



The Water Report™

Water Rights, Water Quality & Water Solutions in the West

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KLAMATH

THE FORGOTTEN BASIN?

by Glen Spain, J.D., Institute for Fisheries Resources (IFR)

“More than any other wild region I’ve known, the Klamaths have a venerable quality which is not synonymous with ‘pristine’ ‘unspoiled,’ or other adjectives commonly applied to natural areas. These adjectives imply something of the smoothness and plumpness of youth, whereas the Klamaths are marked by the wrinkles and leanness of great age. Although their peaks and high plateaus have been marked by glacier they are at heart preglacial mountains, with elements of flora and fauna that reach back farther into the past than any place west of the Mississippi River. The Klamaths seem so old, in fact, that I’d call them a grandparent of the Sierra and Cascades instead of a sibling. Owing to winters mild enough and summers moist enough for species to grow together that are elsewhere segregated by elevation or latitude, several species that once grew throughout the West now survive only in the Klamaths.”

David Rains Wallace, *The Klamath Knot*, Sierra Club Books, 1983

Background

Given the current controversy, it is perhaps ironic to remember that the Klamath Basin (Basin) was once referred to as “the forgotten basin.” While historically the Basin served as the third largest producer of salmon in the US, trailing only the Columbia River basin and the California Central Valley basin in economic importance to the fishing industry, it long remained much less well known. Geographically isolated, the Basin is also politically complex, divided by numerous state and regional boundaries and therefore often presumed to be in someone else’s jurisdiction and, thus, someone else’s problem.

The indigenous peoples of the Basin have always had a salmon-dependent economy, as did the European settlers in the region until recent times. Before European development, the Klamath is estimated as having produced between 660,000 and 1.1 million returning adult salmon every year, with an average of 880,000. Today, however, much of the salmon carrying capacity of the Basin has been destroyed in the pursuit of narrowly construed “development” goals and the ensuing loss of habitat. Adult salmon returns now average only about 9.7% of historic numbers, even including supplemental hatchery fish — natural spawners survive at about 6.9% of past levels. Some stocks, such as coho salmon and spring-run chinook, are down to less than 2% of their historic abundance. Harvest now has to be carefully constrained to avoid irreparable impacts to these very weak stocks. These harvest constraints entail great economic and social costs.

Salmon production in the Basin remains heavily impacted by a wide array of habitat damaging activities, both historic and ongoing. Such activities include: massive clearcut logging in the past; pollution from mining operations past and present; widespread water diversions in the Upper Basin and many of its tributaries; and the dams built since 1917 — dams which lack fish passage and also create or contribute to other serious water quality problems. These combined impacts currently threaten to drive wild salmon in the Basin to extinction. Some salmonid species once common to the Basin, such as chum salmon, are now presumed extinct. Other previously thriving fish species, such as green sturgeon, struggle to survive at seriously depressed population levels.

Klamath**Protection
Efforts****Water
Availability****Adjudication
Ongoing****Tribal Rights****The Water Report**

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While literally dozens of governmental agencies have partial jurisdiction over the Klamath, none have anything approaching comprehensive control over all the factors leading to the Basin's ecological decline.

There have been efforts to bring special protections to the Basin to prevent more fish extinctions. One very important species of anadromous salmon (coho), once abundant in the Basin, is now listed as "threatened with extinction" under both the federal Endangered Species Act (listed 62 Fed. Reg. 24588 et seq. (May 6, 1997) as part of the Southern Oregon/Northern California Coho ESU), as well as under the equivalent California Endangered Species Act (CESA). Two other resident fish species dependent on Upper Basin aquatic habitats and culturally important to the Klamath Tribes of Oregon — the Lost River sucker (known to the Klamath Tribes as the "tschum") and the short-nosed sucker (the "kuptu") — have been on the federal Endangered Species List since 1988 (see 53 Fed. Reg. 27130 et seq. (July 18, 1988)).

Much of the Upper Basin is arid and the basic availability of water is always an issue. The Basin's limited surface water supply is in many locations over-appropriated for human uses at the expense of fish survival. Such appropriations are based on principles of western water law which historically did not take instream fish needs into account and presently provide little remedy to address this oversight.

Most of the water rights in the arid Upper Basin have never been adjudicated. A painfully tedious adjudication process has been ongoing for over 20 years, with several more years to run. One result of this situation is a lack of enforcement by state agencies against illegal use. There is presently only scarce monitoring of water diversions or measurement of total consumptive use.

A major hurdle in the adjudication process is the obligation to address Tribal water rights held by Treaty by the Klamath Tribes of Oregon. The federal Courts have ruled that Klamath Indian Tribal water rights are senior to all others and date "from time immemorial" (see *U.S. vs. Adair*, 723 F.2d 1394 (9th Cir. 1983)). However, the Oregon Water Resources Department (WRD) has taken the position that these most senior (but unadjudicated) water rights are still "inchoate" — i.e. "undetermined vested" rights under ORS 536.007(11)) — since the adjudication process is still on-going in the Basin. Thus, no water has been set aside to satisfy these most-senior rights. The earliest that WRD regulation of pre-1909 water rights will occur is when the official "Findings of Fact and Order of Determination" is eventually filed with the Circuit Court of Klamath County (see ORS 539.170 and 180). WRD has also not developed any mechanism for setting aside water to meet federal Endangered Species Act (ESA) obligations and continues to give out water rights in the clearly over-appropriated Basin

Something similar goes on in California, based on similarly outmoded water allocation policies that fail to take ecological needs into account. As a result, important Klamath tributaries like the Scott and Shasta Rivers are increasingly being dewatered every year, with large parts of them now going dry in most years at a frequency and extent hitherto unknown. Some local restoration efforts are trying to recapture or purchase this lost instream water. Unfortunately, state and county agencies all too often work at cross-purposes to these efforts.

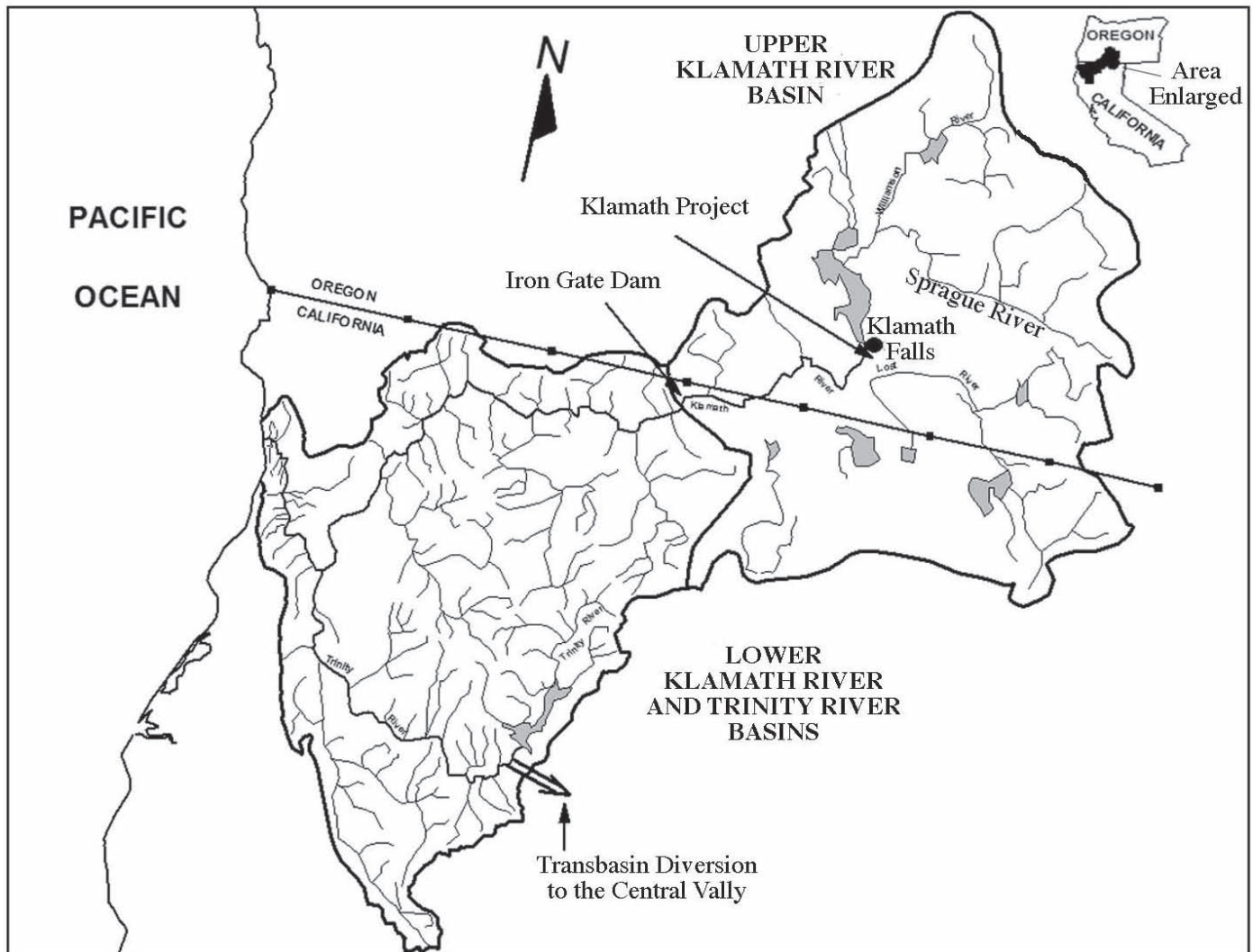
In both the Basin's upper and lower sub-basins, the manmade "shortage" of surface water is being addressed through groundwater pumping, resulting in widespread aquifer drawdowns. However, in those precious few areas for which studies have actually been undertaken, there is growing evidence that such drawdowns now exceed the ability of these aquifers to recharge. Aquifers augment stream flows via inflow from springs. Drawing down these aquifers to meet streamflow shortfalls simply exacerbates those shortfalls.

Lower Klamath River Tribes (the Yurok, Karuk and Hoopa Tribes) also have protected interests in the waters of the Klamath River sufficient to protect their Tribal rights to abundant fisheries (see *Parravano vs. Babbitt*, 70 F.3d 539 (9th Cir. 1995)). Various other federal water obligations, including those deriving from the ESA and Tribal treaties, are also senior to — and trump all — conflicting Klamath Irrigation Project water rights (see *Klamath Water Users Assn. vs. Patterson*, 204 F.3d 1206, at 1213 (9th Cir. 1996) (ESA and Tribal water obligations take precedence over the water rights of irrigators)). However, these priority water rights have yet to be given meaningful consideration by the relevant state water agencies.

The Basin also produces key "indicator stocks" (primarily fall chinook) by which much of the central West Coast fishing industry is regulated. For many years, a series of major fishery closures has been mandated by federal law on the basis of "weak stock management" of the Klamath salmon stocks. Under the biological principle of "weak stock management," whenever weak stocks intermingle in the ocean with healthy stocks, fishing opportunities on all of them must be curtailed because of potential impacts on the weakest. The weakest stock thus becomes the limiting factor on all other ocean harvests. Once that weak stock "cap" is reached, fishing must end — even when there are millions of otherwise harvestable fish still available.

The Basin has long been source of the weakest of these West Coast stocks. As Klamath stocks have declined, more and more fisheries in the ocean region known as the Klamath Management Zone (or

Upper & Lower Klamath River Basins



Coast-Wide Impacts

“KMZ”— an area roughly from Fort Bragg, CA to Florence, OR) have suffered major closures in what would otherwise have been relatively abundant fisheries. These closures come at great economic and social cost to fishing-dependent communities. The economic secondary effects of Klamath fisheries declines cause additional job losses and economic suffering all up and down the Pacific coastline.

In 2006, for instance, Klamath adult returns were so low that the “minimum spawner floor” of 35,000 returning fall chinook adults (a mere 4% of historic run size) could not be met even in the absence of any fishing impacts. These low returns triggered emergency conservation measures, including widespread fishery closures affecting over 700 miles of coastline, to prevent even accidental capture of depressed but intermingling Klamath fall chinook. The total economic costs to the fishing industry of these closures is expected to top \$100 million in 2006 alone, with 2007 likely to be nearly as bad. The Secretary of Commerce as well as the Governors of Oregon and California declared fisheries economic emergencies last summer to seek disaster assistance for ports closed to fishing and out of work commercial fishermen in both states.

Reforms?

Rotating water and fisheries crises, and declining ecosystem integrity, are now the rule rather than the exception in the Basin, adversely affecting nearly every community and stakeholder in the upper and lower sub-basins. The long-term negative economic impact of these declines and instabilities has been widespread but generally ignored by policy makers. Many ongoing practices, which originated in a less knowledgeable past, are clearly not sustainable.

Today, however, there is hope for reforms needed to bring the Basin back into sustainability and to put an end to this cycle of rotating crises. Opportunities now exist to rethink and perhaps decommission fish-killing dams. There are also now tools to finally grapple with the much more intransigent issues of water over-allocation. The discussion below outlines the present status of some of these opportunities.

Dealing With The Klamath Dams – The FERC Process

SOME FAVORABLE TRENDS

Klamath

“The increasing loss of fish habitat, to pollution, unwise development and other human activities, is the single largest long-term threat to the future viability of the marine fisheries of the United States... Protection of habitat is the cheapest investment the nation can make to sustain productive fisheries.”
 ---- From Hinman and Safina, 1992. Summary and Recommendations in: R.H. Stroud (Ed.), “*Stemming the Tide of Coastal Fish Habitat Loss*” Marine Recreational Fisheries Symposium 14:245–249. National Coalition for Marine Conservation, Savannah, GA.

PacifiCorp
Dams

The Klamath Hydroelectric Project, now owned by PacifiCorp, was initiated in 1917 with the construction of the first Copco dam. A true trendsetter, the Copco dam did not provide for fish passage. From 1917 through 1962, power dams and related structures continued to be added. Today there are four main dams (Iron Gate Dam, the lowest in the river system, then Copco Dams No. 1 & 2, then J.C. Boyles Dam) plus a non-power flow regulatory structure (Keno Dam) and several small components (Fall Creek Dam, and the East Side and West Side Powerhouses at Link River Dam). Link River Dam is owned by the Bureau of Reclamation (Reclamation), not PacifiCorp.

FERC
Licensing

Like all privately owned power dams, the Klamath Project operates pursuant to a power license from the Federal Energy Regulatory Commission (FERC). The Klamath Project holds FERC License No. P-2082, which includes all its dams and structures. This license was last reissued in 1956 for a term of 50 years. The Project’s license therefore expired April 17, 2006. The Project is currently operating on a temporary one-year license while proceeding through the lengthy process of FERC relicensing.

In spite of promises of fish passage dating back to 1917 by the original Copco Company, none of these dams have fish passage for lower river salmonids. This state of affairs would no longer be legal under the current environmental standards applied to any new license, and some sort of fish passage is a nearly certain outcome of FERC’s current consideration of relicensing in the Basin.

Estimates are that these dams block salmonid access to approximately 570 miles of once-occupied productive salmon habitat, which today could produce between 149,734 to 438,023 additional adult fish each year (see Huntington, C. W. *Preliminary Estimates Of The Recent And Historic Potential For Anadromous Fish Production Above Iron Gate Dam* (April 5, 2004)). But first the fish have to be able to get there. A number of factors are now aligned in the fishes favor.

Dam Removal
Recommended**Strong Agency Stands on Fish Passage, Recommendations for Decommissioning**

On March 24, 2006, as a result of years of work and analysis, the National Marine Fisheries Service (NMFS), as the foremost federal salmon manager, formally recommended full dam removal to FERC as the biologically best option to revive the Klamath’s failing salmon runs. In its own Federal Power Act 10(a) recommendation filing, NMFS stated:

NMFS

“Recommendation: The Licensee shall develop and implement a plan to remove the lower four Project dams (Iron Gate, Copco 2, Copco 1, and J.C. Boyle dams), restore the riverine corridor, and bring upstream and downstream fish passage facilities at Keno dam into compliance with NMFS guidelines and criteria within ten years of license issuance, expiration or surrender.”

UNDER ITS JUSTIFICATION, NMFS WENT ON, AMONG OTHER THINGS, TO ADD:

“While NMFS is prescribing preliminary fishways under its authority in Federal Power Act Section 18, NMFS believes that within this relicensing process the best alternative to contribute to restoration of all fish species of concern in the Klamath watershed is the decommissioning and subsequent removal of the four lower Project dams (Iron Gate, Copco 1 & 2, and J.C. Boyle), combined with improvements in fish passage at Keno Dam. The dam removal alternative is a superior alternative from a fish passage, water quality, and habitat restoration standpoint... Implementing this dam decommissioning and dam removal alternative would go a long way toward resolving decades of degradation where Klamath River salmon stocks are concerned.”

USFWS et al

A similar stand has been endorsed by: the US Fish & Wildlife Service (USFWS); Oregon and California state agencies; Tribes; several members of Congress; many NGO organizations (including IFR); and the Humboldt County Board of Supervisors. Even the Pacific Fishery Management Council (“PFMC”—which manages all ocean salmon fisheries in federal waters under the Magnuson-Stevens Fishery Management and Conservation Act (16 U.S. C. §1801 et seq.) formally endorsed Klamath Project

<div data-bbox="159 178 305 216">Klamath</div> <div data-bbox="164 254 300 321">PFMC Statement</div> <div data-bbox="155 779 308 846">Agencies' Authorities</div> <div data-bbox="131 1129 332 1197">Decommission Impact</div> <div data-bbox="167 1375 297 1442">Economic Analysis</div> <div data-bbox="142 1690 321 1728">FPA Changes</div> <div data-bbox="121 1829 342 1866">Appeal Allowed</div>	<p>decommissioning and removal as its recommended option for restoring damaged Klamath fisheries, as noted in a formal comment letter to FERC dated April 24, 2006:</p> <p>“The value of ocean fisheries is high when Klamath natural chinook are abundant, but can be much lower when Klamath fish constrain the catch of other healthy stocks. The Council estimates that between 1970 and 2004, the average annual personal income impacts of the recreational and commercial ocean salmon fishery in the area where Klamath fish are found amounted to \$92 million. The constraints on the fishery in 2006 caused by the need to protect Klamath River natural fall chinook are expected to reduce the value of this fishery to less than \$33 million. In contrast, the Klamath hydropower project produces 163 megawatts with an annual net economic value of \$16.3 million. NMFS notes that the ‘generating capacity provided through continued Project operations is nominal...relative to the watershed level of benefits to aquatic resources and regional and national priorities for restoring anadromous salmonids.’...”</p> <p>“The Council believes the proposed relicensing of this project will have substantial adverse impacts on EFH [Essential Fish Habitat] in the Klamath River. The project causes harm to salmon habitat; to the health of fish stocks; to commercial, recreational, and tribal fisheries; and to fishing communities along the Oregon and California coasts and in the Klamath River basin. Consequently, the Council recommends that FERC order the immediate decommissioning and removal of the four lower Klamath River dam structures and full restoration of habitat affected by the dams and reservoirs. ”</p> <p>Unfortunately, under the Federal Power Act (16 U.S.C. § 791 et seq.) under which FERC operates, NMFS, state agencies, Tribes, the PFMC and NGOs <i>cannot</i> compel decommissioning — they can only recommend it. Nevertheless, these recommendations will have a great deal of persuasive power before FERC. FERC will also consider the damage these dams have done to other, potentially more valuable, economic sectors — such as the fishing industry.</p> <p>Under the Federal Power Act, however, NMFS and USFWS <i>can</i> compel construction of fish passage facilities for salmon, which none of these dams currently possess. NMFS therefore also joined with the US Fish and Wildlife Service (USFWS) to require stringent volitional fish passage requirements in these dams as a precondition of any license renewal as a backup option to full decommissioning.</p> <p>Persuasive Economics</p> <p>All the dams in the Klamath Project combined only generate on average about 88 megawatts of power annually, which represents a mere 1-2% of PacifiCorp’s total generation capacity. Even the California Energy Commission has said the dams are irrelevant to the power needs of that state, and the impact of decommissioning them would be insignificant. Any well-designed modern power plant could easily generate ten times that amount of power or more. At some point it is simply a better economic and ratepayer decision to invest in new (and far more productive) facilities than patch up an obsolete system that has outlived its engineered lifespan.</p> <p>On December 1, 2006, the California Energy Commission (CEC) released what is likely to be an influential economic analysis of the dams, <i>Economic Modeling of Relicensing and Decommissioning Options for the Klamath Basin Hydroelectric Project</i>. The CEC Report shows that even under future fuel and power costs estimated by PacifiCorp itself, four-dam decommissioning in the Klamath would still be about \$101 million <i>cheaper</i> than retaining the dams and retrofitting them to modern fish passage standards. In other words, if PacifiCorp retains these dams, they face a high risk of operating them at a loss as well as refusal by the state PUCs to allow them to pass the costs of such a bad decision on to its ratepayers. Any later PacifiCorp effort to pass on these costs to ratepayers in the face of such negative numbers would be hotly contested.</p> <p>Favorable Rulings in the Energy Policy Act Appeal and Trial</p> <p>Until 2005, the power of NMFS and the USFWS to require fish passage under Section 18 of the Federal Power Act (16 U.S.C. § 811) was absolute. Until 2005, if a federal agency required fish passage it became an automatic condition of any future FERC license and was binding on FERC.</p> <p>The hydropower industry, which is facing thousands of relicensings in the next decade, strongly opposed this federal fish passage mandatory conditioning authority. The industry finally succeeded in lobbying Congress to change the Federal Power Act in 2005 via the Energy Policy Act (P.L. 109-58). If there are fish passage conditions that a license applicant disputes, these changes to the Act provide for an intermediate trial-type fact-finding hearing and appeals process, subject to a very stringent 90-day timeline. This provision was retroactively applied to the Klamath Project under newly adopted rules (43 C.F.R. § 43 (DOI Rules) and 50 C.F.R. § 211 (NOAA Rules)).</p>
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Klamath**PacifiCorp
Appeal**

Thus, on April 28, 2006 (in the very first test of this new appeals procedure), PacifiCorp formally appealed the Preliminary Fish Passage Conditions of NMFS, USFWS and the Bureau of Land Management (BLM) on numerous grounds. Many Tribal, conservation and fishing industry groups (including IFR and the Pacific Coast Federation of Fishermen's Associations (PCFFA)) intervened in these expedited proceedings to defend these fish passage preliminary conditions.

After three months — which included intensive preparation coordinated between the conservation and fishing groups, the Tribes and the state and federal agencies — this Administrative Appeals case went to a week-long trial before a Senior US Coast Guard Administrative Law Judge (ALJ) on August 21-25, 2006. Opposed to the fish passage recommendation were PacifiCorp and its entire legal team, as well as Siskiyou County, which is concerned about the impact of dam removal on property owners surrounding Copco Lake and the impact on whitewater rafting businesses. At stake was whether fish passage would be imposed by the federal agencies or whether a “trap and haul” alternative — proposed by PacifiCorp, that would leave the dams in place (and river conditions more or less the same) — would prevail.

ALJ Ruling

On September 27, 2006, the ALJ ruled in favor of the federal and state agency positions on every major issue in the case, including all the issues directly relevant to fish passage. The agencies lost on only a few minor points, mostly dealing with impacts on whitewater rafting. This nearly complete victory on all key issues regarding the efficacy of fish passage is a vindication of the agencies' Section 18 prescriptions and seriously undercuts PacifiCorp's efforts to substitute a more primitive “trap and haul” program for full volitional fish passage. [See Water Briefs, TWR #32.]

A Very Favorable Sediment Study

Whenever any dam is breached there are always concerns about trapped sediments washing downstream. As concerns Klamath Project dams, there had been speculation that there might be serious problems with either the volumes of sediments trapped behind the dams, or the toxic nature of these sediments, that could make dam decommissioning prohibitively expensive or dangerous. PacifiCorp expressed such concerns, yet refused to conduct the studies necessary to determine their validity as part of its relicensing application process.

CCC Study

However, on September 22, 2006, the California Coastal Conservancy released a comprehensive sediment study with results favorable to decommissioning the dams. This extensive study found that: (1) there are no significant toxic contamination problems in sediments trapped behind the dams, and; (2) the amount and position of retained sediment would not become a significant problem with decommissioning and removal, but would largely wash through the river system within a single season without significantly jeopardizing downriver ecosystems and salmon runs. There are a number of mitigation measures available to limit sediment surges to a short duration. Over the long run, the river is so lacking in spawning sediment for at least 50 miles below Iron Gate Dam that there would be a net benefit for salmon in increasing sediment beds, above and beyond the opening up of the blocked-off areas of historic habitat.

These findings clearly demonstrate that decommissioning of the major dams in the Klamath Hydropower system would be relatively easier and far less expensive than previously feared and overcomes a major PacifiCorp objection to dam removal.

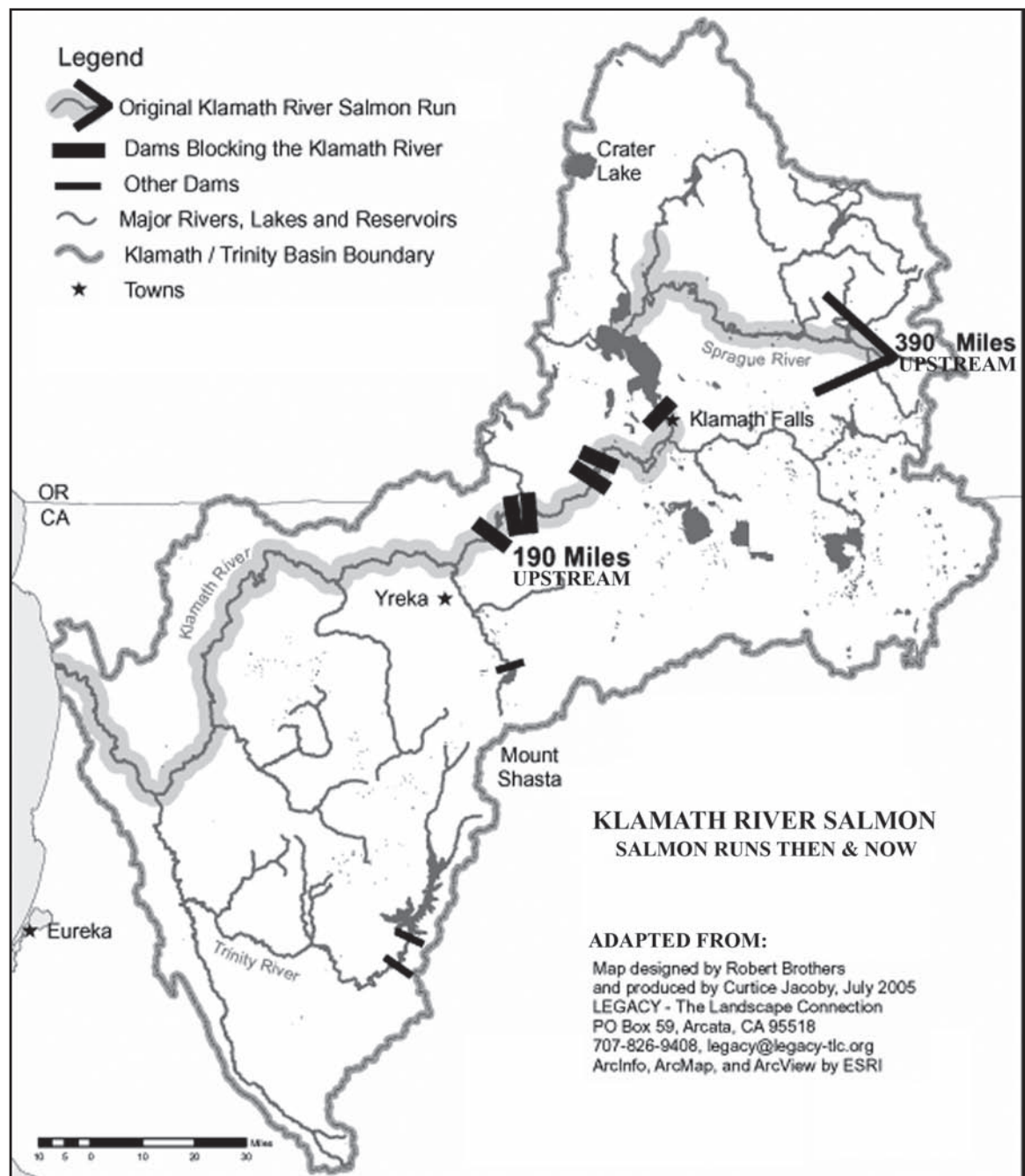
**FERC Considers
Partial Removal****The Draft Environmental Impact Statement (DEIS) Concludes Dam Removal Is Feasible**

On September 25th, 2006, FERC published its long-awaited Draft Environmental Impact Statement (DEIS) analyzing the various options for relicensing. Most importantly, one of the four options under consideration is a partial dam removal scenario. This is a rarity in FERC DEIS's, and shows that serious consideration is being given to dam removal in some form. The removal option analyzed includes the total removal of the two biggest and most fish-harmful dams in the system (i.e. the Iron Gate and Copco No. 1 dams). These removals would, according to FERC's own analysis, correct many of the serious water quality problems within the system, many of which jeopardize the health of the Klamath's salmon runs far downstream. FERC also concluded that this “2-dam removal” option was far cheaper than retaining the dams with full volitional fish passage, as well as far more likely to correct serious water quality problems created by the dams.

DEIS Flaws

This DEIS is flawed, however, in several ways, including: (1) failure to analyze full decommissioning and removal (i.e. a “4-dam removal” option); (2) failure to take into account the subsequent ALJ Rulings which were issued two days after the DEIS came out; and (3) failure to factor in the Coastal Conservancy sediment study, which also came out shortly after the DEIS was issued. These and numerous other flaws have prompted many to call for the DEIS to be withdrawn, rewritten, and reissued in light of this important new information. The formal comment period on this DEIS closed December 1, 2006.

Klamath

Habitat
Halved**Probable Strong State Water Quality Certification Requirements**

Under Section 401(c) of the federal Clean Water Act, in order to get a FERC license every project must be certified by the affected state(s) as meeting state water quality requirements. Thus, as concerns Basin relicensing, FERC is bound by whatever mitigation measures the states require of PacifiCorp to meet state water quality standards. (The state's water quality certification process is their only mandatory conditioning authority under the Federal Power Act.)

The ability of the Klamath mainstem to support salmon is severely constrained by a range of poor water quality conditions which include: high water temperatures; detrimental dissolved oxygen levels; excessive ammonia; toxic and other algae blooms; nutrient concentrations in the warm water reservoirs; and related fish parasites and diseases that thrive in such conditions. All these conditions can be traced to, or are exacerbated by, the Klamath dams. Most of both upper and lower parts of the river are listed under the Clean Water Act Section 303(d) as "water quality impaired" for a host of these and other limiting factors. The inclusion of impaired waters on a "303(d) list" triggers the establishment of Total Maximum Daily Loads ("TMDLs"— which address a waterbody's capacity to assimilate various pollutant loads in terms of maintaining its designated beneficial uses).

State
CWA Authority

TMDLs

Klamath

A long-term process is underway to establish TMDL water pollution standards throughout the Klamath basin. These TMDL development processes are under deadline pursuant to a court ordered Consent Decree in *Pacific Coast Federation of Fishermen's Associations (PCFFA) et al., vs. Marcus* (D. Ct. N. Calif. – No. 95-4474MHP), which requires TMDLs to be adopted for most northern California rivers by December 31, 2007.

Toxic Algae

In recent years there has been increasing concern with the spread of highly toxic blue-green algae throughout the dams' reservoirs. In particular, the range of *Microcystis aeruginosa* — a poisonous cyanobacterium that creates a potent human liver toxin (microcystin) — is spreading. Even small exposures to microcystin can lead to serious liver damage in humans. The airborne form of microcystin is odorless, colorless and can affect boaters who never even come in direct contact with the water. This potent liver toxin also accumulates in fish, creating serious health hazards for recreational, commercial and Tribal river fishermen, fish consumers, and additional causes of concern for the health of the fish populations themselves.

During July 2006, water samples were taken in the Iron Gate and Copco reservoirs that found *Microcystis aeruginosa* everywhere at levels of serious health concern. At one location in Copco Reservoir the levels exceeded the World Health Organization's (WHO) "moderate risk" exposure standard by more than 3,900 times. According to the researchers conducting these studies, these levels are "among the highest recorded in the world." This species thrives in the nutrient-rich warm waters of reservoirs behind the dams, but is not found anywhere else in the Basin (nor in the moving waters of any healthy river). The toxins from these algae blooms, however, wash downstream.

PacifiCorp Application

PacifiCorp applied on March 29, 2006, to both Oregon and California for Clean Water Act state water quality certifications, and the deadline for action on that application is March 28, 2007. The state agencies have noted a number of serious flaws in the application. However, it is not uncommon for such certifications to be temporarily withdrawn and resubmitted if they are incomplete or might be denied, extending such deadlines another year.

Subsidy Discontinuance**Ancillary FERC and State PUC Klamath Irrigation Power Rate Litigation**

There has already been ancillary litigation over a preliminary FERC decision about the content of any new license, primarily over the future fate of power subsidies previously tied by long-term contracts to the Klamath Hydroelectric Project. Since 1917, upper basin irrigators have enjoyed subsidized irrigation power prices fixed at 1917 rates, which today are only about 1/12th to 1/17th the power rates paid by all other similarly situated irrigators. This subsidy of about \$10 million/year was paid for by all other PacifiCorp ratepayers, including other farmers not receiving the subsidy, but is now scheduled for phase-out.

FERC Veto

In FERC Docket No. P-2082-039, Reclamation and the upper Basin irrigator groups receiving these preferential power subsidies asked that these rate subsidies be extended by FERC as part of the license, with any future license extensions. FERC, however, vetoed the idea by Order on January 20, 2006, and noted that these power rates were all provided pursuant to a long-term power contract, not a license condition, and that this power contract expired on its own terms on April 16, 2006. A later Petition for Rehearing was filed by the Klamath Water Users Association (KWUA), which represents Reclamation Project-dependent irrigators and water districts, in FERC Docket No. P-2082-041. This request was denied on April 20, 2006. KWUA then appealed the latter ruling directly to the US Court of Appeals for the District of Columbia Circuit (Case No. 06-1212) where it is being briefed.

Appeal

This appeal is likely to fail. Setting intrastate retail electrical rates of the sort requested by KWUA is well beyond FERC's jurisdiction and outside its powers under the Federal Power Act. With very few exceptions, none of which are relevant here, the Federal Power Act gives jurisdiction to FERC only over rates for wholesale power sold in interstate commerce, while leaving authority to set retail power rates strictly to the states.

State/Federal Reg Areas

For instance, 16 U.S.C. § 824(a) of the Federal Power Act states:

It is hereby declared that the business of transmitting and selling electric energy for ultimate distribution to the public is affected with a public interest, and that Federal regulation of matters relating to generation...of that part of such business which consists of the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce is necessary in the public interest, *such Federal regulation, however, to extend only to those matters which are not subject to regulation by the States.* (emphasis added)

The US Supreme Court also made this jurisdictional division clear in *Federal Power Commission v. Conway Corp.*, 426 U.S. 271, 276 (1976) ("[t]he [Federal Power] Commission has no power to prescribe

Klamath**PUC
Jurisdiction**

the rates for retail sales of power companies.”). See also *Northern States Power Company v. FERC*, 176 F.3d 1090 (8th. Cir. 1999), rehearing en banc denied (1999 US App. LEXIS 23494), cert. denied 528 U.S. 1182 (2000) (“FERC acknowledges that it cannot permissibly affect state regulation of retail rates and practices.” (Id. at 1093) “Congress has drawn a ‘bright line’ between state and federal regulation.” (Id. at 1096)).

Furthermore, the matter has already been decided by the State Public Utilities Commissions (PUCs), which under our federal system clearly have jurisdiction over intra-state retail rates within their states. Under current state laws, such grossly disparate rate subsidies are illegal as discriminatory under both Oregon (see ORS § 757.325) and California law (see CA Public Utilities Code § 453(a) and (c)). In Oregon, the Oregon PUC has ordered these subsidized rates to move to market rates over a seven-year transition period (OPUC Docket No. UE-170, Order No. 06-172 (April 12, 2006), and a Proposed Decision issued by the California PUC on November 13, 2006 (CPUC Docket No. A05-11-022) has denied all KWUA’s claims to continued power subsidies and continues their move to market rates over a four-year transition period. The CPUC Proposed Decision is expected to be finalized on December 14, 2006.

**FERC Denial
Authority****Hope For A Negotiated Dams Settlement**

FERC’s authority to deny a new license (in effect ordering decommissioning) when circumstances warrant, though to be used rarely, is nevertheless well rooted in its existing authority. In a Policy Statement on Decommissioning, issued December 14, 1994 (69 FERC ¶ 61,336), FERC itself noted:

“After examining the legislative history and the relevant statutory provisions, the Commission concludes that it has the legal authority to deny a new license at the time of relicensing if it determines that, even with ample use of its conditioning authority, no license can be fashioned that will comport with the statutory standard under section 10(a) of the Federal Power Act (the Act) and other applicable law.” (Policy Statement, pg. 2)

“The Commission has concluded that it has the power to take steps necessary to assure that the public interest is suitably protected, including, in the rare case, requiring removal of the project dam.” (Id. at 4)

“Given this history, it is the Commission’s view that, in those cases where, even with ample use of its conditioning authority, a license still cannot be fashioned that will comport with the statutory standard under section 10(a), the Commission has the power to deny a license.” (Id. at 23)

“The possibility that a project may have to shut down is not a legitimate basis for the Commission to ignore its obligations to impose necessary environmental conditions.” (Id. at 29)

**Public Interest
Obligation**

Most importantly, FERC has clearly stated that “economic viability” of a project is not to be the driver of a decision to relicense, but only one of many factors to consider. License conditions do not become “unreasonable” simply because a marginal project can no longer be economically viable under such conditions. It is FERC’s job to protect the public interest, not to guarantee profits for license applicants:

“There is no merit to the suggestion by some industry commentators that a condition in a power license is per se unreasonable if, as a result of imposing the condition, the project is no longer economically viable. The statute calls for a balancing of various development and nondevelopment interests, and those commenters’ position would elevate power and other development interests far above the environmental concerns. It would mean that severe environmental damage would have to be accepted in order to protect even a very marginal hydropower project. The Commission does not read the Federal Power Act to compel such a result. As the Court of Appeals for the Seventh Circuit recently observed: ‘[T]here can be no guarantee of profitability of water power projects under the Federal Power Act; profitability is at risk from a number of variable factors, and values other than profitability require appropriate consideration.’ (*Wisconsin Public Service Corporation vs. FERC*, 32 F.3d 1165, 1168 (7th Cir. 1994).” (Id. at 27-28)

**Process
Limitations**

Nevertheless, what may be accomplished through the regular FERC process is limited. In the past, the authority of FERC to order dams removed has been ambiguous and has never once been used without a prior settlement agreement consented to by the applicant company. Should FERC ever assert this authority unilaterally, the hydropower industry would surely challenge the decision and tie-up the process in years of litigation. Moreover, FERC process alone cannot deal with the other water and habitat restoration issues plaguing the Klamath basin that could — potentially at least — be incorporated in a broader settlement.

Negotiations

Mindful that FERC was created to license dams and is loath to decommission any dam against the wishes of the applicant, confidential multi-stakeholder settlement negotiations have been ongoing for over two years. These negotiations still represent the best hope of achieving a more inclusive settlement incorporating both dam decommissioning as well as meaningful river restoration. Agency support for decommissioning helps enormously in these negotiations, as does their insistence before FERC supporting full volitional fish passage.

<div>Klamath</div> <div>Over Appropriation</div> <div>BiOp Overturned</div> <div>Fish-Kill</div> <div>Appeal Ruling</div> <div>Target Flows Ordered</div> <div>Appeal Status</div> <div>Current Best Science</div>	<div> <p align="center">Correcting Long-Term Water Inequalities</p> <p>“Diversion of water is potentially one of the most serious factors adversely affecting salmon in western Oregon and northern California.”</p> <p><i>Status and Future of Salmon of Western Oregon and Northern California</i>, report by the “Botkin Commission” to the Legislatures of California and Oregon (1995).</p> </div> <div> <p>Another major problem, even more intransigent than dam removal, is the widespread over-appropriation of the limited water resources of the Basin. There are, however, ongoing efforts to restore more balance and fairness to existing water allocations so that fishing communities (and commercially valuable fisheries) may survive. Public interest groups, commercial fishers, Tribes and others are working towards a sustainable rebalancing of the water demands of this drought-prone basin so that future water demand will once again balance with the limited supply. What follows is a status report on some of these efforts.</p> </div> <div> <p>BiOp Water Flows Litigation Ruling</p> <p>On July 15, 2003, the US Federal District Court of Northern California ruled in favor of the plaintiffs in a major Klamath water case, <i>Pacific Coast Federation of Fishermen’s Associations (PCFFA), et. al., vs. U.S. Bureau of Reclamation</i>, U.S. Dist. Ct. N. Calif. (Civ. No. C02-2006 SBA). The Court found the current 10-Year Biological Opinion (BiOp), which established water regimes of the lower Klamath River through 2012, to be “arbitrary and capricious.” In a precedent setting ruling, the Court threw out several provisions of the BiOp based on speculative future programs and actions outside the control of Reclamation. These were programs and actions that Reclamation was relying upon to prevent jeopardy to Klamath Basin’s ESA-listed coho salmon. The BiOp had been adopted by NMFS under political pressure and against the advice of many, including its own scientists.</p> <p>In 2002, a massive fish-kill was triggered by near-record low flows in the lower river which were allowed under the contested 10-year BiOp. This incident devastated the lower river and seriously damaged its fisheries for years to come. The case objecting to the BiOp was subsequently brought by PCFFA, IFR, the Yurok and Hoopa Tribes, Congressman Mike Thompson, and others.</p> <p>Various portions of this ruling were appealed by both sides to the Ninth Circuit Court of Appeals. In a highly significant decision issued October 18, 2005 (<i>PCFFA vs. Bureau of Reclamation</i>, 426 F.3d 1082 (9th Cir. 2005)), the Court of Appeals not only supported the lower Court’s ruling invalidating much of the BiOp, but supported our appeal and invalidated the remainder of the BiOp. Of particular importance is the canceling of the BiOp provision that allowed a gradual phase-in of the much higher “target flows” necessary to prevent extinction until 2010. The Ninth Circuit noted that by 2010 the coho might well be extinct. The Ninth Circuit then ordered the lower court to craft injunctive relief accordingly to establish target flows immediately.</p> <p>In the remand back to the US District Court, on March 27, 2006, Judge Armstrong imposed full minimum “target flows” (due under the BiOp only by 2010) per the Ninth Circuit’s instructions, to last until a new ESA Section 7 consultation can occur and a new Klamath River Biological Opinion has been adopted — likely to be in the Spring of 2008. These court-ordered minimum flows guarantee at least basic survival flows to the lower Klamath River to protect fragile fish runs as they recover from the impacts of the 2002 fish kill, and will help mitigate serious water quality and disease problems exacerbated by the Klamath dams. Beyond 2008, the agencies must develop a biologically and legally sound new BiOp that will be protective of the fish.</p> <p>The injunction ordering minimum instream fish flows was then appealed by the Klamath Water Users Association (KWUA) as Intervenor, which filed its Opening Brief on November 13, 2006. NMFS has dismissed its initial appeal. The case is now into briefing, with oral argument expected sometime next year.</p> </div> <div> <p>Determining What Water Fish Need – The “Hardy Flow Study”</p> <p>In the meantime, a long-awaited study of flow needs for salmon below Iron Gate Dam was released in final form on October 16, 2006. This study, <i>Evaluation of Instream Flow Needs in the Lower Klamath Basin (Phase II)</i>, was developed by Dr. Thomas B. Hardy and a team of scientists at the Institute for Natural Systems Engineering at Utah State University, and is therefore referred to as the “Hardy Flow Study” (Study). [The Study represents the best available science on the needs of fish in the lower basin and is available online at: www.engineering.usu.edu/uwrl/inse/klamath/report.html]</p> <p>Efforts to scientifically determine how much water lower river fish actually need to survive (and eventually recover) is very threatening to many water interest stakeholders and agencies in the Basin. The Study was first proposed in 1996. It was finally commissioned and funded against water user protests (but only through the Bureau of Indian Affairs (BIA) of the Department of Interior) in 1998. Funding</p> </div>
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Klamath**Reclamation
Study**

was first delayed and then cut off entirely by the Bush Administration in 2002 and 2003. This provoked a loud protest from Congress in 2003. Funding was then restored, but an alternative and competing study was commissioned by Reclamation (also operating within Interior, but with water interests differing from BIA) seeking to get different results. Following at least two intensive rounds of peer-review and despite Reclamation protests, the Study was at long-last finalized last October. Even now, the Study has yet to be classed by the Department of the Interior as a “final” report. Interior has ordered yet a third peer-review by a special scientific panel of the National Research Council, whose report on this (and Reclamation’s competing flow study) is not due out until sometime early 2008 — nearly 12 years after study was first proposed.

Among other things, the Study documents that salmon in the lower river need nearly twice the amount of water Reclamation (which controls all flows from the Klamath headwaters passing through Iron Gate Dam) has been willing to provide during recent water years under the 2002-2012 BiOp. This is yet more evidence of how terribly over-appropriated the Basin’s limited water supply has become.

Cautious Hope**Hope From Renewed Political Attention to the Klamath**

As a result of this year’s widespread ocean salmon fishery closures (affecting over 700 miles of Pacific coastline) and the massive economic dislocation those closures caused there is renewed political attention being brought to bear on the Klamath Basin. One would hope this renewed attention will translate into renewed political will to finally solve the Basin’s many problems. A hopeful sign is that the Governors of both California and Oregon have announced a “Klamath Summit” to be held sometime in early 2007 to deal with, among other things, the future of the Basin’s dams.

Unfortunately, the history of follow-through on political promises for Klamath restoration does little to inspire confidence. In 2002, a Cabinet-Level “Federal Klamath Working Group” was formed within the Bush Administration to coordinate Klamath restoration efforts and create an overall restoration plan. No plan was ever produced. The effort quietly faded away.

In October, 2004 — just before the last Presidential election — Bush Administration Cabinet officials enlisted the Governors of both California and Oregon and signed a much ballyhooed “Klamath River Watershed Coordination Agreement.” This Agreement pledged, among other things, to establish a “State and Federal Klamath Basin Coordination Group” to “implement an aggressive, coordinated approach to allocate existing resources to the extent possible toward short-term opportunities that will improve conditions in the basin.” The election managed to occur, but the State and Federal Klamath Basin Coordination Group never managed to hold a meeting. Nothing changed.

The inter-jurisdictional fragmentation of the Basin works against basin-wide restoration planning. The major effort to date to form a basin-wide, stakeholder-driven restoration coordination mechanism has been the Conservation Implementation Program (CIP) being pushed by Reclamation. However, the origins of the CIP make some people suspicious. The CIP was originally proposed by Reclamation in the now-discredited 2002 BiOp as a “recommended and prudent alternative” and viewed by critics as aimed more at avoiding tough water-allocation decisions in an over-appropriated basin than at resolving these issues. Since then, the CIP concept has been slowly evolving within Reclamation and become part of the Reclamation’s budget, but so far has little stakeholder buy-in (there has never been a public meeting of this program) and has been mostly a paper exercise. [The most recent iteration of the Reclamation-proposed CIP concept is available on the web at: www.usbr.gov/mp/kbao/CIP/index.html]

In the meantime, much of the necessary federal funding for true Basin restoration work, such as the 20-year long efforts of the “Klamath Fisheries Restoration Task Force” created by the Klamath River Basin Fishery Resources Restoration Act in 1988 (in response to the last major Klamath fishery collapse, see 16 U.S.C. § 460ss et seq.), has now disappeared. In some ways the Basin’s federal restoration efforts appear to be going backwards. Many of the productive, stakeholder-driven, grassroots restoration efforts so touted by the Administration and now finally underway will soon disappear without renewed federal funding.

Nevertheless, there is renewed hope that some comprehensive long-term solutions can emerge from this renewed attention. Perhaps a renewed political will to finally manage the Klamath Basin on a sustainable basis is in the offing. Only time — and adequately funded follow-up — will tell.

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PACIFIC COAST FEDERATION OF FISHERMEN’S ASSOCIATION WEBSITE: www.pcffa.org
INSTITUTE FOR FISHERIES RESOURCES WEBSITE: www.ifrfish.org/

**Paper
Exercises****CIP**

Glen Spain, JD, is the Northwest Regional Director of the Pacific Coast Federation of Fishermen’s Association (PCFFA), the West Coast’s largest association of commercial fishing families, as well as Program Director of PCFFA’s affiliate organization, the Institute for Fisheries Resources.

Editor's Note: PacifiCorp's Revised Klamath Project Alternative Proposal

PacifiCorp has submitted a revised alternative proposal concerning fish passage to address the federal agencies' interests and concerns in issuing a new license for the Klamath Hydroelectric Project. PacifiCorp's submission is an alternative to the Departments of Interior and Commerce March 2006 filing, which detailed the federal agencies' prescriptions for fish ladders and screens. In its December 1st press release, PacifiCorp noted that the revised proposal "reflects PacifiCorp's desire to reach a compromise and proposes several enhancements to the company's April 25 alternative filing to the federal agencies" so that the company could continue generating energy on the Klamath River. Those facilities produce, on average, enough electricity for 70,000 residential homes each year.

PACIFICORP PROPOSES IN ITS MODIFIED ALTERNATIVE:

- Upstream and downstream volitional fishways at J.C. Boyle Dam consistent with the federal agencies' prescriptions;
- Downstream volitional fishways at Iron Gate, Copco No. 1, and Copco No 2 dams;
- Collection and transport of upstream migrating adult fish at Iron Gate to release sites upstream of Iron Gate Reservoir, Copco Reservoir, J.C. Boyle Reservoir, and one location above the project area within one year of a new license;
- An upstream fishway at Copco No. 2 Dam for collecting and transporting adult fish at or upstream of Copco No. 1 Reservoir within four years of a new license;
- Commitment to upstream passage survival rates for adult fish equivalent to volitional fish passage standards;
- Construction of tailrace barriers and spillway modifications, if necessary, consistent with the federal agencies' prescriptions;
- Commitment to 100 percent funding for marking all hatchery fish released from the Iron Gate Fish Hatchery consistent with the federal agencies' preference for wild fish;
- Commitment to rigorous research, monitoring and evaluation of fish reintroduction efforts;
- Establishment of a Fisheries Technical Committee to include federal and state agencies, Tribes and other stakeholder representatives to develop and make scientific recommendations on reintroduction plans and fisheries mitigation, protection and enhancement measures, consistent with the new license;
- Significant additional seasonal restrictions on J.C. Boyle peaking operations, including ramping operations to reduce stranding of fish; and
- Water-quality impact studies pertaining to the J.C. Boyle facility.

For info: PacifiCorp Klamath Relicensing website: www.pacificorp.com/Article/Article1152.html; FERC Relicensing website: www.ferc.gov/ >>> Documents & Filings >>> elibrary >>> Advanced search >>> P-2082

Klamath Irrigation Permit

Aquatic Herbicide

CWA Delegation

STATE NPDES PROGRAMS & ESA CONSULTATION

FEDERAL DISTRICT COURT REJECTS ARGUMENT THAT ESA CONSULTATION IS REQUIRED

by J. Mark Morford (Stoel Rives LLP, Portland, OR) and Beth S. Ginsberg, (Stoel Rives LLP, Seattle, WA)

Oregon Natural Resources Council v. Hallock, No. 02-1650-CO, (D.Or.) has been closely watched by permittees, state environmental agencies, and environmental groups because of its potential to upend National Pollution Discharge Elimination System (NPDES) permitting processes carried out by delegated state agencies under the federal Clean Water Act (CWA).

The Oregon Natural Resources Council (ONRC) brought this action against Stephanie Hallock, Director of the Oregon Department of Environmental Quality (ODEQ), and Stephen Johnson, Administrator of the US Environmental Protection Agency (EPA), alleging that they violated the Endangered Species Act (ESA) by failing to consult with the US Fish & Wildlife Service in connection with ODEQ issuing an NPDES permit. The NPDES permit in question was issued to the Klamath Irrigation District (KID) to allow use of the aquatic herbicide acrolein to keep its irrigation system free of weeds. KID administers a series of canals and waterways which contain shortnose and Lost River sucker fish, listed as endangered and thus protected under the ESA. On November 29, 2006, a federal district court in Oregon issued an order dismissing the case and granting the summary judgment motions by defendants Hallock and Johnson.

The heart of the issue presented by ONRC's challenge relates to the hybrid nature of Oregon's NPDES program, and indeed, any state permit program approved by EPA under federal law. Under the federal CWA, EPA is authorized to approve state NPDES permit and CWA enforcement programs if EPA determines that such programs have adequate authority to ensure consistency with the CWA. EPA approval requires that the state give EPA notice of each permit application and every action proposed by the state with regard to an individual permit. EPA has the authority to object to a state's issuance of an NPDES permit if it determines that the permit is not consistent with the CWA, but may waive its right to review an

Klamath Irrigation Permit

Section 7 Consultation

No Prior Requirement

No Consultation "Trigger"

Similar Rulings

individual permit in a particular circumstance. In Oregon, ODEQ is the authorized permitting entity and issues NPDES permits under state law, with the assistance of some EPA funding. [Editor's Note: EPA's contribution represents 12.7% of the total budget for ODEQ's Wastewater Permitting Program — see *Second Declaration of Lauri Aunan* (ODEQ's Water Quality Division Administrator), filed in Case No. 02-1650-CO, (D.Or.)].

Under section 7 of the ESA, federal agencies are required to consult with federal wildlife and fisheries agencies to ensure that action "authorized, funded or carried out by such agency...is not likely to jeopardize the continued existence of any threatened or endangered species" or destruction or modification of critical habitat. 16 U.S.C. § 1536(a)(2). ONRC argued that ODEQ had an obligation to commence an ESA section 7 consultation when it issued the KID NPDES permit because ODEQ's actions were somehow "federalized." The Court, however, rejected ONRC's argument. "Defendant Hallock in her individual or official capacity is not a federal agency and as such she cannot be required to comply with the EPA consultation requirements." The court then added: "The plaintiffs have not presented any cases in which courts have found that a state would be required to comply with the ESA consultation requirements because a state program was 'federalized' by virtue of receiving federal funding. This court declines to create new law on this issue." (Order at 13)

In addition, ONRC maintained that because EPA has the ability to oversee ODEQ's permitting decisions in Oregon, and because of the general federal funding that ODEQ receives from EPA in administering the state CWA program in Oregon, EPA and ODEQ had a joint obligation to initiate consultation before they issued the KID NPDES permit. While EPA did not take any formal action on the KID permit, ONRC argued that EPA's review of the KID permit and its decision not to object to its issuance constituted the requisite "federal action" requiring consultation under the ESA.

The Court summarily rejected these arguments, concluding that neither EPA's review of the KID NPDES permit nor EPA's failure to object to the permit's issuance constitute "federal action" sufficient to trigger the ESA consultation requirement. The Court based this finding on the fact that EPA does not have a statutory duty to review all NPDES permits issued by the authorized states. However, the Court went on to add that the ESA consultation requirement would not be triggered even if EPA had such a duty. The court also stated that "Defendant Johnson in his individual or official capacity is not required to comply with the ESA consultation requirements as it is the State of Oregon that issued the KID permit, not the EPA." Order at 13.

Magistrate Judge Cooney's decision joins the chorus of decisions across the country rejecting the expansive interpretation of ESA section 7 advanced by ONRC in this case. The case is consistent with case law holding that state agencies are not subject to the ESA consultation requirements. *See, e.g., Defenders of Wildlife v. U.S. Environmental Protection Agency*, 420 F3d 946, 951, 971 (9th Cir 2005) (Stating in dicta that an authorized state agency is not subject to ESA consultation requirement when issuing NPDES permits.); *American Forest and Paper Ass'n v. U.S. Environmental Protection Agency*, 137 F3d 291, 2299 (5th Cir 1998) (Court rejected an EPA attempt to require Louisiana, as a condition to approval of the state's NPDES program, to engage in ESA consultation before issuing NPDES permits). The magistrate's decision in *ORNC v. Hallock* also is consistent with the Ninth Circuit's recent opinion in *Western Watersheds Project v. Matieko*, 2006 WL 2042825 (9th Cir 2006), where the court held that the duty to consult under Section 7 of the ESA only applies to affirmative actions by a federal agency and not to an agency's "failure to exercise discretion." *Id.* at 6-8. Under the reasoning adopted in this opinion, state issued permits—whether under the CWA, as in this case, or the Clean Air Act, or any other federally approved state program that may enjoy the benefits of federal funding — will not require an ESA consultation merely because of the federalized or hybrid nature of the permitting process.

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Mr. Morford has in-depth experience with the full range of environmental issues that face industrial, energy, forest products and agricultural facilities, including water quality, air quality, waste management, radioactive materials management, endangered species issues and cleanups. Mark is listed in *The Best Lawyers in America*, *The International Who's Who of Business Lawyers*, *Lawdragon 500 Leading Lawyers in America*, *Chambers USA America's Leading Lawyers for Business* and *Oregon Super Lawyers*.

Ms. Ginsberg has more than 20 years experience litigating and providing advice on environmental, natural resources, and wildlife matters under the CWA, ESA, NEPA, and other federal and state statutes for public and private entities. Ms. Ginsberg has been consistently voted a "Super Lawyer" by Washington Law and Politics and has recently been named one of the Fifty Top Women Lawyers in Washington.

Water Prices

Droughts More Common

Market Research

Recent Findings

Varied Increases

Price Tie-Ins

Drought Effects

CLIMATE & WATER PRICING

CLIMATE EFFECTS ON WATER TRANSACTION PRICES

by B. G. Colby, J. Pullen, K. Pittenger, and L. Jones

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Introduction

Tree ring studies (paleoclimatology) indicate that prolonged dry periods in the western United States are not as rare as once believed. Climate models indicate that droughts are likely to become more common. The increased pressure on water supplies brought about by such conditions will likely lead to an increase in water transactions as a water-supply reliability tool. A better understanding of how drought affects negotiated water prices will be useful for potential sellers/lessors and for urban and regional water managers who may need to acquire dry-year supplies. However, there is relatively little statistical analysis of how drought influences transaction prices in the West.

Recognizing the limited previous empirical work on western US water transactions, the University of Arizona's Water Transactions Research Project is examining how drought affects prices in water purchases and leases in the West. Certain preliminary and partial findings of this project are reported below.

Previous Studies

Water market transactions for instream flows in the West were recently studied and it was found that water transactions for environmental purposes are occurring more frequently and can involve substantial payments, at varying prices (Loomis et al. (2003)). An examination of water market prices in the semi-arid West for three markets — Arizona's Central Arizona Project, Colorado's Colorado-Big Thompson Project, and New Mexico's Middle Rio Grande Conservancy District — indicated that: water markets are in various stages of development in the Southwest; water prices are lower in wetter periods; and the type of buyer has a significant influence on the price of the water transaction (Brookshire, Colby, Ewers, and Ganderton (2004)). A rational expectations model was developed to explain price variation in the Colorado-Big Thompson water market (Michelsen, Brooker, and Person (2000)). Their findings show economic activity is a significant determinant for water right prices and that an increase in the regional water supply can significantly affect the value of existing water rights.

Analysis of western water markets relying on 14 years (1990-2003) of water sale and lease data published in the *Water Strategist* (Stratecon, Inc.) found a significant increase in median purchase price over time (Brown (2006)). However, a similar purchase price increase was not observed in median lease price. Brown statistically tested seven variables to determine what factors influence price. The variables tested were: transaction year; a drought measure; quantity of water transferred; buyer's county population in 2000; a groundwater dummy variable with surface water as the alternative; and dummy variables for municipal or environmental use with irrigation use as the alternative. The six-month cumulative Palmer Drought Severity Index (PDSI) was used as the drought measure. Brown utilized "Ordinary Least Squares regression"— a mathematical optimization technique which attempts to find a function which closely approximates the data by minimizing the sum of the squares of the ordinate differences between points generated by the function and corresponding points in the data. The results of both the price and lease regressions are significant but exhibit limited explanatory power (low "adjusted R² values").

For leases, higher prices were linked to drier time periods and larger populations, and to municipal and environmental use compared to irrigation use. For sales, higher prices were associated with "more recent sales, smaller volumes of water transferred, smaller county populations, and with surface water." Sale price was higher for municipal use than irrigation use, which was higher priced than environmental use. Lease price grew with population, but purchase prices did not. Surface water versus groundwater did not have a significant effect on lease prices. Purchase prices were not found to increase with drier conditions. Lease prices were not systematically related to transaction size, suggesting that transaction costs do not influence leases as much as they do purchases.

The University of Arizona Water Transactions Research Project

Model Characteristics

The University of Arizona Water Transactions Research Project (Project) examines how drought affects prices in water purchases and leases. The sources of transaction data used in the analysis are *The Water Strategist*, *Water Market Update*, *U.S. Water News*, as well as miscellaneous trade journals and research reports.

Water Prices	<p>THE PROJECT'S WATER PURCHASE PRICE MODELS INCLUDE:</p> <ul style="list-style-type: none"> • An Intermountain Southwest Model (Arizona, Colorado, Nevada, New Mexico, and Utah) • An Urban Model including the major metropolitan areas of the Southwest • Specialized models within each State
Involved States	<p>THE PROJECT'S WATER LEASES MODELS INCLUDE:</p> <ul style="list-style-type: none"> • Individual State models for Arizona, California, Colorado, and New Mexico • A Southwest Model including: Arizona; Colorado; Nevada; New Mexico; and Utah
Adjusted Prices	<p style="text-align: center;">THE PROJECT'S MAJOR VARIABLES</p> <p>The following section describes the major explanatory variables utilized in this study's models. When applicable, the anticipated upward or downward influence on price (the "hypothesized sign of parameter estimates") of these variables is also included.</p> <p>Price: The price, <i>lnAdj_Price</i>, is the natural log of the real price per acre-foot paid for water. In the lease models, if the life of the lease is more than one year, the annual price per acre-foot is used to ensure comparative prices across leases of various lengths. Real prices are adjusted to constant dollars (\$2004 for the purchase models and \$2005 for the lease models).</p> <p>Date: The date is a record of the month and year the transaction was reported. Due to lags in reporting transactions, this date does not correspond to the date the transaction price was actually formalized between the parties. As a result, select variables are "lagged" to account for discrepancies between the actual transaction date and the date on which it was reported.</p> <p>The year a transaction occurred is used to construct a trend variable to assess if there is a statistically significant up-trend or down-trend in the price of water over time. Factors such as population growth may increase price, thereby shifting the water-demand curve outward. However, other factors may act to decrease price over time. As a market matures, transaction costs may be reduced and potential transactors may become more comfortable with the process. This can increase the number of sellers/lessors in the market, causing the supply curve to shift outward with the increased availability of water for transactions lowering the price. This phenomenon is sometimes observed as agricultural water users become more willing to lease or sell water.</p>
Countervailing Influences	<p>Quantity: The number of acre-feet of water transferred is generally captured in the models by using the variable <i>lnAF</i> — which is the natural log of total acre-feet transferred per transaction. However, in some models price and quantity were found to be simultaneously determined, creating "endogeneity" bias. "Endogenous" variables are those variables resident to a model, an undesirable feature for statistical analysis. Bias may arise when one endogenous variable affects another such variable in the absence of an outside (i.e. "exogenous") influence not considered in the model framework. For this study, in those models where price and quantity were found to be simultaneously determined <i>Qhat</i> or <i>Lnafhat</i> were used in the place of <i>lnAF</i>. <i>Qhat</i> and <i>Lnafhat</i> come from an "instrumental variable approach." In this approach a first stage regression is used to predict the quantity of each transaction. The predicted quantity is then used in the place of the actual quantity to eliminate the endogeneity bias in the model.</p> <p>Some transaction costs, such as locating trading partners and gaining approval for the transfer, do not systematically increase with the quantity of water leased or sold. Economies of scale thus come into play. Economies of scale (i.e. decrease in the price per unit as the number of units increases) would suggest a negative relationship between the quantity of water and its price per acre-foot. On the other hand, prior studies suggest that in some regions large transactions encounter more opposition and incur higher transaction costs (Colby 1990; Howe and Goemans 2006).</p>
Overcoming Model-Bias	<p>Original Use: This variable indicates how the water was originally used. Major categories include: agriculture; municipal; industrial; and storage/surplus.</p> <p>New Use: The new use variable indicates how the water is put to use. Major new use categories include: agriculture; municipal (which includes landscape and golf course irrigation as well as new development); environmental; recreation; industrial; and storage.</p> <p>Because the marginal value of water varies across uses in developing markets, the price of water transferred for lower value uses (such as low-value crop production) would be expected to be less than for relatively higher value uses (such as municipal or environmental). In mature markets, with many buyers and sellers, this differential would diminish as market forces bring a convergence of price across uses (the "equimarginal" principle).</p>
New Use Categories	<p>Length of Lease: This variable, used in the lease models only, represents the number of years of the life of a lease. The effects of this variable are mixed. On the one hand, lessees may have a higher willingness to pay for a longer lease for the longer assured supply. On the other hand, a shorter term lease may represent an effort to meet an immediate need, and thus the willingness to pay might be higher.</p>
Lease-Term Variables	

Water Prices

"SPI" & "MEI"

Climate Regions

El Nino & La Nina

Long-Term Considerations

Statistics Tools

Change in Population: The Intermountain Southwest has experienced rapid growth in annual population while this study progressed. The variable *population%change* examines how the percent of change in population has influenced the price of water per acre-foot over time. The annual percent-change in population is used in the statistical models for the region where the transaction occurred.

Drought and Climate Indexes: Two indexes were used to measure drought and climate conditions — the National Oceanic and Atmospheric Administration (NOAA) Standard Precipitation Index (SPI) and the Multivariate ENSO Index (MEI).

Relative dry and wet conditions are captured using the SPI. NOAA developed the SPI to monitor drought and it is a measure of the probability of precipitation for a given time period. The SPI matrix ranges from negative four (-4) to positive four (4), with -4 representing extremely dry conditions and 4 extremely wet. A valuable feature of the SPI is its capacity to measure drought over different lengths of time, calculating time-spans from one to 72 months long (ending on the last day of the latest month). The SPI can capture droughts of three to six months (which affect soil moisture and thus agricultural production), and longer-term droughts of six months to several years (which have implications for major rivers, aquifers, and other large bodies of water). The SPI divides each State in the US into climate regions, and the SPI for each region is calculated using average precipitation and temperature data from the 10 to 50 weather/climate data stations sited within that region. A climate region is said to be in drought when the SPI is continuously negative and reaches a value of -1 or less. As hydrologic conditions become dryer the SPI goes down. In the terms of the Study, the supply of water thus "shifts in"—implying a negative parameter estimate on this SPI variable. During drought, this may be further compounded by an increase in demand for water as junior rights holders find themselves in a shortage situation and thus enter the market. The Study obtained SPI data from the Western Region Climate Center database and these data were assigned to each water transaction based on the year, month, and climate region in which the transaction took place. In most cases, the transfer originated in the same climate region as that in which the water was put to a new use. Thus, only one SPI value was assigned per transaction. In California, however, it is quite common for transfers to cross climate regions, and to account for this SPI values were assigned to each transaction based on the climate region where the water transfer originated as well as the climate region to which the water was ultimately transferred.

A newer climate index, the Multivariate ENSO Index (MEI) is also explored in the Study. The El Nino/Southern Oscillation (ENSO) index is linked to yearly climate variability (Klaus 2004). The MEI utilizes: a weighted average of sea-level pressure; the east-west and north-south components of the surface wind; sea surface temperature; surface air temperature; and the total fraction of cloudiness in the sky. The MEI is calculated on a sliding bi-monthly basis and all seasonal values are standardized with respect to each season and to the 1950-1993 reference period to keep all MEI data comparable (Klaus 2006). In the Southwest a positive MEI value indicates an El Niño event, suggesting a wet winter. A negative MEI value indicates a La Niña event, suggesting a dry winter in the region.

Because buyers and sellers likely take into account long-term hydrologic and climactic conditions, SPI and MEI of various lengths were explored. In particular, SPI and MEI indices based on two, six, and 12-month averages were considered. Lagged values of each time scale were also included to reflect time lags between price negotiations and reporting of a transaction. Thus, a lag effect of six and 12 months for the SPI and MEI are assessed.

As noted above, price and quantity are often simultaneously determined in water transactions. A statistical device (the "Hausmann-Wu test") is performed on each model to determine whether or not price and quantity are endogenous. If quantity is endogenous in the price equation, inconsistency and bias will arise in the Ordinary Least Squares (OLS) analysis (Wooldridge 2003) if the bias is not addressed. The statistical remedy applied in the Study is referred to as "two-stage least squares" (2SLS). In the first stage, instrumental variables (which are assumed to be exogenous) are used to predict the value of quantity. Supply-side variables generally are used as instruments for quantity and demand-side variables are used in the price models. In the second stage, the predicted values of quantity are then substituted back into the price equation as an explanatory variable. If the Hausmann-Wu test indicates quantity is exogenous, however, OLS is applied in favor of 2SLS. This is because when the explanatory variables are exogenous, the 2SLS estimator is less efficient than OLS (Wooldridge 2003).

After application of either OLS or 2SLS the data is subjected to further statistical tests dealing with "heteroskedasticity" (where random variables have different variances, as opposed to "homoscedasticity"—where all such random variables have the same finite variance). The Breusch-Pagan test and White's test for heteroskedasticity are conducted to determine whether the variance is constant. If the tests indicate a non-constant variance, a "variance-covariance matrix" is used to construct "Huber-White robust standard errors" so that valid hypothesis tests can be carried out.

Water Prices

**Figure 1:
Southwest
Purchases
Summary**

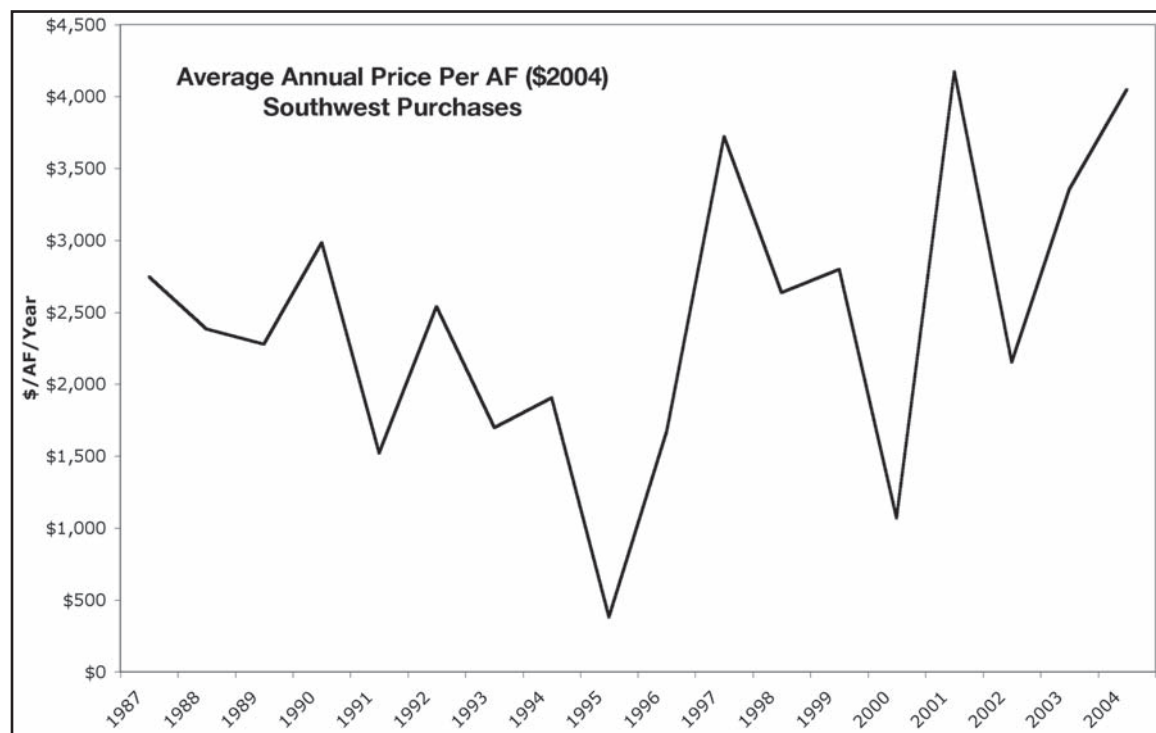
Price Influences

Market Characteristics

**Table 1:
Front Range
Analysis**

Purchase Models

In this brief article, we summarize results from two purchases models: the Colorado Front Range Purchases Model and the Southwest Urban Purchases Model. The average annual purchase price for the five southwestern states of Arizona, Colorado, Nevada, New Mexico and Utah from 1987 to 2004 is shown in Figure 1.



THE STUDY'S HYPOTHESIZED RELATIONSHIPS BETWEEN PURCHASE PRICE AND OTHER VARIABLES INCLUDE:

- Price increases as drought intensifies
- Markets are immature and thus negotiated prices will vary across types of use
- Real price increases over time: while economies of scale may be present, transactions costs could outweigh them, and the SPI would have an inverse effect on demand. (Purchase prices are adjusted to 2004 dollars using the Consumer Price Index.)

For the Colorado Front Range Purchases Model (Table 1), the average purchase price was \$6,943 per acre-foot (\$2004). The average quantity purchased was 282 acre-feet.

Several characteristics of the market emerged. Economies of scale were found to exist, evidenced by larger blocks of water selling for lower per-unit prices than smaller blocks of water. It was also found that as drought intensifies, price does indeed increase. Prices (in constant-year dollars) are increasing over time. Water rights purchased for agricultural purposes cost less than water purchased for municipal uses, indicating that the market is not equalizing marginal values across sectors as would be expected in an efficiently functioning water market relatively free of trade barriers.

Colorado Front Range Purchases Model, 1132 Observations			
Variable	Significant	Sign	Explanation
Qhat	Yes	-	Economies of scale present
SPI 12	Yes	-	Prices increase as drought intensifies
Trend	Yes	+	Prices are increasing over time
Population%Change	Yes	-	Prices decrease as population increases
Municipal Use	Yes	+	Prices are higher when water is bought for municipal use
Environmental Use	Yes	-	Prices are lower when water is bought for environmental use
R-Squared = .6015			

Water Prices

**Table 2:
Southwest
Urban
Analysis**

Southwest Urban Purchases Model, 1447 Observations			
Variable	Significant	Sign	Explanation
Qhat	Yes	-	Economies of scale present
SPI 24	No	-	The 24 month SPI is not a significant indicator of price
Trend	Yes	+	Prices are increasing over time
Population%Change	Yes	-	Prices decrease as population increases
Municipal Use	Yes	+	Prices are higher for municipal use
Environmental Use	Yes	-	Prices are lower for environmental use
Recreation Use	No	+	Prices are not significantly different for water purchased for recreation
Phoenix	Yes	-	Phoenix prices lower than Colorado Front Range
Tucson	Yes	-	Tucson prices lower than Colorado Front Range
Albuquerque	Yes	-	Albuquerque prices lower than Colorado Front Range
Las Vegas	No	+	Las Vegas prices not significantly different from Colorado Front Range
Reno	Yes	+	Reno prices higher than Colorado Front Range
Salt Lake City	Yes	-	Salt Lake City prices lower than Colorado Front Range
R-Squared = .5766			

The Southwest Urban Purchases Model was estimated using two-stage least squares (Table 2). The Colorado Front Range is omitted from the model so as to serve as the basis of comparison. Economies of scale were once again present. However, in this Model the drought index was not found to be significant. This insignificance may be due to differences in the importance of surface and groundwater supplies across different regions. The appropriate lag (determined by the month-span of the SPI) for each region may also differ. As before, municipal purchases cost more than agricultural purchases. However, environmental purchases cost less. The urban area where the transaction occurred is statistically significant, with prices in Phoenix, Tucson, Albuquerque, and Salt Lake City being below Colorado Front Range prices and the prices in Reno being above those in Front Range transactions.

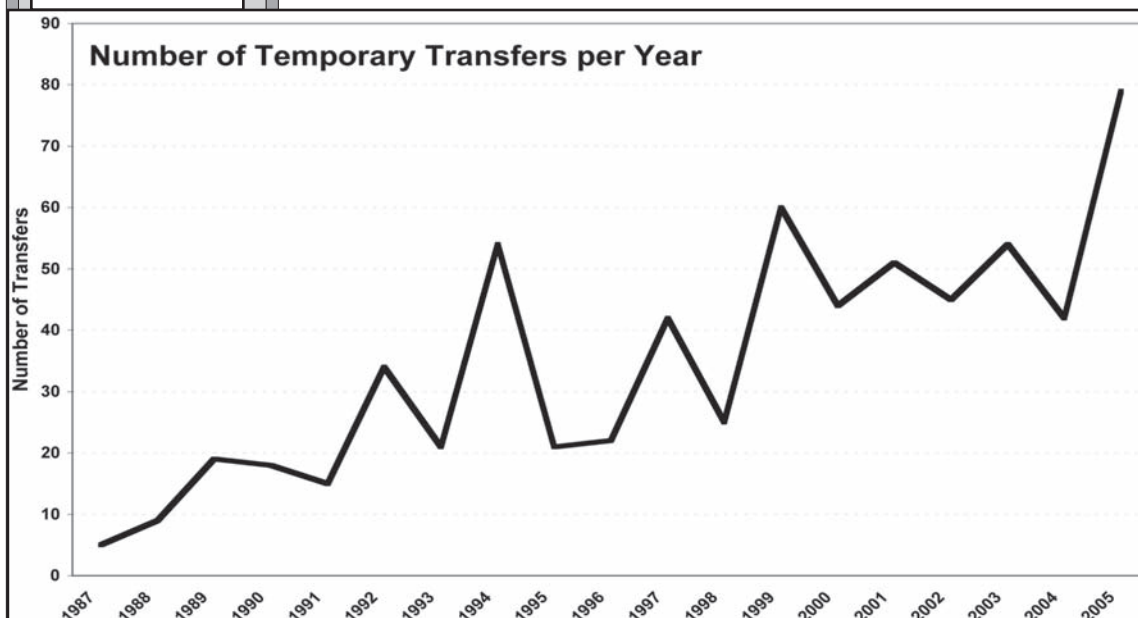
Overall, the Study's purchase models indicated statistically significant influences relative to the following variables: price and quantity transferred; the year the transaction occurred; the percent change in population in the area; the new use of the water right; the location where the transaction occurred; and the SPI drought index.

**Figure 2:
Leases
Summary
12 Western
States**

Lease Models

Leases were examined independently of purchases to analyze the effect of dry periods on the price of leased water. The dataset consists of 660 temporary water transfers occurring in the West between 1987 and 2005. These leases occurred in 12 western states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Texas, Utah, Washington, and Wyoming. All prices are adjusted to

2005 dollars using the Consumer Price Index. Figure 2 summarizes the number of leases reported per year. It should be noted that the sources used in compiling this data generally do not report leases between users in the same irrigation district. Such transfers, which are a regular component of agricultural water management strategies, can involve substantial volumes of water (Howitt and Hanak 2005).



Water Prices

**Table 3:
Colorado
Leases
Analysis**

Several individual state lease models were estimated. A summary of the results for the Colorado leases model is shown in Table 3. Notable characteristics of this model are similar to the purchase models. Economies of scale are found to be present and prices rise with dry conditions. Also notable is the inverse relationship between lease-length and price, with longer leases found to have lower prices per acre-foot per year. The type of use in the model was not significant as it was with the two purchases models discussed, possibly indicating the Colorado leases market is maturing.

Colorado Leases Model, 64 Observations			
Variable	Significant	Sign	Explanation
Lnafhat	Yes	-	Economies of scale present
Trend	No	+	There is no significant trend in prices
MEI12L6	No	-	Prices do not vary significantly with 6 month lagged 12 month MEI
SPI12L6	Yes	-	Prices increase with prolonged drought
Municipal-New Use	No	+	Prices for municipal use are not significantly different from prices for agricultural use
Industrial-New Use	No	+	Prices for industrial use are not significantly different from prices for agricultural use
Environmental-New Use	No	-	Prices for environmental use are not significantly different from prices for agricultural use
Other-New Use	No	+	Prices for other uses are not significantly different from prices for agricultural use
Front Range	No	+	Front Range prices are not significantly different from other locations
Years-lease	Yes	-	Prices are lower with longer leases
R-Squared = .39			

Table 3: Colorado Leases Analysis

A lease model was also estimated for the five southwestern states of Nevada, Utah, Colorado, Arizona, and New Mexico (Table 4 — next page). Figure 3 depicts how the average lease prices have varied in the Southwest from 1987 to 2005. Prices in the model were found to rise with dry conditions, as in previous models. The price per acre-foot of leased water varies widely from State to State — with Arizona having statistically significant higher lease prices than Colorado and Utah. Leases to municipal and environmental uses were priced higher than leases to agriculture.

Wide Price Variation

**Figure 3:
Southwest
Lease Prices
Summary**

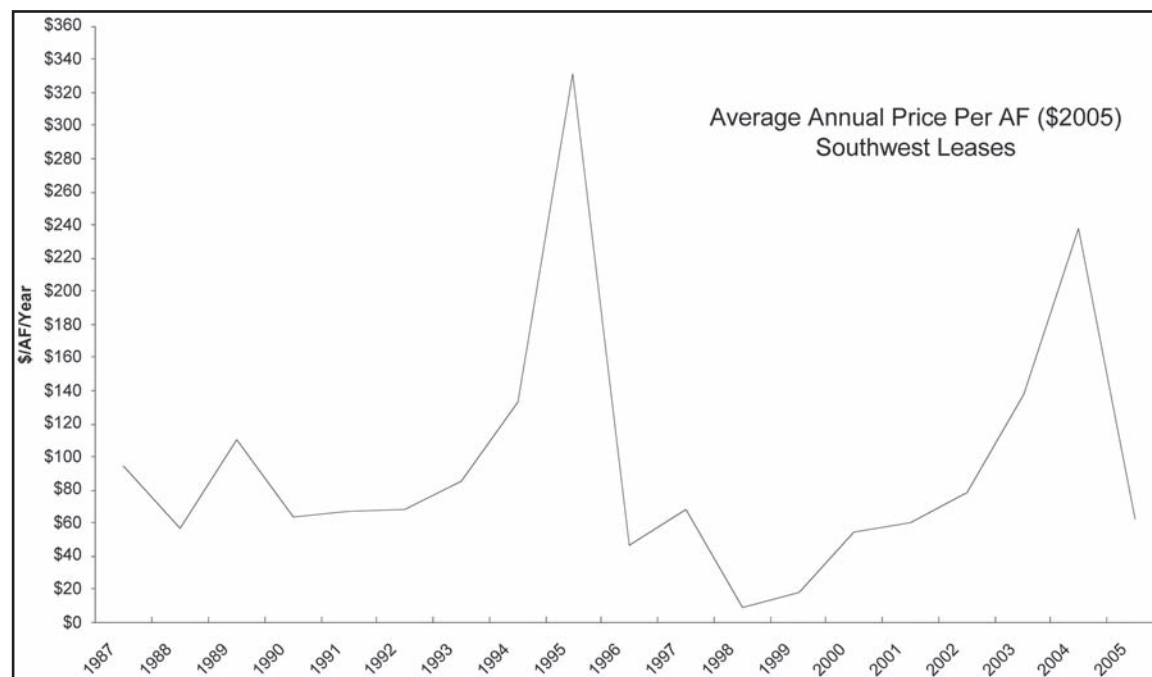


Figure 3: Southwest Leases Summary

Water Prices

**Table 4:
Southwest
Leases
Estimates**

Southwest Leases Model, 178 Observations			
Variable	Significant	Sign	Explanation
Trend	No	-	There is no significant trend in prices
Lnafhath	No	-	Quantity is not a significant determinant of prices
Arizona	Yes	+	Prices are predicted to be higher than Colorado
New Mexico	No	-	Prices in New Mexico are not significantly different than in Colorado
Nevada	No	-	Prices in Nevada are not significantly different than in Colorado
Utah	Yes	-	Prices are predicted to be lower than Colorado
MEI	Yes	+	Prices rise with dry El Niño conditions
SPI12L6	Yes	-	Prices rise with dry conditions
Years - Lease	No	+	Lease length does not significantly determine prices
Ag-to-Municipal	Yes	+	Prices are higher for ag to municipal transfers than from ag to ag
Ag-to-Environmental	Yes	+	Prices are higher for ag to environmental use transfers than from ag to ag
Storage-to-Ag	No	+	Prices are not significantly different for transfers out of storage than from ag to ag
Storage-to-Municipal	No	+	Prices are not significantly different for transfers out of storage than from ag to ag
Storage-to-Environmental	No	+	Prices are not significantly different for transfers out of storage than from ag to ag
Other Use Types	No	+	Prices are not significantly different from transfers to other uses than from ag to ag
R-Squared = .40			

Conclusion

The ongoing Water Transactions Research Project, headed by Dr. Colby at The University of Arizona, is developing analytic tools that we hope prove useful for water acquisition planning, developing budgets and financing for acquisition programs and to facilitate more informed negotiations among parties involved in transactions. Many urban areas have active water acquisition programs, as do non-profit organizations and public agencies concerned with water supplies to support fish recovery and ecosystem services. The purchase and lease pricing models may also be valuable in forecasting the economic consequences of drought on water acquisition costs.

Results to date indicate that dry and wet conditions do indeed have significant effects on water transaction prices, though these effects are, in turn, significantly impacted by various local and regional conditions.

It should be noted that these analyses highlight differences among the climate indicator indices being used. While in some models, only SPI is significant and in others both SPI and MEI are significant, transaction prices do reflect dry and wet conditions. Ongoing work examines other climate and hydrologic indicators, as well as refining models that explain the price and quantity of water being transferred in other sub-regions of the West.

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Bonnie Colby is Professor of Agricultural and Resource Economics at the University of Arizona, where she has been a faculty member since 1983. Her doctorate is from the University of Wisconsin. Colby's expertise is in the economics of inter-jurisdictional water disputes, water rights valuation, water transactions and water policy. She has authored over one hundred journal articles and six books, including *Braving the Currents: Resolving Conflicts Over the River Basins of the West*, *Water Markets in Theory and Practice* and *Negotiating Tribal Water Rights*. Dr. Colby advises public agencies, businesses and NGOs throughout the western United States on water acquisitions, water pricing and financial aspects of water settlement agreements. Lana Jones is a graduate research assistant in the Department of Agricultural and Resource Economics at the University of Arizona, working with Dr. Colby on issues in water resource economics.

K. Pittenger and J. Pullen both received an MS degree in Agricultural and Resource Economics from the University of Arizona in 2006. Pittenger is now a doctoral student at the University of California-Davis and Pullen is a Ph.D. student at the University of Arizona.

Water Prices

Author's Note: This brief summary is based on ongoing research by Dr. Bonnie Colby at the University of Arizona. The results reported here are preliminary in nature and may change as new data becomes available and new analytic techniques are applied.

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Summary of Terms Used to Describe Statistical Analysis

Endogeneity refers to the fact that an independent variable included in the model is potentially a choice variable, correlated with unobservables relegated to the error term.

In general, **sample selection bias** refers to problems where the dependent variable is observed only for a restricted, nonrandom sample.

"Endogenous" variables are those arising within a model. Bias may arise when one endogenous variable effects another variable within the model in the absence of real-life influences not considered.

Least squares or **ordinary least squares (OLS)** is a mathematical optimization technique which attempts to find a function which closely approximates the data by minimizing the sum of the squares of the ordinate differences between points generated by the function and corresponding points in the data.

In statistics, a sequence or a vector of random variables is **heteroscedastic** if the i.e., where random variables in a sequence or vector have different variances, as opposed to **homoscedasticity**, where all such random variables have the same finite variance.

NATIONAL FOREST ACTIVITIES

GOLD MINING DECISION HAS WIDE IMPLICATIONS

by David Moon, Editor

Overview

On August 4, 2006, a federal district court issued a decision in *HCPC, et al. v. Haines, et al.*, Case CV. 05-1057-PK (Oregon Federal District Court) enjoining gold mining activity in the North Fork Burnt River watershed in eastern Oregon. The decision was based on several federal laws and could have implications for all activities in the national forests that require permits from the US Forest Service (USFS).

Plaintiffs challenged a Record of Decision (ROD) for the North Fork Burnt River Mining Project (Project) in the Wallowa-Whitman National Forest (WWNF) in Eastern Oregon under several federal laws. The plaintiffs prevailed on most of their summary judgments motions, resulting in the USFS being enjoined from allowing mining or mineral operations for any action that the court found violated the Clean Water Act (CWA), the Organic Act, the National Forest Management Act (NFMA) and the implementing laws and regulations of those acts.

CWA Violations

The most sweeping holding by federal Magistrate Judge Paul Papak came in his conclusion regarding CWA violations. Judge Papak first noted that “several reaches of the North Fork Burnt River and its tributaries do not meet state water quality standards for temperature and sediment.” The Judge then added an explanation point by finding that the “Forest Service may not ignore or defer its responsibility to remedy existing water pollution in the project area based on a misguided notion that the right to mine trumps federal and state environmental laws.” Slip Op. at 11-12. This decision was based in part on the court’s finding that USFS had a “clear” responsibility under CWA § 401 to obtain state water quality certifications prior to permitting miners to begin mining operations, yet had failed to do so. Slip Op. at 9 (See 33 U.S.C. § 1341(a)(1) and *California Trout, Inc. v. FERC*, 313 F.3d 1131, 1138 (9th Cir. 2002), cert. denied, 540 U.S. 818 (2003); *Natural Resources Def. Council v. U.S. EPA*, 279 F.3d 1180, 1183 (9th Cir. 2002); *Ackels v. U.S. EPA*, 7 F.3d 862, 865-67 (9th Cir. 1993).

The court also found that USFS violated CWA § 313, which “requires all federal agencies to comply with water quality standards, including a state’s antidegradation policy. 33 U.S.C. § 1323(a). Federal agencies must ensure that any authorized activity on federal lands complies with all applicable water quality standards. See *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1153 (9th Cir. 1998); *National Wildlife Federation v. U.S. Army Corps of Engineers*, 384 F.3d 1163, 1167 (9th Cir. 2004)...Plaintiffs point to the fact that the Forest Service has approved additional mining operations in waters that are on Oregon’s § 303(d) list as water-quality limited for sedimentation, and that Oregon’s antidegradation policy does not allow further degradation through new or increased discharges. OAR 340-041-004(7).” Slip Op. at 9.

Ultimately, the court rejected USFS arguments that road-related sediment reduction activities (road closures and decommissionings) will likely compensate for whatever sediment escapes as a result of mining activities. The Order pointed out “the prospective nature of the road-related projects. The FEIS [Final Environmental Impact Statement] states that most road closures and decommissionings will not occur until roads are no longer needed for mining. The timing of those projects is, at best, uncertain. Mining, once started, may continue for many years.” Slip Op. at 10

Other Violations of Federal Law

In addition to CWA violations, the Judge also granted summary judgment motions by the plaintiffs based on other federal laws. The court noted that the Forest Service Organic Administration Act of 1897 (the Organic Act) established the national forest system and authorizes the Forest Service to promulgate regulations for the use and preservation of national forests, and specifies that individuals entering the national forests for the purpose of exploiting mineral resources “must comply with the rules and regulations covering such national forests.” 16 U.S.C. § 478; *Clouser v. Espy*, 42 F.3d 1522, 1529 (9th Cir. 1994), cert. denied, 515 U.S. 1141 (1995). The court then held: “To the extent that this court finds a violation of the Clean Water Act, a finding that the Organic Act has been violated follows...The Forest Service has failed to minimize adverse environmental impacts as required by regulations, and failed to ensure that mining operators comply with water quality standards.” Slip Op. at 12-13.

Next, the court held that the Forest Service violated the National Forest Management Act (NFMA). “NFMA establishes the legal framework for managing Forest Service lands, including the requirement that

National
Forests

USFS
Permits

Federal Acts

WQ Standards
Unmet

State Standards

Uncertain
Compensation

Organic Act

NFMA

National Forests

"Speculative" Measures Insufficient

Combined Proposal Analysis Upheld

a land and resource management plan (LRMP or Forest Plan) be prepared by the Forest Service for each national forest, and that all permits, contracts and other usages of land be consistent with the Forest Plan. 16 U.S.C. § 1600 et seq.; 16 U.S.C. § 1604(a) and (i). The Forest Plan for the WWNF was adopted in 1990 and amended in 1995 to provide additional protections for inland native fish as required by the Inland Native Fish Strategy (INFISH)." Slip Op. at 13. Although the case dealt only with mining activities, the opinion nonetheless includes language that could be applicable to other activities on Forest Service lands where permits are required, such as logging or ski areas. The court's examination of the USFS decision regarding road building, road-density requirements and other support facilities on forest service land, led the Judge to grant plaintiffs' motion for summary judgment on claims under NFMA. "To the extent that the Forest Service relies on the speculative road closures and decommissionings addressed above, this court is not persuaded the Forest Service has made a proper finding regarding open-road density in the project area." Slip Op. at 18.

NEPA Ruling

The court did grant the USFS summary judgment motion on claims under the National Environmental Policy Act (NEPA). The Judge rejected plaintiffs' assertion that USFS violated NEPA by considering forty-nine proposals together and, thus, failed to analyze site-specific impacts from each mining operation, and also by failing to consider an adequate range of alternatives to each of the proposed mining operations. "The NFBR FEIS is not a programmatic EIS and does not suffer from the same flaws that courts have found when analyzing programmatic as opposed to site-specific EISs. See *California v. Block*, 690 F.2d 753 (9th Cir. 1982); *Natural Resources Defense Council v. Morton*, 388 F. Supp. 829 (D.D.C. 1974). Also, different agency actions may be analyzed in a single EIS when these actions are sufficiently related and in a similar geographic location. *Inland Empire Public Lands Council v. U.S. Forest Service*, 88 F.3d 754, 763-64 (9th Cir. 1996) (utilizing one EIS to analyze eight timber sales in a watershed). Regulations authorize agencies to consider similar actions in a single document and encourages them to do so when one EIS will provide superior analysis in assessing the combined impacts of similar actions. 40 C.F.R. § 1508.25(a)(3)" Slip Op. at 20.

FOR ADDITIONAL INFORMATION: A complete copy of the Opinion and Order is available on Northwest Environmental Defense Center's website: www.nedc.org/

WATER BRIEFS

FISH RECOVERY SW

MULTI-AGENCY COOPERATION IN THE SAN JUAN RIVER BASIN

The Interior Secretary Kempthorne recently joined the governors of the States of Colorado and New Mexico as well as representatives of the Navajo Nation, Jicarilla Apache Nation, Southern Ute Indian Tribe and Ute Mountain Ute Indian Tribe to renew their commitment to a national program that is working to recover endangered fishes in the San Juan River while water development proceeds in accordance with state and federal laws. These leaders signed an extension of a cooperative agreement for the San Juan River Basin Recovery Implementation Program that will extend the Recovery Program through 2023. The extension will ensure the continued cooperative work to recover the endangered Colorado pikeminnow and razorback sucker while future water development occurs for agricultural, hydroelectric and municipal uses in the San Juan River Basin.

Established in 1992, the Recovery Program is a voluntary, cooperative program involving Native American tribes, federal and state agencies, and water development interests in Colorado and New Mexico.

The main goals implemented through the program are to conserve populations of the Colorado pikeminnow and the razorback sucker, and to continue with the water development in the Basin in compliance with Federal and state laws, interstate compacts, Supreme Court decrees and federal trust responsibilities to the Southern Ute Indian Tribe, Ute Mountain Ute Tribe, Jicarilla Apache Nation and the Navajo Nation.

As a result of the cooperative effort, biologists are seeing signs of recovery in both the razorback sucker and Colorado pikeminnow populations. Stocked fish have been captured at spawning sites in reproductive condition and captures of young fish in the San Juan River demonstrate that these endangered fish are successfully reproducing. Overall habitat for native fish in the river has improved and water development for agricultural, municipal and hydroelectric projects has been able to continue.

"The program's early years consisted of extensive research into the habitat and life requirements of the fish species," said David Campbell, the Recovery Program's director. "We are now at a juncture where recommended management actions are improving the quality of river habitat. This is reflected in growing populations of razorback sucker and Colorado pikeminnow. The extension of the program will allow for continued efforts to recover these rare fish."

For info: David Campbell, Recovery Program Director, 505/ 761-4745

RECOVERY PROGRAM WEBSITE: <http://southwest.fws.gov/sjrip>.

WATER BRIEFS

**WATER PRIVATIZATION CA
COURT VOIDS CONTRACT**

On November 2, Judge Elizabeth Humphreys of the San Joaquin County Superior Court overturned the 2003 water privatization contract that the City of Stockton (Stockton) entered into with Denver-based Operations Management International, Inc & Thames Water (OMI). Under the \$600 million contract, Stockton proposed to turn over to OMI principal responsibility for the operation of the municipal water, wastewater and stormwater utilities, including capital improvements and asset management, for a period of 20 years. Stockton was sued by the Sierra Club, Concerned Citizens Coalition of Stockton, and the League of Women Voters of San Joaquin County to overturn the contract.

Judge Humphrey's agreed with the plaintiffs' position in stating that the court reviewed "the entire history of this litigation...and determined that the Petition is correct and the requirements of CEQA [the California Environmental Quality Act] have not been met." Ruling at 2. The court found that the "City's failure to conduct a [sic] environmental review before approving the Contract was improper. The OMI Contract is a 'project' under CEQA." Ruling at 4. "There is substantial evidence in the administrative record to demonstrate that transfer of the city's water utility operations for 20 years will have significant environmental impacts. Substantial evidence in the administrative record supports a fair argument that the Project may have a significant environmental effect." *Id.* The court then noted that "the Project does not qualify for an existing facilities exemption because the Contract provides for the construction of new infrastructure improvements and extensive modification of existing facilities." *Id.* For a general overview of the CEQA statutes and guidelines, the court cited to *California Farm Bureau Federation v. California Wildlife*, 143 Cal.App.4th 173, 183-185 (2006). Ruling at 2.

In accordance with the Ruling, Stockton was ordered to resume municipal operations and management

of the water, wastewater and stormwater utilities within 180 days. Ruling at 5. As part of the order, the court stated that Stockton "shall not reapprove the Project unless and until the Respondents have first prepared, circulated for public comment, and certified an environmental review document that complies with CEQA and CEQA Guidelines." Ruling at 6. A copy of the Judge's Ruling is available on the Sierra Club's website listed below.

For info: Rachel Hooper, Shute, Mihaly & Weinberger LLP (lead counsel for Plaintiffs), 415/ 552-7272 or email: hooper@smwlaw.com; SIERRA CLUB WEBSITE: www.sierraclub.org/environmentallaw/lawsuits/viewCase.asp?id=325

**AQUATIC PESTICIDES US
EPA FINAL RULE**

On November 21, the US Environmental Protection Agency (EPA) issued a final rule clarifying two specific circumstances in which a Clean Water Act (CWA) permit is not required before pesticides are applied. EPA's regulation states that the application of a pesticide in compliance with relevant requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) does not require a National Pollutant Discharge Elimination System (NPDES) permit in two specific circumstances. The two situations are when pesticides are applied directly to water to control pests (including mosquito larvae, aquatic weeds and other pests in the water); and when pesticides are applied to control pests that are present over or near water where a portion of the pesticide will unavoidably be deposited to the water in order to target the pests effectively. The final rule replaces EPA's *Interpretive Statement on the Application of Pesticides to Waters of the United States in Compliance with FIFRA*, published on Feb. 1, 2005.

The summary of the final rule in the Federal Register stated that the "rulemaking is based on the Agency's interpretation of the definition of the

term "pollutant" under the Clean Water Act (CWA) as not including such pesticides." The use of pesticides and the intersection of FIFRA and CWA have been the subject of litigation previously (see Beale, TWR #4 and Goldman, TWR #12).

The new rule drew immediate criticism from Beyond Pesticides, a Washington-based public health and environmental group. Beyond Pesticides November 21 press release noted that the statute EPA is relying on to protect water (FIFRA) is a regulatory and licensing law that oversees the registration of pesticides and their application. FIFRA does not, however, regulate and oversee water quality and the protection of aquatic ecosystems in the local context, which is the distinct business of the CWA. The group also maintains that when FIFRA registers a pesticide it does not take into account heightened toxicity due to combinations of chemical (mixture and synergy), or the phenomenon of toxic chemical drift, which commonly occurs in aerial spraying.

According to Beyond Pesticides, EPA's rule allows the weaker and more generalized standards under FIFRA to trump more stringent CWA standards. CWA uses a kind of health-based standard known as **maximum contamination levels (MCLs)** to protect subjective risk assessment, while FIFRA uses a highly subjective risk assessment with no attention to the safest alternative.

EPA's final rule is available on their website at www.epa.gov/npdes/agriculture. Additional information regarding FIFRA and the pesticide program can be found on EPA's website at www.epa.gov/pesticides/. See also the Federal Register: November 27, 2006 (Volume 71, Number 227). EPA has established a docket for this action under Docket ID No. OW-2003-0063. All documents in the docket are listed online at www.regulations.gov.

For info: Jeremy Arling, EPA Water Permits Division, 202/ 564-2218, or email: arling.jeremy@epa.gov; Jay Feldman, Beyond Pesticides, 202/ 543-5450 or website: www.beyondpesticides.org

WATER BRIEFS

**GW CONTAMINATION CA
CLEANUP COSTS SETTLEMENT**

EPA recently announced that it has reached separate settlements requiring companies that allegedly contributed to groundwater contamination at the San Gabriel Valley Superfund site near Los Angeles, to reimburse EPA \$2,136,320 and the California State Department of Toxic Substances Control (DTSC), \$16,000 for past cleanup costs. Rathon Corp. and Chemed Corporation must reimburse \$1.76 million to the EPA and \$14,000 to the DTSC. The Saint-Gobain Corporation (as successor in interest to Saint-Gobain Calmar Inc.) must reimburse \$376,320 to the EPA and \$2,000 to DTSC. EPA has already received approximately \$10 million from prior settlements relating to the Puente Valley Operable Unit.

Other potentially responsible parties are implementing groundwater cleanup programs for the Puente Valley Operable Unit, estimated to cost over \$50 million over the next ten years. The work parties are designing a groundwater cleanup system that requires installing wells to pump out contaminated groundwater to prevent it from further spreading. The extracted groundwater will be treated to remove contaminants and may be provided to a local water supply distribution system or discharged to surface water.

EPA listed several sections of the San Gabriel Valley as Superfund sites in 1984, including multiple areas of groundwater contaminated by volatile organic compounds. Contaminated groundwater associated with all of the San Gabriel Valley sites lies under significant portions of Alhambra, Irwindale, La Puente, Rosemead, Azusa, Baldwin Park, City of Industry, El Monte, South El Monte, West Covina, and other areas of the San Gabriel Valley. There are 45 water suppliers in the Valley that use the San Gabriel Basin groundwater aquifer to provide 90 percent of the drinking water for over one million residents.

The settlement must be approved by the court. The consent decrees were lodged in Federal District Court on November 2, 2006. On November 22, 2006, a 30-day public comment period

regarding the decrees began through publication in the Federal Register.

For info: Francisco Arcaute, EPA, 213/244-1815; EPA's Superfund program website for Region 9: www.epa.gov/region09/waste/sfund/

**INTERSTATE COMPACT US
DRAFT MODEL COMPACT**

The Utton Transboundary Resources Center has drafted a model interstate water compact that places the power of managing interstate water in the hands of the states in the hope of avoiding expensive and acrimonious litigation. The Utton Center contracted with Muys and Associates (Jerome Muys and George Sherk) to draft the compact. After more than two years of extensive research and assessments of current compacts, plus input from a national and state expert advisory committee, the model compact is now available. Topics that were not considered when older compacts were enacted (such as tribal water rights, environmental statutes, groundwater and drought) are included. The compact is not a one-size-fits all, but a model with alternatives discussed in commentaries to each section. The model compact can be accessed at the Utton Center's website: http://uttoncenter.unm.edu/model_compacts.html.

For info: Marilyn O'Leary, Utton Center, 505/277-3253

**TRIBAL WATER PROJECTS US
EPA FUNDING PUBLICATION**

A new EPA publication for funding tribal water projects was announced at the joint meeting of the EPA National Indian Workgroup and the EPA National Tribal Caucus in Reno, NV on November 30. The Tribal Resource Directory for Drinking Water and Wastewater Treatment highlights more than 30 federal and non-federal programs that provide funding and technical assistance to help tribes attain access to safe drinking water and basic sanitation. The directory is available in hard-copy and electronically. The web-based version includes a searchable database that allows users to look for programs that match specific needs. The directory is available on the Office

of Wastewater Management tribal website: www.epa.gov/owm/mab/indian/index.htm. Printed copies of the Tribal Resource Directory for Drinking Water and Wastewater Treatment (EPA 832-R-06-007) can be obtained from: US EPA, National Service Center for Environmental Publications, P.O. Box 42419, Cincinnati, OH 45242
For info: EPA, 800/490-9198

**WETLAND MITIGATION CA
EVALUATING CWA PROJECTS**

A new report assessing wetland mitigation efforts across California, including evaluation of permit compliance and ecological conditions of over 100 wetland mitigation projects is now available. The report, "An Evaluation of Compensatory Mitigation Projects Permitted Under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991-2002" by Richard F. Ambrose, John C. Callaway, and Steven F. Lee, was completed for the California State Water Resources Control Board (SWRCB).

The purpose of this project was to evaluate the compliance and wetland condition of compensatory wetland mitigation projects associated with Clean Water Act Section 401 Water Quality Certifications throughout California. This was done by selecting, reviewing and performing field evaluations for 143 permit files distributed across the 12 Water Board regions and sub-regions of the State. For each permit file the authors assessed the extent to which permittees complied with their mitigation conditions (including acreage requirements), whether the corresponding mitigation efforts resulted in optimal wetland condition, and if the habitat acreages gained through compensatory mitigation adequately replaced those lost through the permitted impacts.

The study found that permittees were largely following their permit conditions (although one-quarter to one-third of the time these were not met), but the permit conditions that were being met are not resulting in compensatory mitigation projects that are similar to natural wetlands. Only 16% of the files fully complied with all mitigation plan

WATER BRIEFS

conditions; however, 42% had scores of 90% or greater. Permittees usually complied with acreage requirements and third party acreage credit purchases, but there was much lower compliance with monitoring and submission requirements. Despite relatively high permit compliance, most mitigation sites were not optimally functioning wetlands. In comparison to reference sites, only 19% of the mitigation files were classified as optimal, with just over half sub-optimal and approximately one-quarter marginal to poor.

The study also includes a large number of recommendations, including sections on mitigation requirements, information management, clarity of permits, effective assessment of the goal of "no net loss," and coordination with other agencies (besides SWRCB). The authors accepted comments on the report through December 1 and anticipated making revisions to the report to produce a Final Report.

For info: John Callaway, email: callaway@usfca.edu; Rich Ambrose, email: rambrose@ucla.edu; full report is available at the SWRCB website: www.waterboards.ca.gov/cwa401/index.html#contracts

AQUIFER RECHARGE ID

ESPA ASSESSMENTS FUNDED

Members of the Idaho Water Resource Board today approved a plan to spend \$350,000 to conduct technical and engineering assessments at three locations across the Eastern Snake Plain Aquifer (ESPA), where managed aquifer recharge could potentially occur. The proposed sites are in addition to the W-Canal aquifer recharge pilot project, currently under construction near Wendell.

Aquifer recharge has been identified as a likely component of the Board's framework for a comprehensive ESPA management plan, currently being prepared for presentation to the 2007 Idaho Legislature. The Board, along with its consultant, CDR Associates of Boulder, Colorado conducted working group meetings during December focusing on management alternatives for the ESPA plan.

The W-Canal pilot project is Idaho's first state-run aquifer recharge site. Studies are being conducted to determine the amount of water that could be expected to filter through the project into the Eastern Snake Plain Aquifer. The ESPA is the large underground aquifer that feeds communities across southern Idaho and provides water for large irrigation projects.

For info: Idaho Dept. of Water Resources, 208/ 287-4800, or website: www.idwr.state.id.us/

STORMWATER POLLUTION CA INDUSTRIAL RUNOFF

EPA recently ordered Coulter Forge Technology, an iron and steel forging facility in Emeryville, and California Waste Solutions, Inc., a recycling facility in Oakland, to immediately comply with the federal Clean Water Act at their facilities concerning industrial runoff. Polluted stormwater runs off these two facilities and into the collection system where it eventually runs into the San Francisco Bay, a violation of the facilities' stormwater discharge permits. Polluted runoff is the leading cause of water pollution in the San Francisco Bay. Stormwater runoff can carry pollutants from industrial sources metals, oil and grease, acidic wastewater, bacteria, trash and other toxic pollutants into nearby water sources.

On September 18, EPA investigators inspected both facilities and discovered inadequate stormwater pollution controls and pollution prevention plans, which are violations of the companies' stormwater discharge permit and the Clean Water Act. The EPA ordered California Wastes Solutions, Inc. and Coulter Forge Technology to minimize and prevent the discharge of pollutants into the San Francisco Bay or any other body of water; perform a daily inspection of the industrial activity areas; and complete specific clean-up tasks. Failure to comply with the EPA order could bring penalties against the companies for as much as \$32,500 per day per violation.

For info: Lisa Fasano, EPA, 415/ 947-4307

CONSERVATION GRANTS US

ESA TIE-IN

US Fish and Wildlife Service (USFW) is currently seeking proposals from states and US territories interested in securing federal grant assistance to acquire land or plan for endangered species conservation efforts. For fiscal year 2007, the Cooperative Endangered Species Conservation Fund (Fund) plans to provide approximately \$80 million in grant funding for conservation planning and habitat acquisition for federally protected species. Proposals must be submitted to the appropriate USFW Regional Offices by February 7, 2007.

The Fund is authorized under Section 6 of the Endangered Species Act provides grants to states and territories to support participation in a wide array of voluntary conservation projects for federally listed threatened and endangered species, as well as for species that are either candidates or have been proposed.

USFW is seeking proposals under three categories:

RECOVERY LAND ACQUISITION: For acquisition of threatened and endangered species habitat in support of approved recovery plans.

HABITAT CONSERVATION PLANNING ASSISTANCE: Supporting the development of Habitat Conservation Plans (HCPs). The purpose of an HCP is to ensure adequate protection for threatened and endangered species, while at the same time providing for economic growth and development.

HCP LAND ACQUISITION: Supporting acquisitions by the State or local governments that complement actions associated with the HCP.

By law, the state or territory must have a current cooperative agreement with USFW and contribute 25 percent of the estimated program costs of approved projects, or 10 percent when two or more states or territories undertake a joint project. The grants are expected to be awarded during summer 2007.

For info: USFW Division of Consultation, Habitat Conservation Planning, Recovery and State Grants, 703/ 358-2106

USFW WEBSITE: www.fws.gov/endangered/grants/

January 2-4 ID Seventeenth Annual Water Quality Workshop: Monitoring, Assessment & Management, Boise, Boise State University. For info: Don Zaroban, IDEQ, 208/ 373-0405, email: don.zaroban@deq.idaho.gov, or website: www.deq.idaho.gov/water/assist_business/workshops/nps_workshop_07.cfm	January 17 OR "Water Conflicts in the West," Eugene, University of Oregon, Many Nations Longhouse, 4:30 pm. RE: Faculty Series with Adell Amos. For info: Jill Forcier, Environmental & Natural Resources Law Program, 541/ 346-1395, or email: jillf@uoregon.edu	January 25-26 CO Colorado Water Congress 49th Annual Convention, Denver. For info: CWC, 303/ 837-0812, email: macravey@cowatercongress.org, or website: www.cowatercongress.org	February 8 OR "Corporate Law & the Environment," Eugene, University of Oregon, Many Nations Longhouse, 4:30 pm. RE: Faculty Series with Judd Sneirson. For info: Jill Forcier, Environmental & Natural Resources Law Program, 541/ 346-1395, or email: jillf@uoregon.edu
January 4-5 CO NEPA Seminar, Denver, Hyatt Convention Center. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com	January 18-19 WA Endangered Species Act Regional Conference (14th Annual), Seattle, Red Lion on 5th. RE: Case Law, Policy Developments, & Legislative Proposals ;& ESA Implementation. For info: The Seminar Group, 800/ 574-4852, email: info@TheSeminarGroup.net, or website: www.TheSeminarGroup.net	January 26 OR Symposium on Klamath River Basin, Eugene, University of Oregon. Sponsored by the Journal of Environmental Law & Litigation. For info: Melissa Peterson, mpeter10@uoregon.edu, JELL website: www.law.uoregon.edu/org/jell/klamath.php	February 21 WA Marine Shoreline Development, Seattle. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com
January 4-5 CA California Wetlands, Sacramento. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com	January 18-19 WA Buying & Selling Electric Power in the West Conference, Seattle, Washington Athletic Club. RE: Bonneville's post-2011 Contracts, Climate Change & New Transmission Projects, Incentives for Renewables, Financing, FERC's Priorities & More. For info: Law Seminars Int'l, (800) 854-8009, or website: www.lawseminars.com	January 26-27 HI Natural Resources Damages in Hawai'i, Honolulu, Ala Moana Hotel. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com	February 22-23 CA 25th Annual Water Law Conference (ABA), San Diego, Hotel Del Coronado. RE: Recent Changes in Water Law & What That Means for the Future, Agency Statutory Interpretation, Instream Use & Water Conservation, Federal Reserved Rights Doctrine, Transfers, Adjudications, Global Climate Change & More. Co-Sponsored in part by THE WATER REPORT. For info: ABA website: www.abanet.org/environ/committees/waterresources/home.html
January 12 OR Oregon Fish & Wildlife Commission Meeting, Salem, ODFW Headquarters, 3406 Cherry Avenue NE. RE: Access & Habitat Emergency Seeding, Coastal Coho Conservation Plan, Fish Passage Priority Enforcement, Pacific Halibut Management, Groundfish Fishery Harvest Levels & Management, Damages for Commercial Fish Violations, R&E Project Approvals. For info: Casaria Tuttle, ODFW Director's Office, 503/ 947-6044, or website: www.dfw.state.or.us/agency/commission/minutes/	January 18-20 NM Quivira Coalition's 6th Annual Conference, Albuquerque, Marriott Pyramid. RE: "Fresh Eyes on the Land: Innovation & the Next Generation" For info: Quivira website: www.quiviracoalition.org	January 29-30 NV Nevada Water Law, Reno. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com	February 22-23 OR Oregon Environmental Quality Commission Meeting, Location TBA. For info: Helen Lottridge, ODEQ, 503/ 229-6725, or website: www.deq.state.or.us/about/eqc/EQCagendas.htm
January 12-14 CA Wild & Scenic Environmental Film Festival, Nevada City. For info: www.wildlandsscenicfilmfestival.org	January 22-25 GA Fourth International Conference on Remediation of Contaminated Sediments, Savannah, Marriott Riverfront Hotel. RE: Efficient Assessment, Effective Management & Successful Remediation. For info: The Conference Group, 800/ 783-6338, email: info@confgroupinc.com, or website: www.battelle.org/environmental/conferences/sedimentscon/	January 30-Feb 2 FL Winter Conference: National Association of Clean Water Agencies, St. Petersburg, Renaissance Vinoy Resort.. RE: Global Trends Impacting Public Utilities: The Rising Cost of Clean Water. For info: NACWA, 202/ 833.2672, email: info@nacwa.org, or website: www.nacwa.org/meetings/#07winter	February 22-23 NV Family Farm Alliance Conference, Las Vegas, Monte Carlo Resort & Casino. RE: Development in the West, Agricultural Lands and Environmental Demands, Reclamation Roundtable, Climate Change, Ag Water Supplies & More. For info: FFA, 707/ 998-9487, or email: ffameeting@aol.com
January 17 WA SEPA & NEPA, Seattle, Renaissance Hotel. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com		February 1-2 NM Law of the Rio Grande, Santa Fe, Eldorado Hotel & Spa. RE: Rio Grande Compact, Regional Planning & Conversion of Water, Active Water Resource Management & Adjudication, Municipalities' Demands, Indian Water Rights Settlements, Hydrology & Water Markets, Recreational & Environmental Uses & More. For info: CLE Int'l, 800/ 873-7130, email: registrar@cle.com, or website: www.cle.com	

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February 22-23 CA

Annual Executive Briefing by the Water Education Foundation, Sacramento, RE: Current Water Issues - Speakers from the Urban, Business, Farming, Environmental & Public Interest. For info: WEF, 916/444-6240, email: feedback@watereducation.org, or website: www.water-ed.org/briefings.asp

February 26 WA

Natural Resources Damages Litigation, Seattle. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

February 27-March 2 DC

Water Systems Council Spring 2007 Members Meeting, Washington, DC. For info: member_services@watersystemscouncil.org or website: www.watersystemscouncil.org/calendar/index.cfm

March 1-2 OR

Public Interest Environmental Law Conference (25th Annual), Eugene, University of Oregon. For info: PIELC, 541/ 346-3828, email: askpielc@uoregon.edu, or website: www.pielc.org/

March 1-2 OR

2007 Brownfields Conference, Salem, Salem Conference Center. For info: Karen Homolac, Oregon Economic and Community Development Department, 503/ 986-0191, email:Karen.Homolac@state.or.us

March 1-2 NV

NEPA, Las Vegas. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com

March 5-6 DC

2007 Ground Water Industry Legislative Conference/NGWA Fly-In, Washington, DC. For info: National Ground water Association, website: https://info.ngwa.org/servicecenter/Meetings/Index.cfm

March 8-9 CO

Colorado Water Law, Denver, Grand Hyatt. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com

March 8-11 CO

36th Annual Conference on Environmental Law, Keystone, Keystone Resort & Convention Center. For info: ABA website, www.abanet.org/enviro/programs/keystone/2006/

March 12-13 ID

Water Law, Boise. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

March 13 VA

"Water Quality Committee Meeting," Western States Water Council, Arlington, Crowne Plaza Washington National Airport, 1480 Crystal Drive. For info: Cheryl Redding, WSWC, 801/ 561-5300, email: credding@wswc.state.ut.us or website: www.westgov.org/wswc/meetings.html

March 16-17 CO

The Climate of Environmental Justice: Taking Stock, Boulder, University of Colorado Law School. RE: Environmental Justice and the Consequences of Climate Change. For info: Maxine Burkett, Natural Resources Law Center, 303/ 492-3720, or website: www.colorado.edu/law/centers/nrlc/Climate_Justice_Conference.pdf

March 19-20 WA

Clean Water & Stormwater, Seattle. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

March 20-23 WA

Fifth Climate Prediction Applications Science Workshop, Seattle. For info: Diana Perfect, NOAA-National Weather Service, 301/ 713-1970 x 132, email: diana.perfect@noaa.gov, or website: www.cses.washington.edu/cig/outreach/workshopfiles/cpasw07/

March 26-27 TX

Texas Wetlands, Austin. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com

March 29-30 CA

NEPA, San Francisco. For info: CLE Int'l, 800/ 873-7130 or website: www.cle.com

March 29-30 CO

Coal in the West, Denver. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com

March 30 WA

Bringing Brownfields Home, Seattle. For info: Law Seminars Int'l, 800/ 854-8009, email: registrar@lawseminars.com, or website: www.lawseminars.com



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