC license acceptance ("upfront money") to be deposited into the Beaver River Fund. As indicated in Attachment 1, all or part of the upfront money will be used to facilitate the State's acquisition of the following from Niagara Mohawk within eighteen months of Niagara Mohawk's FERC license acceptance for Beaver River Project No. 2645: (a) a conservation easement, 25 feet in width, around the Moshier impoundment, (b) reserved sand and gravel rights along Moshier bypassed reach and the fee title to the abutting acreage to the south, and (c) fee title to "Eagle Canyon", all with appropriate reservations for Niagara Mohawk access, operation and maintenance purposes, d) any other Niagara Mohawk lands, easements and mineral rights not essential to project operation and not otherwise identified herein. Any money not used to purchase the land will remain in the fund for other uses. The State will prepare the title documents, appraisal, surveys and all other documents necessary to transfer title of the property at no cost to the Beaver River Fund or Niagara Mohawk.

2. Niagara Mohawk will contribute no less than \$14,000 (fixed contribution) annually to the Beaver River Fund for the years 1-15 following acceptance of the FERC license and \$20,000 annually for the following 15 years for the purposes described herein.

3. The base minimum flows at Moshier, Eagle, Elmer and Taylorville will be 45, 45, 20, and 60 cfs, respectively. If downward adjustments to any or all of these base minimum flows are made, Niagara Mohawk will supplement the Beaver River Fund annually by an amount equivalent to 50 percent of the annual hydropower generating value associated with the difference between the flows selected and the base minimum flows using the energy values prevailing in that year. For

the purposes of this evaluation, the Public Service Commission (PSC) Service Classification No. 6 (SC6) for transmission Voltage, blended on peak/off peak "energy only" rates will be used for the value of energy.

4. The Beaver River Fund will be administratively managed by Niagara Mohawk and distributed according to the recommendation of a Beaver River Advisory Council. The NYSDEC will chair the council. At a minimum the following entities shall be invited to serve on the Council.

- New York State Department of Environmental Conservation (NYSDEC)
- Niagara Mohawk Power Corporation (NMPC)
- United States Fish & Wildlife Service (USFWS)
- New York Rivers United (NYRU)
- Board of Hudson River-Black River Regulating District (HRRD)
- New York State Conservation Council (NYSCC)
- Adirondack Park Agency (APA)
- Adirondack Mountain Club (ADK)
- Lewis County
- Trout Unlimited CM
- American Whitewater Affiliation (AWA)
- Adirondack Council (AC)
- National Park Service (NPS)

Each member will have one vote with majority vote. to the distribution of funds based on

The Council will also make recommendations which must be considered by the regulatory agencies and Niagara Mohawk regarding management of the Beaver River and hydropower project operations, in accordance with other provisions of this agreement.

5. The Beaver River Fund will be used within the Beaver River basin for projects and services designated by majority vote of the council for purposes of ecosystem and protection, natural resource stewardship, public education, facility maintenance and applied research necessary to accomplish these projects and provide these services and additional public access to outdoor recreational resources not currently to by Niagara Mohawk as its commitment to these purposes. The fund is not intended for any of the parties to carry out any obligations under the new FERC or any amendment thereto. Furthermore, the fund is not in for any person or party to discharge any legal or statutory obligations. Unspent funds shall accumulate with interest in a Federal Deposit Insurance Corporation (FDIC) insured account or instrument managed pursuant to prevailing trust standards. Within one year following surrender or expiration without annual renewal of the new FERC License, the funds accumulated and not otherwise obligated shall revert to Niagara Mohawk.

**Black River Project and Beebe Island Project Settlement Offer, September 14, 1995
Project Nos. 2569, 2538 (New York)**

Attachment 1

THE BLACK RIVER FUND AND ADVISORY COUNCIL

1. Beginning with the year the FERC License is accepted, NMPC will contribute annually \$3,000 to the Black River Fund ("Fund") for 15 years and \$4,000 annually for the following 15 years.

The fund may be used to facilitate acquisition or options, for the public benefit, of some or a combination of parcels described in Attachment 2, consisting of the following from NMPC:

- (a) permanent conservation easement(s);
- (b) reserved right(s); or

(c) fee title(s);

all with appropriate reservations for NMPC access, operation and maintenance purposes; and, additionally,

(d) any other NMPC lands, easements and mineral rights not essential to project operation or maintenance and not otherwise identified herein.

Any money not used for such acquisitions will remain will remain in the fund for other uses.

Financing and requisition will be arranged through NMPC's Land Management & Development subsidiary. NMPC agrees not to alter, encumber or convey rights to the above-referenced parcels for 18 months following license issuance for the Black River Project, FERC No. 2569.

NYSDEC shall be responsible for facilitating the purchase agreement. The State will prepare the title documents, appraisal, surveys and all other documents necessary to transfer title of the property to be acquired at no cost to the Black River Fund or NMPC.

2. The Black River Fund will be administratively managed by NMPC and distributed according to the recommendation of a Black River Advisory Council ("Advisory Council"). The NYSDEC will chair the Advisory Council. At a minimum the following entities shall be invited to serve on the Advisory Council, with service being conditioned, save for Jefferson County, on those entities listed below being signatories to the Settlement:

- New York State Department of Environmental Conservation
- Niagara Mohawk Power Corporation
- United States Fish & Wildlife Service
- New York Rivers United
- New York State Conservation Council
- Adirondack Mountain Club
- Jefferson County
- New York Council, Trout Unlimited
- American Whitewater Affiliation
- National Park Service

Each member will have one vote, with distribution of funds and other Advisory Council decisions to be based on majority vote.

The Advisory Council will also make recommendations for consideration by the regulatory agencies and licensees regarding management of the Black River and hydropower project operations, in accordance with other provisions of this Settlement Offer. The Council shall designate one of the Watertown whitewater outfitters to serve as the liaison with licensees in cases of abnormal river conditions.

The Black River Fund will be used within the Black River basin for projects and services designated by majority vote of the Advisory Council for purposes of ecosystem restoration and protection, natural resource stewardship, public education, facility maintenance, applied research necessary to accomplish these projects and provide these services and additional public access to outdoor recreational resources not currently agreed to by licensees. The Fund is not intended for any of the signatories to carry out any obligations under the new FERC licenses or any amendment thereto. Furthermore, the Fund is not intended for any signatory to discharge any legal or statutory obligations. Unspent money shall accumulate with interest in a Federal Deposit Insurance Corporation (FDIC) insured account or instrument managed pursuant to prevailing trust standards. Within one year following surrender or expiration without annual renewal of the new FERC license for NMPC, available funds accumulated and not otherwise obligated shall revert to NMPC.

**Order Issuing New License, Carolina Power & Light Company (Issued November 4, 1994)
United States Federal Energy Regulatory Commission; Project No. 432 (Tennessee)**

p. 10

In lieu of providing minimum releases of water from the project dam to the bypassed reach of the Pigeon River, the parties to the settlement agreement have agreed to establish the Pigeon River Fund. The settlement agreement provides that Carolina Power will make contributions to the Fund, which will be used to support projects and activities that provide direct benefits to surface water quality, fish and wildlife habitat, fishery management, and public access to a surface water body in or near the Pigeon River and French Broad River basins. Carolina Power will make an initial contribution of \$1 million to the Fund. Starting one year after it is obligated to make its initial contribution, Carolina Power will make annual payments into the Fund according to a graduated schedule. These payments will continue until the Commission orders a minimum flow to be released into the bypassed reach.

p. 47-50

Article 414. (a) In lieu of providing minimum releases of water from the Project dam to the bypassed stretch of the Pigeon River, the licensee shall make contributions to a Pigeon River Fund (Fund) to be established pursuant to this license. The Fund will be used to support projects and activities that meet the following criteria: (1) Projects and activities must provide direct benefits: to surface water quality; fish and wildlife habitat in the immediate vicinity of a surface water body; fishery management; or public access to a surface water body in a covered river basin. Without limiting the generality of the foregoing criteria, preparation of river management plans and watershed studies and acquisition of conservation easements shall be considered to provide such direct benefits. "Covered river basin" shall include the Pigeon River and French Broad River basins as depicted on the State of North Carolina Hydrologic unit Map--1974. (2) A majority of the Fund dollars authorized for expenditure in any given year must be committed within the Pigeon River Basin, unless the Pigeon River Committee (Committee) determines that this condition should be waived due to the unavailability of projects in the Pigeon River basin. (3) Activities undertaken with contributions by the licensee must provide direct benefits within the licensee's service area in western North Carolina as it exists as of the date of this license. (4) Projects and activities must not be related to or in support of litigation in any administrative or judicial forum, other than litigation intended to protect the Fund's monetary assets or in defense of challenges to the Committee's decisions. However, any reports or studies prepared by the Committee shall be in the public domain. The Secretary of the North Carolina Department of Environment, Health, and Natural Resources (NCDEHNR) will appoint the Committee which will oversee the Fund and have the authority to approve the expenditure of monies from the Fund. The Committee will consist of no more than eleven members, a majority of whom are not employed by the North Carolina State government. At least two members of the Committee shall be employees or designees of the licensee who shall be appointed upon the recommendation of the licensee. The Fund will be administered by a nonprofit, tax-exempt corporation designated by the Secretary of NCDEHNR which will be responsible for: (1) presenting proposed projects to the Committee; (2) managing the implementation of projects pursuant to a contract with the Secretary of NCDEHNR; and (3) providing an annual report to the Secretary of NCDEHNR, the licensee and the Commission that describes the Fund's accomplishments, and contains a balance sheet and an accounting of how the Fund monies have been spent during the prior year.

(b) The licensee shall make an initial contribution of one million dollars (\$1,000,000) into the Fund within sixty (60) days after both of the following events have occurred: (1) the issuance of a new license in accordance with the terms of the Walters Settlement Agreement; and (2) the Secretary of NCDEHNR, in writing, has advised the licensee that the Fund has been duly established and has requested that the contribution be made; Provided, however, that the licensee shall not be required to make this contribution as long as there is pending any request for rehearing with respect to the new license, or as long as the time in which any party can file a petition for judicial review has not expired, or as long as any petition for judicial review which may be filed is pending. In the event that the licensee elects to defer making its initial contribution, or any portion thereof, to the Fund because of the existence of one of the aforementioned events, it shall be obligated to increase its initial contribution by an amount equal to the interest on the unpaid portion of the initial contribution at a rate calculated in accordance with the method for determining the interest due on wholesale rate refunds pursuant to Section 35.19(a) of the Commission's Regulations (18 C.P.R. S 35.19(a)), measured from the date of issuance of this license.

(c) on or before the date one year after the licensee is obligated to make its initial contribution (the "Anniversary Date,") and annually thereafter until water is released into the bypassed reach of the Pigeon River pursuant to a minimum flow regime ordered by the Commission, the licensee shall make payments to the Fund in accordance with the following schedule:

<u>Year</u>	<u>Amount (\$)</u>
1	\$100, 000
2-5	previous years payment adjusted by the U.S. Bureau of Labor Statistics (BLS) Consumer Price index-All Urban Consumers (CPI), using the annualized arithmetic average of the 12 most recently published monthly CPI values
6	\$290,000
7-end	of license term or requirement previous year's payment adjusted by CPI, using the annualized minimum flow begins, whichever annualized arithmetic average of the 12 most recently published comes first BLS monthly CPI values

During the first year in which water is released into the bypassed reach of the Pigeon River pursuant to a minimum flow regime ordered by the Commission, contributions pursuant to this schedule shall be prorated based on the number of days between the last Anniversary Date and the date on which water releases begins.

(d) In consideration of the licensee's commitment to make the contributions into the Fund specified herein, the Secretary of NCDEHNR has agreed that NCDEHNR will not seek an order or assist any other person in seeking an order requiring the licensee to provide minimum releases of water from the project dam for at least ten years after the date of the issuance of this license.

(e) The licensee and NCDEHNR, in consultation with the Commission Staff, have agreed upon water quality and biological criteria that must be met before the establishment of a minimum release of water from the Project dam would be considered in the public interest. These criteria are listed in Appendix A to the 1994 settlement agreement and are incorporated by reference herein. The licensee and NCDEHNR may agree upon revisions to the terms and criteria set forth in Appendix A based on significant future changes in circumstances, and may jointly petition the Commission for a license amendment.

(f) Consistent with the conditions set forth in Article 414(d) and when the criteria set forth in Appendix A hereto are met, the Secretary of NCDEHUR may seek an order from the Commission requiring releases of water from the project dam of 30 cubic feet per second (cfs)

during May and June of each year, and 20 cfs during the remainder of the year. The Secretary of NCDEHNR has agreed that NCDERNR will not seek minimum releases greater than the levels specified herein. The Secretary of NCDEHNR has also agreed to give written notice to the licensee of his/her intention to seek an order requiring minimum releases from the project dam at least sixty (60) days in advance of doing so and, prior to seeking an order from the Commission, to give the licensee a full opportunity to comment. The Commission reserves the right to require minimum flow releases, and will provide public notice and opportunity for hearing prior to issuing any order requiring minimum releases from the project dam.

(g) The licensee's obligation to make any contribution into the Fund shall cease beginning on the date the licensee is required for any reason to provide any minimum release of water from the project dam into the bypassed stretch of the Pigeon River.

(h) The Commission reserves the right, after notice and opportunity for hearing, to modify this funding arrangement, including ordering a suspension or cessation of contributions, should it be necessary or appropriate.

Consumers Power Company Settlement, November 11, 1992

Project Nos. 2451, 2452, 2468, 2448, 2447, 2449, 2453, 2450, 2436, 2599, 2580 (Michigan)

p. 24 -25

11.0 Retirement Studies and Trust Fund

11.1 It is the intent of the parties to seek the establishment of trust funds that would ensure that funds are available for proper future management of each project upon retirement from power production.

11.2 Ten years after license issuance, CPCo will begin consulting with the resource agencies on a plan for studying the costs of: 1) permanent non-power operation, 2) partial project removal, or 3) complete project removal at each of the 11 projects. Within six (6) months thereafter, CPCo will submit the study plans to the FERC for approval. Within twenty-four (24) months after approval of the plans by FERC, CPCo shall complete the studies called for by the plans, unless the FERC shall establish a different period for study completion. On completion of the studies, CPCo shall submit study reports to the FERC and resource agencies. In its first retail and wholesale general change of rate filings following completion of the studies, CPCo shall include costs related to the establishment of trust funds to collect from ratepayers the costs of: 1) permanent non-power operation, or 2) partial project removal, or 3) complete project removal at each of the 11 projects. If the MPSC or FERC does not approve CPCo's rates insofar as they reflect costs related to the trust funds, CPCo shall include such costs in each successive retail and wholesale general change of rate filing unless the Steering Committee believes making such a proposal would be unproductive. The State of Michigan on behalf of the CPCo ratepayers, shall be beneficiary of the trust funds unless otherwise directed by the MPSC or FERC.

11.3 Nothing herein shall be construed as creating any obligation on the part of CPCo to retire any project or not seek additional relicenses for any project.

**Comprehensive Settlement Agreement Overview: Deerfield River Hydroelectric Project
October 5, 1994; Project No. 2323 (Massachusetts)**

p. 14-16

C. Enhancement Fund

NEP agrees that within sixty days of the issuance of a new license consistent with this Settlement, NEP will establish the Deerfield River Basin Environmental Enhancement Trust Fund

in the amount of \$100,000 (1994\$) to finance watershed conservation, development of low impact recreational and educational projects and facilities, and planning, design, maintenance and monitoring of such facilities and projects. The Fund will not be used to carry out the various obligations set forth in the other provisions of this Agreement. The Fund will be disbursed on four year cycles. Over the first five cycles, the funds to be disbursed will be limited to 70% of the interest accrued over the previous four years, the remaining interest to be added to the principal. The last four cycles will be limited to all of the interest accrued in the preceding four years plus a portion of the principal, to be 20%, 25%, 33%, and 50% of the remaining principal for each of the four distribution cycles respectively. The last distribution cycle will be for all remaining funds in the account.

The Fund will be administered by a three member committee, which shall determine the investment strategy for the fund and the appropriate distribution of available funds for each year. The committee will be comprised of a representative of NEP, a designee of the Secretary of the State of Vermont Agency of Natural Resources and a designee of the Secretary of the Commonwealth of Massachusetts Executive Office of Environmental Affairs. Funding decisions will be made by unanimous vote of the three member committee. The committee will also be charged with approving additional contributions to the fund when and if they become available through gift, grant, or other means.

By the end of October of each year preceding a distribution cycle, the committee will submit to FERC for approval a ranked list of projects selected for funding by the committee and an accompanying accounting plan. One or more projects may be funded in any distribution cycle. Upon the completion or abandonment of any funded project, and in no case later than the next distribution cycle, the committee will submit to FERC an accounting specifying the actual use of the awarded funds over the course of the project.

Eligible Fund recipients include nonprofit organizations, educational institutions and units of government within Vermont and Massachusetts. In general, funds will be available on a 50% matching basis; however, the Committee is authorized to waive the matching requirement upon an applicant's showing of need. Projects will be selected through a competitive grant application basis.

To be eligible for funding, a proposed project would be required to provide clear public benefit and contribute to the goals of enhancing low impact recreational, environmental education or environmental protection opportunities directly related to the Deerfield River watershed. Projects must be located within the Deerfield River Basin or in towns with some portion falling within the basin. In the later case, projects must be directly tied to the basin, e.g., a trail spur originating outside the basin that connects with a trail network within the basin. Projects must be consistent with those plans accepted by the FERC as Comprehensive Plans for the Deerfield River. Funds may be used for outdoor educational programs, including curriculum development and travel for students, interpretative materials and signs.

**Ludington Pumped Storage Project Settlement Agreement, February 27, 1995
Project No. 2680 (Michigan)**

FERC Offer of Settlement, p.17-18

I. RETIREMENT STUDIES AND TRUST FUND

The intent of the parties is to seek the establishment of trust funds that would ensure that funds are available for proper future management of the LPSP upon retirement from power production.

Five (5) years after this Agreement becomes effective, The Detroit Edison Company and Consumers Power Company will begin consulting with other parties on a plan for studying the costs of: (1) permanent non-power operation, (2) partial project removal, or (3) complete project removal. Within six (6) months thereafter, Consumers Power Company and The Detroit Edison Company will submit the study plans to the FERC for approval. Within twenty-four (24) months after approval of the plans by FERC, Consumers Power Company and The Detroit Edison Company will complete the studies called for by the plans, unless the FERC establishes a different period for study completion. On completion of the studies, Consumers Power Company and The Detroit Edison Company will submit study reports to the FERC and the other parties. In their first retail and wholesale general change of rate filings following completion of the studies, Consumers Power Company and The Detroit Edison Company will include costs related to the establishment of trust funds to collect from ratepayers the costs of: (1) permanent non-power operation, or (2) partial project removal, or (3) complete project removal. If the MPSC or FERC does not approve such rates insofar as they reflect costs related to the trust funds, Consumers Power Company and/or The Detroit Edison Company shall include such costs in each successive retail and wholesale general change of rate filing unless a majority of parties believe making such a proposal would be unproductive.

Nothing herein shall be construed as creating any obligation on the part of Consumers Power Company or The Detroit Edison Company to retire the LPSP.

C. CASH COMPENSATION

Consumers Power Company and The Detroit Edison Company shall, upon the effective date of the Settlement, transfer the total sum of \$5 million to the Great Lakes Fishery Trust described in Section IV. Consumers Power Company and The Detroit Edison Company shall, upon the effective date of this State Agreement, transfer the additional sum of \$213,657.08 to the Great Lakes Fishery Trust described in Section IV to reimburse the Great Lakes Fishery Trust for the value of the following lands which will be transferred to the GTB, LRB, and LTBB by Consumers Power Company:

... the cash liabilities herein will be severable and not joint among Consumers Power Company and The Detroit Edison Company.

**Missouri/Madison Project Recommended Terms and Conditions, May 1995
Project No. 2188 (Montana)**

p. 9.8-9.9

2. Missouri-Madison Avian PM&E Fund

MPC will establish a Missouri-Madison River System Avian PM&E fund (\$375,000). The priority of this avian PM&E fund will be as follows:

- a. Endangered and threatened Species;
- b. Proposed Species;
- c. Candidate Species;

- d. Species of special interest or concern; and
- e. Neotropical migrants.

Finding additional cooperators and funding will be a priority for the study.

Cost: \$375,000 one-time contribution.

3. Missouri Fisheries PM&E Fund

MPC will establish funding for the recovery of threatened and endangered (T&E) fish species and other aquatic species of special concern that may be impacted by the operation of the Great Falls developments. Funds will be used to conduct life-history studies and recovery of the pallid sturgeon, sturgeon chub, sickle-fin chub, blue sucker, western silvery minnow, plains minnow, Flathead chub, and paddlefish in the Missouri River between Morony Dam and Fort Peck Reservoir. This may include, but not be limited to: 1) purchasing hatchery space for rearing pallid sturgeon; 2) purchasing net and tagging supplies, radio telemetry equipment, boats, and other hardware; 3) conducting life-history research, including DNA/RNA/physical behavior studies; and 4) funding a part-time salary and expenses for a fisheries technician or biologist. Specific use of funds will be determined by the Missouri River Fisheries Technical Advisory Committee.

Cost: \$35,000 per year.

4. Madison Fisheries PM&E Fund

MPC will establish funding for the recovery of threatened and endangered (T&E) fish species and other aquatic species of special concern that may be impacted by the operation of the Madison River developments. The grayling recovery effort, guided by the Montana Fluvial Arctic Grayling Work Group, may include, but not be limited to: 1) purchasing hatchery space to raise grayling; 2) constructing artificial spawning channels, gabions and weirs, and facilities to spawn and raise grayling; 3) adding chemical treatments to remove competitive species from tributaries; 4) funding a biological technician, including expenses; 5) conducting grayling life history work including radio telemetry, habitat preference, and DNA/RNA/physical behavior studies; 6) using miscellaneous equipment for fieldwork including tag and trapping materials and electrofishing equipment; 7) fish passage facilities.

Cost: \$50,000 per year.

Skagit River Project Offer of Settlement, April 1991

Project No. 553

2. Plan Elements

The City will make available a total amount of \$17,000,000 from which both the acquisition of wildlife habitat lands and habitat enhancement will be funded. The large majority of the money will be used to acquire property rights (preferably in fee simple) in order to preserve wildlife habitat in the upper Skagit River and South Fork Nooksack River valleys. Lands have been selected that possess riparian areas and corridors, wetlands, and mature forest communities; have eagle usage or provide elk winter range; and/or are adjacent to other protected lands. The City will begin to secure some of the identified lands in advance of the receipt of the new license. The City will implement a continuing program to retain some of the acquired lands in the Nooksack basin in early successional stages in order to provide winter forage for elk. Some low-intensity habitat enhancement and manipulation measures may also be employed (e.g., wetland habitat restoration) in several locations. The Agreement establishes the procedures by which monies are allocated and lands are selected and acquired.

The City will provide continuing support during the term of the new license to interagency wildlife and ecosystems research and monitoring efforts in the North Cascades with emphasis on

research that will enhance the knowledge and practice of wildlife protection and management in the Project Area and Ross Lake National Recreation Area. In support of this mission, the City will make an annual payment of \$50,000 for the purpose of funding wildlife and environmental research and studies. A five member Wildlife Research Advisory Committee will solicit and review the research proposals and select the projects for funding. The City will make an annual payment of \$20,000 to support the long-term monitoring of wildlife and environmental resources in the North Cascades National Park Service Complex. The City will also fund the inventory and monitoring of bald eagle activity and design and equip a North Cascades research facility in the Project Area.

As part of the City's support of the North Cascades Environmental Learning Center (see the Recreation and Aesthetics section), an annual payment of \$20,000 for the term of the license will be provided by the City to the Center to further the development of public knowledge and understanding of the values and issues in wildlife and ecosystems management and protection in the Project Area and the North Cascades Area.

A memorandum of understanding will provide the procedural framework for consultation with the National Park Service regarding management activities on the City's non-residential fee title lands in the Ross Lake National Recreation Area that are not part of the Project Area. The Settlement Agreement also describes the procedures by which the implementation of the Plan will be periodically reviewed, and establishes a Wildlife Management Review Committee to provide this review and oversight.

**Order Issuing New License, City of Watertown, New York (Issued June 16, 1995)
United States Federal Energy Regulatory Commission; Project No. 2442**

p. 61-62

iv. Black River Fund

Watertown has executed a formal agreement with New York Rivers United to establish a trust fund - the Black River Fund (City of Watertown, 1994c, "Agreement Between New York Rivers United and City of Watertown Regarding Watertown Hydroelectric Project (FERC No. 2442)"). The Black River Fund would be used to finance projects and facilities within the City of Watertown which would conserve and enhance the fish, vegetative, and wildlife resources; improve water quality; educate the public about the river and its uses; and provide for recreation and general aesthetic improvements. The NPS supports the terms and conditions of the agreement (letter from Marie Rust, Regional Director, National Park Service, Boston, Massachusetts, December 9, 1994). We do not recommend incorporation of the Black River Fund into the provisions of any license issued for the project; however, we see no conflict between the fund and our recommended measures.

We note that Watertown has proposed several environmental mitigative measures for the project, most of which were either originally suggested by, or have been endorsed by the resource agencies and other parties to the proceeding, including New York Rivers United and the NPS. In section VI. of this EA, we have taken these proposals into account in our independent analysis of the proposed project, and are recommending 20 measures which, along with standard articles which would be included in any new license issued for the project, would protect, enhance, or mitigate for adverse impacts to geology and soils, fish and wildlife resources, water quality, aesthetic resources, recreational resources, and cultural resources in the project area.

We respect the establishment of the Black River Fund as enhancement not in conflict with the Commission's statutory authority; we believe that it is admirable on Watertown's part to go

even further by agreeing with NYRU to set up a trust fund for further enhancement, beyond what any project license would require.

However, the parties must recognize that, because the terms of the Black River Fund would not be part of any license issued for the project, they would be beyond the Commission's jurisdiction to enforce.

Wilderness Shores Settlement Agreement, July 29, 1996**Project Nos. 1759, 2074, 2072, 2073, 2131, 1980 (Michigan, Wisconsin)****p. 36-47****4.4. Mitigation and Enhancement Fund**

4.4.1 Beginning with the effective date of the licenses, WE shall provide annual monetary contributions to a designated WE account by January 1 of each year for the upcoming year, or any portion of a year, in the amount of \$145,000 for the duration of the license (in 1996 dollars adjusted annually in the year of payment for changes in the CPI). This fund shall be used for projects in the Upper Menominee River Basin to include aquatic studies and research, water quality enhancements beyond standards, habitat mitigation and enhancement, acquisition of riparian lands, and the Way Dam adaptive management implementation and testing. A maximum of 45,000 annually (adjusted for CPI) can be spent on the Way Dam adaptive management implementation and testing unless the Team decides upon a higher expenditure. WE shall, after consultation with Team, file with the Commission for approval a conservative investment and funding rollover plan for this fund following the schedule in Paragraph 2.3.9.

4.4.2 WE shall file with the Commission for approval annual resource enhancement plans and implementation schedules developed by the Team. WE shall, after consultation with the Team, file with the Commission for approval a plan for the annual payment of these funds. The annual resource enhancement plan must describe specific enhancement activities to be undertaken and contain provision to monitor the success of these measures.

4.4.3 WE shall, after consultation with the Team, file for commission approval an annual according procedure for this fund following the schedule in Paragraph 2.3.9.