14.2.2


# CHENEGA CORPORATION

Post Office Box 60
Chenega Bay, Alaska 99574-0060
(907) 573-5118


MEMORANDUM

TO: Public Advisory Group

FR: Charles W. Totemoff, Native Landowners Representative

RE: EVOS Restoration Projects' Comments

DATE: January 6, 1993

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**Project No. 93002: Sockeye Overescapement.**

This project appears to be one of an abundance of fish in 1989. The plan is to study the Kenai Peninsula, Tustumena and Kenai River Lake system; also Kodiak and Red Lake system. The proposal is merely to collect data. Its high priced, $714,600. We believe that the Red Lake project makes sense; however, we are concerned about what appears as a disproportionate amount of money spent on indirect effects the Kenai River area.

Suggestion:

Why not cut down a little bit on the Kenai River Lake system and include additional research at Eshamy and Jack Pot re: sockeyes?

**Project No. 93003: Effect of Oil on Pink Salmon Eggs.**

The budget is for a two year cycle at $686,000 total, including contractual of $200,000. This project appears to involve work through PWSAC, and is certainly of importance to the entire oil impacted area.

**Project No. 93004: Preservation of Wild Populations of Pink Salmon Impacted by EVOS.**

The budget is $899,000, including $168,500 contractual. These take place in the Cordova area. No specific areas have been identified, however. However, the important thing about these studies is that they appear to relate to the health of the wild stock and the impact of oil. The write up is a little bit confusing. Please tell us where the streams are, and what information is anticipated to be collected.

**Project No. 93005: Cultural Resources Information, Education, and Interpretation.**

This is a six month project with a budget of $399,400. The proposal is to let the public know about the value of cultural heritage information preserved in archaeological sites. Basically, it is not clear whether the purpose is to explain what is valuable or what is archaeological. ADNR proposes to organize and promote, from oil spill affected communities, groups to go out and conduct archaeological work. This is extremely sensitive; the affected Native community ought to be able to contract their own archaeologists to conduct mitigation efforts without public involvement. We suggest that grants be provided to the affected ANCSA Corporation, Tribes under ARPA, to hire archaeologists to undertake the mitigation efforts in conjunction with ADNR oversight.

**Project No. 93006: Sites of Specific Archaeological Restoration.**

The budget for this project is $259,000. This is a nine year program involving monitoring, restoration assessment, field work, and proposed restoration assessments and treatment actions. We note that the environmental compliance description requires compliance with the Historical Preservation Act, the Archaeological Resources Protection Act, and the Native American Graves and Repatriation Act. The United States Forest Service and the Department of the Interior are both involved. Thus it is necessary to consult with the Native landowners, as a matter of law. The Pacific Rim Village Coalition joint venture proposal contains information on these acts and their relationship to cultural resources. Specifically, the Federal agencies, and to the same extent the State agencies, must consult with the Native landowner. In addition, contracting could be required. It is unclear how implementation of the program will occur in light of the environmental compliance section. The idea is important; the manner of implementation is unknown. The agencies must be aware that, Natives already suffered the oil spill's impact on cultural resources, ANCSA land owners must be an integral part of cultural resources restoration and protection work.

**Project No. 93007: Archaeological Site Stewardship Program.**

This program focuses on training local residents to protect archaeological resources and obtaining agreements with private landowners and agencies to participate in the stewardship program. Personnel is high at $94,000 and contractual is $46,000. The total budget is $194,000 for a two year program. Again, we believe that

the personnel costs might be cut down in favor of direct contracting for protection and stewardship with ANCSA land owners.

**Project No. 93008: Archaeological Site Patrol and Monitoring.**

The budget for this project is $297,000, of which $117,500 is contractual. This program is to be coordinated with the Archaeological Site Stewardship Program. Environmental compliance requires the consultation requirements previously discussed. Alot of the program involves watching certain sites by patrol and monitor. Annual reports are required. Who will be the field personnel? How will this be controlled? The project is necessary; implementation should involve ANCSA corporation consultation and involvement at every step of the way.

**Project No. 93009: Public Information, Education and Interpretation.**

Budget: $316,700

This project involves public information outreach in order to inform and educate the public on the effects and impacts of the Exxon Valdez oil spill and to enhance eco-tourism.

The program is presently slated with an emphasis on the communities of "Valdez, Whittier, Cordova, Seward, Homer, Kodiak, and the Municipality of Anchorage." Public information should emphasize interested Native communities in the spill impact area. Alaska corporation have cooperated in the past with the governments and have worked with the National Park Service (Port Graham and English Bay) and the Alaska Department of Fish & Game and the USFS (Chenega). One of the problems with this project is that it will more than likely (because the state and NPS involved) involve use of ANCSA lands, whether intentionally or not. It also is a source of advertising of ANCSA ownership interest and perhaps tourism projects.[1]

**Project No. 93010: Reduce Disturbance Near Murre Colonies.**

The budget for this project is $56,800. This is probably a really good project. It seems to affect the Port Graham, English Bay, as well as the Chignik Bay areas.

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[1] We note that a DEC publication made available to the public several years ago depicted oil damaged beaches in PWS, the Kenai Peninsula, Kodiak and the Alaska Peninsula. No mention was made of the fact that the uplands were privately held by ANCSA corporations. We are concerned that such future publications serve to educate the public on private rights, as well.

**Project No. 93011: Harvest Guidelines to Aid Restoration of River Otters and Harlequin Duck.**

Harlequin Ducks are of importance subsistence wise. The total budget is $11,200. Basically, what is proposed is to make recommendations on season and bag limits to the Board of Game. There ought to be more local community input as a part of this function. The local advisory groups for the Board of Game must be consulted as a part of this process.

**Project No. 93012: Genetic Stock Identification of Kenai River Sockeye Salmon.**

The budget for this project is $300,600.

We are uncertain how this project is distinguishable from 93002. It also seems like it is expensive and far removed. How does this project relate to the restoration program?

**Project No. 93014: Quality Assurance for Coded Wire Tagged Application and Fish Restoration Project.**

The budget for this project is $94,800. The purpose of this is to study the coded wire tag system. We believe training should include assisting local employment. We support this project, which also examines the effects of an oil spill.

**Project No. 93015: Kenai River Sockeye Salmon Restoration.**

The budget for this project is $732,600. Why is this needed? Basically, it looks as if ADF&G wants to replace some escapement monitor equipment.

**Project No. 93016: Subsistence Restoration Project.**

This is a combination project between the ADF and NOAA which has a two year life and a budget of $360,000, of which $135,000 is contractual. It is sort of a blow up of an earlier Chenega proposal. There is some coordination and community mapping. However, it is again going to be from outside the community looking in. The project does include all of the affected Native villages. However, personnel could be reduced in favor of local hire, with oversight by the agencies.

**Project No. 93017: Subsistence Restoration Project**

Funds Available: $360,300 of which $135,000 is presently contractual.

This is a two year study to restore subsistence use of fish and wildlife damaged by the Exxon Valdez, and includes community meetings to identify and map specific areas and resources of continued concern to subsistence users. Some of our members have started auto-cad mapping their lands. It would seem that this would certainly assist in presenting a focused approach to the Trustees Council, and establish a past pattern. In addition, the project includes, at least in part, Chenega's proposal for funds to be made available to support subsistence food sharing program between communities. Further, samples will be collected, and there will need to be imputing with regard to the planned 1993 spring shoreline survey.

The "How" section of 93017 is especially important. Discussion concerns "involving subsistence users and decisions affecting mitigation ...." and also discusses the subsistence study. We support this project. We also believe that data and resources owned by the ANCSA corporations may be available, and ANCSA corporations must be consulted regarding work scope.

**Project No. 93018: Enhanced Management of Wild Stock, PWS, Emphasis on Cutthroat Trout and Dolly Varden**

Budget: $285,300 - 18 months

This project would involve monitoring of weirs, obtaining scales, and so on. The areas include Native corporation owned lands (for example, Eshamy Lake which is surrounded by Chenega lands). The program is oriented towards sparts fishermen. However, the agencies do need to consult with the ANCSA corporations regarding access, and the public needs to be educated regarding the fact that the habitat impacts, to a large extent, riparian and littoral interests of ANCSA corporations.

**Project No. 93019: Mariculture Project.**

This project seeks to <u>restore</u> services by introducing a new technology in order to restore or enhance populations. It is strongly supported by the Chugach area villages and village corporations. A State AG legal opinion was requested.

**Project No. 93022: Evaluating the Feasibility of Enhancing Productivity of Murres by Using Decoys, Dummy Eggs, and Recording of Murre Calls to Stimulate Normal Densities at Breeding Colonies.**

The budget for this project is $281,000. Even Dr. Speese liked this one.

**Project No. 93024: Restoration of Coghill Lake Sockeye Salmon Stock.**

The budget for this project is $191,900. This is a pretty complicated study in order to figure out all sorts of things about sockeye. Our question is, why are you proposing so much to study Kenai River Sockeye, and so little to restore sockeye in PWS?

**Project No. 93025: Montague Island Chum Salmon Restoration.**

Budget: $81,500

The project appears worthwhile and is supported.

**Project No. 93026: The Fort Richardson Hatchery Water Pipe.**

The project total is $3,617,000. There are even typos in the **WHEN** (which starts at 1992 and ends in 1984). We fail to see how this project is oil spill restoration oriented.

**Project No. 93028: Restoration and Migration of Wetland Habitat for Injured Prince William Sound Fish and Wildlife Species.**

We need further information concerning this project which involves fixing a water course. It is not altogether clear what is intended to be accomplished.

**Project No. 93029: Prince William Sound Second Growth Management**

This project is intended to inventory data bases, habitat, and to improve habitat for "pink and chum salmon harlequin duck, marbled murrelet, river otter and bald eagle. It may involve acquisition of habitat and is important from a land owners perspective as well as for the public perception of restoration of critically injured habitat.

**Project No. 93030: Red Lake Restoration (Kodiak Island).**

Budget: $77,200

Perhaps the money should be transferred from 93002 to Red Lake and reduce the Kenai River and Lake system's attention.

**Project No. 93031: Red Lake Mitigation for Red Salmon Fishery.**

Budget: $153,700

The project is intended to improve a hatchery, with a large percentage of the budget going to equipment.

**Project No. 93032: Pink and Cold Creek Pink Salmon Restoration.**

Budget: $36,000

This proposal is to evaluate pink salmon escapement, bypass bariers and evaluate fish passage through barrier bypasses. It appears to address short term needs and is thus an important part of the overall restoration effort.

**Project No. 93033: Harlequin Duck Restoration Monitoring Study in PWS, Kenai, and Afognak.**

Budget: $717,900

All ADF&G. The project is fairly technical, but is intended to characterize nesting habitat, reproductive failure, and whether or not reproductive failure exist elsewhere than western PWS, i.e.: the Kenai coast and Afognak Island. It therefore is land specific, important to subsistence users, and should involve ANCSA corporation consultation.

**Project No. 93034: Pigeon Guillemot Colony Survey.**

Budget: $165,800

The purpose of this study is to conduct a colony census and to figure out how badly damaged the populations are. The areas include, Naked Island and Afognak Island. The location of most of the study will be primarily focused in the Western PWS. This seems to be an important study, with the identification and mapping of the colonies within the area of the EVOS. We believe uplands use will occur. Therefore, Native landowner consent is required. Question: Is this a habitat acquisition study?

**Project No. 93035: Potential Impacts of Oiled Mussel Beds on Higher Organisms**

This is another Fish & Wildlife Service sponsored study. It, however, ties into the oil musseled beds studies referenced above.

The information is important in order to obtain a further understanding of the adverse effects of persistent oil contamination. Chenega is an area with a high degree of persistent oil contamination. Although this study focuses on oyster catchers and harlequin duck, the source of pollution to be examined is oiled mussel beds. We believe that the study is imperative. We would also suggest studies on the effects of persistent oiling on octopus. Octopus are also a primary food source of harbor seals. The less octopus, the less harbor seal. Perhaps this interplay on persistence also should be examined.

**Project No. 93036: Recovery Monitoring and Restoration of Intertidal Oiled Mussel Beds in PWS.**

Total Budget: $404,800

This project involves the sampling of mussels and sediments for petroleum hydro carbon following a protocol established by NOAA and the DRDA process. In addition, there will be efforts to identify new areas of continued contamination. Presently, the National Parks Services surveying and sampling mussels and sediments along the Kenai Peninsula. It is anticipated that the project may be extended to the Kodiak area. This project is supported and is important, especially to the human populations in areas with continued contamination.

**Project No. 93038: Shoreline Assessment, Restoration Monitoring.**

Total Project: $520,700

This project is for a term beginning January 1 and ending September 30, 1993. It is divided into two phases; phase one is a physical survey of selected shoreline and phase two is restoration of land and resource uses by light duty pickup during and after survey. In addition "larger scale treatment work, if necessary, would be identified on work orders and restoration crews from Chenega, Port Graham or other areas would be hired to preform the identified work."

The areas include Knight, LaTouche, Evans, Errlington, Green and Disk islands in Prince William Sound and Tanzina Bay, Windy Bay and Chugach Bay in the Gulf of Alaska.

Chenega Corporation successfully bid upon Exxon clean-up contracts in 1991 and 1992. Further, additional determination is planned for clean-up of oiled mussel beds and the 1993 spring survey of mussel beds (93036, see infra). Further, the Trustees Council allows for additional funds to expand the effort.

This project is very important and both to the health of the resources as well as the residents of contaminated areas. Any restoration-related activities on or adjacent to ANCSA lands should also involve the consent and consultation requirements. In addition, the project, upon completion, if maps are created, should identify individual ANCSA corporation ownerships.

**Project No. 93039: Herring Bay experimental and Monitoring Studies.**

Budget: $507,000

This study focuses on fucus and limpets. It is especially concerned with the Herring Bay area. It is proposed that there will be 3-4 10 day visits to the Herring Bay area during the summer low tide, with equipment. It's an ADF&G project and the contractual amount is $478,700. The study will look at other invertebrates, including barnacles. Question: Is data to be examined from any other areas, or will there be extrapolations? It's an important study. What is planned for follow-up?

**Project No. 93041: Comprehensive Restoration Monitoring Program Phase 2: Monitoring Plan Development.**

This is to design the monitoring component of the restoration plan. It's going to be looking at a number of different flora and fauna groups as well as archaeological resources that were injured. Basically, it's going to involve "monitoring". It is thought that resources and services that are not recovering quickly will be used as candidates for restoration actions and resources and services that are found to be recovering faster than anticipated may allow for an earlier completion of the restoration end point. The problem is, what are you studying, where are you going to study? Is the budget sufficient?

**Project No. 93042: Recovery Monitoring of PWS Killer Whales.**

Budget: $127,000

This is a study project, again. It is importance from an aesthetics stand-point, the importance of a feeling of well being by residents, and the need to restore such services. That is, killer whales are beautiful animals and native to PWS waters.

**Project No. 93043: Sea Otter Population Demographics and Habitat Use in Areas Affected by the EVOS.**

Budget: $291,900

This study looks at what happened to the sea otters, and whether or not areas ought to be purchased for sea otter habitat for possible protection. It's an interesting project.

**Project No. 93045: Surveys to Monitor Marine Bird and Sea Otter Populations.**

Budget: $262,400

This is a boat survey program. Purpose is to figure out whether marine bird and otter populations are recovering. Also to look at habitat protection. The project is a worthy study, and is supported.

**Project No. 93046: Habitat Use, Behavior and Monitoring of Harbor Seals in PWS**

Budget: $230,500

The project will involve aerial surveys and visits to Chenega Bay and Tatitlek once a year to discuss "survey results with residents." It is recognized that seal is important for subsistence purposes, but aerial visits do not appear to provide sufficient information. We know there aren't many harbor seals. Did they die or leave? Besides looking at food sources and source contamination, why not involve the affected communities more? <u>See also</u> comments to Project No. 90035 - octopus populations should also be examined, the effects of oil persistence on harbor seals directly <u>and</u> indirectly should be examined. In addition, Native community input is very important. The project, as structured has little to no involvement. We also have information to share, and concerns.

**Project No. 93047: Subtidal Monitoring Recovery of Sediments**

Total Budget: $1,700,000

An important project, which appears ready to identify oil persistence and toxicity. This project involves recovery of hydrocarbons and subtidal sediments over a two year period. Oiled sites include Chenega's Sleepy Bay require such heavily oiled sites and Port Graham's Windy Bay. We recommend additional upper tidal research.

**Project No. 93050: Update Restoration Feasibility Study No. 5.**

Budget: $10,200

Purpose is to add additional information to the existing DNR data base, which will be made available to the public. The information should be useful to any modifications to the restoration plan. However, private landowners should be identified.

**Project No. 93051: Habitat Protection Information for Anadromous Streams and Marbled Murrelets.**

Budget: $1,179,800

Purpose is to obtain information on habitat protection and acquisition. This is an important project for ANCSA corporations. It's unclear what is planned, however.

**Project No. 93052: Identification and Protection of Important Bald Eagle Habitats.**

Budget: $188,000

See comments to Project No. 93051. Mapping and GIS are also anticipated. Jurisdictional ownership should be included.

**Project No. 93053: Hydrocarbon Data Analysis, Interpretation, and Database Maintenance.**

Budget: $105,500

The purpose is to gather hydrocarbon data of areas affected by the oil spill to figure out whether or not oil is weathering. This is a pretty complicated project, but it could be very important from a recovery standpoint. What is the reporting period? How is data anticipated to impact the Restoration Plan. Why such a limited study?

**Project No. 93057: Damage Assessment GIS.**

Again, this would be useful for the purposes of land acquisition and habitat acquisition and protection. The more GIS is developed the more information the Trustees will have to work on injured resources restoration. However, ANCSA corporation ownership must also be described.

**Project No. 93059: Habitat Identification Workshop.**

Budget: $42,300

It appears that the basic point of this program is to figure out when habitat is necessary to be protected and acquired, and where the immanent threats are. It's data gathering, and the cost is $42,300. It will be strictly contractual. The parameters are not clear.

**Project No. 93060: Accelerated Data Acquisition.**

The purpose of this program is to put together in a quicker fashion a data base with numerous layers, each of the layers to be worked on by various agencies. The total cost is $43,900, all of which is contractual. The goal is to accelerate the habitat protection and acquisition office by collecting an organized resource data to evaluate habitat protection and acquisition proposal.

Many of the data base layers appear important for restoration planning and assessment. It's not a big ticket item, and would certainly assist with implementation of a restoration plan. When and what data will be made public? What are the plans are for analysis? How will the data be analyzed? How often will it be updated? And what are the criteria?

**Project No. 93061: New Data Acquisition.**

Budget: $535,000

This a 9 month project. The idea here is to evaluate habitat protection and acquisition proposals, to develop new data to evaluate such options, including long term protection and acquisition of habitat. See questions to 93061. This project is supported.

**Project No. 93062: Restoration GIS.**

Budget: $138,400

The purpose of this project is to provide statistical and spacial analysis and GIS mapping support for "approved restoration projects". Does this include all restoration projects? It should. It looks like an interesting program, and develops a series of themes for habitat protection.

**Project No. 93063: Survey and Evaluation of Instream Habitat and Stock Restoration Techniques for Anadromous Fish.**

Budget: $59,400

This project is going to develop proposals and designs for instream habitat and stock restoration projects. It's more study in order to figure what other project designs can be implemented with regard to restoration of anadromous streams. The idea is to retrieve equipment, analyze data, collect additional engineering design data and prepare new project proposals. It is unclear, however what the point is.

**Project No. 93064: Habitat Protection Fund**

The project term is to begin on October 1, 1992 and there's no date set to end. What are the plans with regard to habitat protection and acquisition? Is this a project which will require annual funding? Or is this a sinking fund?

**Project Title: Coordinated Recreation Restoration Planning and Assessment.**

This is the Alaska Park Service Proposal. It is strongly supported by Chenega Corporation, Tatitlek Corporation, Port Graham Corporation, English Bay Corporation and Chugach Alaska Corporation. The idea, to involve ANCSA corporations in public recreation and environmental restoration, is sound public policy.

**Project title: Chugach Resources Management Agency.**

This is now a joint proposal involving a facilitating restoration projects and direct contracting. The request for direct contracting is not a new proposal, but rather, is intended to

implement settlements and laws. We are encouraging the PAG to encourage the Trustees and the agencies. The proposal also involves a comprehensive methodology for facilitating work project equipment and other needs. It is suggested that the CRMA would constitute a basic method of reducing project costs, and at the same time, assure that work is carried out efficiently, by interfacing agency needs with regional support groups.

CWT:cb/pr/1-4.mem

Municipality of Anchorage

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(907) 343-4906

Tom Fink, Mayor

2747611 14.2.2

VOL. I TAB X

ENTERPRISE ACTIVITIES

January 5, 1993

Mr. E. Bradford Phillips, Chairman
Public Advisory group
Phillips Cruises & Tours
P.O. Box 100034
Anchorage, Alaska 99510-0034

Dear Mr. Phillips:

As utilities manager of Anchorage, I am writing to express my support for the Fort Richardson Hatchery Water Pipeline project that has been proposed for funding in the Exxon Valdez Oil Spill Restoration 1993 Draft Work Plan (Project Number 93026). As a result of the Exxon Valdez Oil Spill, overescapement of sockeye salmon occurred in the Kenai River in 1989. These spawners yielded more juveniles than the ecosystem could support and, as a result, few smolts were produced. Studies in 1992 estimated only about 300,000 outmigrating smolts, but 400,000 returning adults are required to meet the minimal escapement goal. Smolt production in previous years was also weak and there is not yet any sign of recovery. Consequently, adults returning in future years are not expected to meet escapement needs and closure of the Kenai River to commercial and sport fishing is anticipated in 1994, 1995 and perhaps for a number of years beyond.

The annual average estimated harvest by Kenai River sport fishermen is 107,000 sockeye salmon. The value of the sport fishery alone is $10,000,000 per year. This loss of angling opportunity will have serious and far reaching impacts for fishermen throughout southcentral Alaska. Other proposed projects (Number 39012 and 93015) attempt to reduce the losses to commercial fisheries, but only the Fort Richardson Hatchery pipeline could provide substantial alternative opportunities for Alaskan sport fishermen and help to maintain the quality of life that they now enjoy.

The Fort Richardson hatchery currently provides some catchable trout and salmon for the areas that have been most severely impacted by the oil spill. The proposed project will fund the construction of a water pipeline system to deliver water from the Municipality of Anchorage's water treatment plant to the hatchery. This will immediately double the hatchery's fish production, increase operational reliability and increase efficiency. This project will provide an additional 250,000 large rainbow trout and 50,000 catchable-sized king salmon for landlocked lakes as well as 800,000 king, 600,000 silver and 2,000,000 pink salmon smolts which are expected to provide over 140,000 angler days. These fish will be released beginning in 1994 in areas accessible to the fishermen who will lose recreational opportunities on the Kenai Peninsula and will redirect pressure away from other wild stocks. Wild

stocks will be further protected because Alaska has the strictest fish disease and genetics regulations and policies in the United States. Before any hatchery fish are released, stocking plans undergo thorough public, state and federal review to ensure protection of wild stocks. Though these fish will be used primarily to mitigate losses to sport fishermen, some will also contribute to commercial fisheries in the impacted area. This project will, therefore, serve several user groups.

The proposed project has an estimated capital cost of $3.6 million. All increased operating expenditures, however, will be funded by the Alaska Department of Fish and Game. (Note that no state General Funds are used to operate the hatchery; it is funded by 25% Fish and Game receipts and 75% Federal matching monies.) The hatchery water usage will have an insignificant impact on the Municipality of Anchorage's water supply.

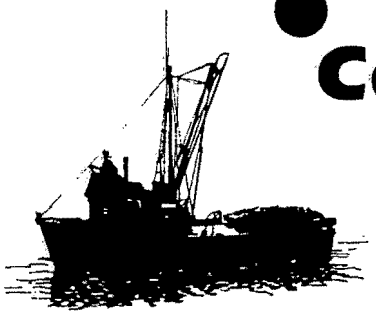
Each summer, thousands of people from all corners of the world converge on the Kenai Peninsula anticipating a unique outdoor Alaskan experience. Many of the fishermen target the Kenai River where a world class fishery has existed for both king and sockeye salmon. In addition, hundreds of thousands of angler days are spent on the Kenai River by resident Alaskans pursuing salmon. Many of these people have no opportunities to fish other than at roadside locations. This project will affect more people than any other proposed project and restore services that will otherwise be lost for an extended period of time.

Your support for, and subsequent Trustee Council approval of, this project will ameliorate the impact from the loss of one of the most important and valuable recreational fisheries in the state. It is my hope that the Public Advisory Group will seriously assess the merits of this project and consider the social and economic benefits that this project will provide to the Municipality of Anchorage, the Kenai Peninsula and the fishing/tourism industries of our state.

Sincerely,

Will Gay
Executive Manager
Enterprise Activities

cc: Mr. Mike Barton, Regional Forester, U.S. Forest Service
Mr. Charles Cole, Attorney General, State of Alaska
Mr. Dave Gibbons, Interim Administrative Director
Mr. Curt McVee, Special Assist. to the U.S. Dept. of Interior Secretary
Mr. Steve Pennoyer, Director, U.S. Department of Commerce
Mr. Carl Rosier, Commissioner, Alaska Dept. of Fish and Game
Mr. John Sandor, Commissioner, AK Dept. of Envir. Conservation



# Cook Inlet Seiners Association

P.O. Box 4311
Homer, Alaska 99603
235-2656

Vol. I Tab X

December 31, 1992

E. Bradford Phillips
Phillips Cruises & Tours
P.O. Box 100034
Anchorage, Alaska 99510-0034

Dear Mr. Phillips:

Cook Inlet Seiners Association (CISA) is writing to convey our ideas and concerns about restoration of the outer coast of the Kenai Peninsula as a result of the 1989 Exxon Valdez oil spill. CISA is a Homer based non-profit organization that represents salmon seiners in the Lower Cook Inlet. Eighty-five percent of the permit holders for this area are members of CISA while over ninety percent are residents of the Kenai Peninsula.

As you are aware, the Lower Cook Inlet was one of the most heavily oil spill damaged area in Alaska, second only to Prince William Sound. It cannot be disputed that the Lower Cook Inlet was seriously damaged by the oil spill. This is graphically displayed by the map on the cover of the Exxon Valdez Oil Spill Restoration 1993 Draft Work Plan.

Since the calamitous impact of the oil spill in 1989, the Lower Cook Inlet has suffered run failures across almost all species of salmon and throughout most of the geographic area. Prior to this time, the Lower Cook Inlet supported healthy salmon fisheries that economically benefited the entire region as well as the state.

In early December of this year, at CISA's Annual Membership Meeting, Dr. Joe Sullivan was a guest speaker. During the meeting, CISA members expressed concern because there were no specific project proposals in the 1993 Draft Work Plan for the Lower Cook Inlet. We were informed that in order to have our concerns and ideas most effectively presented and heard, CISA needed to become more intimately involved in the entire Trustee/

Restoration process. For example, we were encouraged to have a CISA member attend the Trustee meetings in Anchorage which we did. Also, we were told that CISA needed to present our projects directly to the Trustees rather than have the local Department of Fish and Game do so. Prior to this time, we thought that the best route to use was to go through Fish and Game. Obviously, by way of this letter, CISA is directly advocating our proposals and ideas. In addition, we trust this letter clears up any misconceptions about why CISA has not directly addressed the Trustees about restoration of the outer Kenai Peninsula until now.

CISA believes that Exxon Valdez Oil Spill Restoration studies and findings that have been conducted in Prince William Sound are also applicable to the outer coast of the Kenai Peninsula. Salmon in both areas are primarily inter-tidal spawners. This reasoning should also include studies proposed for the Sound in the 1993 Draft Work Plan and those that will follow in coming years. CISA would use the information from the Restoration studies and findings in the Sound as scientific basis in developing and proposing oil spill restoration projects in the outer coast of the Kenai Peninsula. If CISA is correct in this assumption, we need and request this to be specifically and clearly stated and acknowledged by the Trustees at the appropriate level of the process. If CISA is not accurate in this assumption, then we also need to know this because it will vitally impact our proposals to the Trustees. If CISA cannot use Prince William Sound studies and findings as a basis for project proposals for our area, we are requesting that identical studies be conducted in the outer coast of the Kenai Peninsula. As was stated above, this area was the second most heavily oil spill damaged area in the state; there is a dire need of restoration mitigation activities. If additional studies need to be conducted beyond those in the Sound, it is imperative that they begin in 1993. This region has long been ignored; it requires and deserves equal focus, attention, and restoration.

Thank for the opportunity to express our concerns and ideas on this most important issue.

Sincerely,

AlRay Carroll, President
Cook Inlet Seiners Association

14.2.2


# Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 "G" Street, Anchorage, AK 99501
Phone: (907) 278-8012 Fax: (907) 276-7178


**MEMORANDUM**

To: Trustee Council

From: Dave Gibbons
Interim Administrative Director, and
Restoration Team

Date: September 11, 1992

Subj: Initial Screening of 1993 Projects

1993 PROJECT IDEA SCREENING CRITERIA

The following criteria were used as threshold criteria to screen ideas submitted by the general public and State and Federal agencies. The first set of three critical factors were used to screen all ideas. If an idea failed to comply with any one of these factors, it was not forwarded for further project description development. If a project met these criteria, it was subsequently next subjected to either the set of damage assessment or restoration idea criteria, dependent upon its category of proposed work. These criteria and a brief description follow.

CRITICAL FACTORS

1. **Linkage To Resources And/Or Services Injured By The Exxon Valdez Oil Spill**

The settlement documents specify that the use of the restoration trust funds must be linked to injuries resulting from the Exxon Valdez oil spill. The following is the definition of injury:

> "A natural resource has experienced "consequential injury" if it has sustained a loss (a) due to exposure to oil spilled by the T/V Exxon Valdez, or (b) which otherwise can be attributed to the oil spill and clean up. "Loss" includes:
>
> - significant direct mortality;
> - significant declines in populations or productivity;
> - significant sublethal and chronic effects to adults or any other life history stages; or
> - degradation of habitat, due to alteration or contamination of flora, fauna and physical components of the habitat." (April 1992 Restoration Framework)

A link must be evident from the 1993 idea submitted and the above criteria for injury to resources or services.

2. **Technically Feasible**

Are the technology and management skills available to successfully implement the restoration idea in the environment of the oil spill area?

3. **Consistent With Applicable Federal And State Laws And Policies**

Is the restoration idea consistent with the directives and policies with which the Trustee agencies must comply? Some factors discussed included:

- third party suit?
- legal under existing laws and regulations including the settlement agreement?

Damage Assessment Ideas

1. **Project Previously Funded For Close-Out?**

Was the idea funded in the 1992 Work Plan for close-out and final report preparation? If so, it should not receive additional funding.

2. **1993 Close-Out Project**

Should this idea be funded in the 1993 Work Plan for close-out? Only considered with respect to those projects funded for damage assessment continuation in the 1992 Work Plan can be considered.

3. **New Project Where Injury Is Apparent**

Is there a substantial amount of new information to demonstrate injury to resources and services? Injury to resources and services as defined in critical factor 1.

4. **Damage Assessment Continuation**

Are the injuries to resources and services fully understood or is there a opportunity to understand new injuries? The life span of the injured resource should be considered since many species are long-lived and the injury may occur in different life stages, or have temporal stock separation such as odd/even pink salmon year classes.

General Restoration Ideas

All restoration ideas were evaluated using the four criteria described below. If an idea had a clear restoration end point and

was either time critical or a possible lost opportunity and was not a long-term commitment, it was forwarded for further development and consideration.

1. **Is There A Restoration End-Point?**

What is the restoration end-point? A restoration end-point includes actions to restore, replace and enhance natural resources, monitor natural recovery or involves acquisition of equivalent resources or services. If there is no identifiable restoration end-point, then the project was not recommended for further development.

2. **Time Critical To The Recovery Of The Injured Resource/Service; Must Be Conducted In 1993**

Would a delay in the project result in further injury to a resource or service or would we forego a restoration opportunity? This information is critical to support near-term future conditions.

3. **Opportunity Lost If Not Funded In 1993 (Related To Method Of Recovery)**

Other considerations that were taken into account in developing the restoration program included opportunities to combine work or logistics with other projects in order to reduce costs. The intent of this criterion is to identify those project ideas that need to be implemented now or the opportunity will be lost. Is there some factor that will make it impossible to conduct the project in the future?

4. **Involves Long-Term Commitment**

Until a restoration plan is completed, annual restoration activities requiring a long-term commitment should be limited to those projects that do not have irretrievable commitment of funds to future years.

ID Number_____

Date_____

**INITIAL RESTORATION TEAM REVIEW OF 1993 PROJECT IDEAS**

Critical Factors

| Yes | No | Unknown | |
|---|---|---|---|
| ___ | ___ | ___ | 1. Linkage to resources and/or services injured by the Exxon Valdez oil spill. |
| ___ | ___ | ___ | 2. Technically feasible. |
| ___ | ___ | ___ | 3. Consistent with applicable Federal and State laws and policies. |

| Yes | No | Damage Assessment Ideas |
|---|---|---|
| ___ | ___ | 1. Project previously funded for close-out. |
| ___ | ___ | 2. 1993 close-out project. |
| ___ | ___ | 3. New project where injury is apparent. |
| ___ | ___ | 4. Damage assessment continuation. |

| Yes | No | General Restoration Ideas |
|---|---|---|
| ___ | ___ | 1. Is there a restoration end-point? |
| ___ | ___ | 2. Time critical to the recovery of the injured resource/service; must be conducted in 1993. |
| ___ | ___ | 3. Opportunity lost if not funded in 1993. (Related to method of recovery.) |
| ___ | ___ | 4. Involves long-term commitment. |

Recommendation

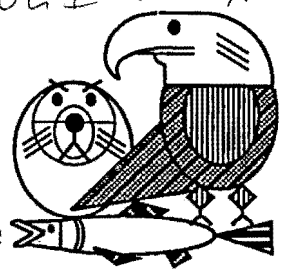
___ Approved for preparation of brief project description.
___ Rejected.
___ Combined with ideas: _____

Comments:

Vol I TAB X 142.2


# Exxon Valdez Oil Spill Trustee Council

645 G Street, Anchorage, Alaska 99501
Phone: (907) 278-8012 Fax: (907) 276-7178

To: Trustee Council

From: Dave R. Gibbons dlg
Interim Administrative Director

Date: December 16, 1992

Subj: Trustee Council Meeting Notes



The following are my notes from our meeting last Friday:

**TRUSTEE COUNCIL MEETING NOTES**

**12/11/92**

By Dave R. Gibbons
Interim Administrative Director

Members Present:

| Trustee Council | Restoration Team |
|---|---|
| John Sandor♦ (ADEC) | Dave Gibbons (IAD) |
| Mike Barton (USFS) | Mark Brodersen (ADEC) |
| Charlie Cole (ADOL) | Marty Rutherford (ADNR) |
| Carl Rosier (ADF&G) | Jerome Montague (ADF&G) |
| Steve Pennoyer (NMFS) | Byron Morris (NOAA) |
| Curt McVee (USDOI) | Pamela Bergmann (USDOI) |
| | Ken Rice (USFS) |

♦ Chair

**MOTION:** Trustee Council (TC) moved to approve the election of officers made by the Public Advisory Group (PAG) (Resolution #4).

Administrative Director (AD) will convey the following TC actions to the PAG concerning their four Resolutions:

1. Operating Procedures resolution (Resolution #1) tabled until next meeting.

2. Tabled resolution #2 until next TC to work with Native land owners and other residents in oil spill affected area.

3. Resolution #3 - Approved to Delay Approval 1993 Work Plan until after their January 6-7, 1993 meeting.
4. Resolution #4 - Approved officers.

On all Resolutions tabled; staff will do further background work to assist TC (with much lead time). Restoration Team members check with their respective agencies on the adoption of resolution #2.

1993 Work Plan

Time Critical - Projects TC approved NEPA Compliance funding only:

1. 93032 - $5,000 approved (Pink & Cold Creek Pink Salmon ladders).
2. 93019 - Tabled until January 19, 1993 meeting.
3. 93030 - No motion to approve.
4. 93031 - No second on motion to approve.
5. 93046 - $3,000 approved Harbor Seals.
6. 93026 - Tabled until January 19, 1993 meeting.

Time Critical project with NEPA Compliance that TC approved:

1. 93045- Boat Survey $262.4 approved.

Timeline

- Comments on proposed timeline due from TC by mid-week. No comments will be accepted to lengthen this timeline.

Strengthening Process

- Trustee Council will solicit comments for all fronts to improve organization.
- State approved position description available now.
- Advertise Administrative Director position.

**MOTION:** Mr. Barton and Mr. Rosier will coordinate the announcement for application of Executive Director using applicable agency guidelines.

**MOTION:** I move that the Trustee Council agrees that the acquisition of approximately 7,500 imminently threatened land in Kachemak Bay State Park meets our restoration criteria. The TC approves the expenditure of up to $75,000 for the completion of NEPA documentation for spending $7.5 million to acquire approximately 7,500 imminently threatened lands in Kachemak Bay State Park. The TC approves the designation of the U.S. Forest Service as the lead agency for ensuring that appropriate NEPA documentation is completed. The TC requests that appropriate NEPA compliance be completed as soon as practicable so the TC may then take final action.

Next Meeting

Continuation meeting is scheduled for January 19 @ 8:00 a.m.

**MOTION:** Under the circumstance that the Trustee Council member or their first alternate is not available, the TC member can appoint a second alternate.

**MOTION:** Administrative Director draft milestone meeting schedule for next TC meeting for calendar years 1993 and 1994.

Each member of the TC requests to receive a copy of the TC meeting transcript.

VOL I TAB X


# Exxon Valdez Oil Spill Trustee Council

Restoration Office
645 "G" Street, Anchorage, AK 99501
Phone: (907) 278-8012 Fax: (907) 276-7178


**MEMORANDUM**

To: Trustee Council

From: Dave Gibbons dlg
Interim Administrative Director, and
Restoration Team

Date: September 11, 1992

Subj: Initial Screening of 1993 Projects

1993 PROJECT IDEA SCREENING CRITERIA

The following criteria were used as threshold criteria to screen ideas submitted by the general public and State and Federal agencies. The first set of three critical factors were used to screen all ideas. If an idea failed to comply with any one of these factors, it was not forwarded for further project description development. If a project met these criteria, it was subsequently next subjected to either the set of damage assessment or restoration idea criteria, dependent upon its category of proposed work. These criteria and a brief description follow.

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ID Number_____

Date_____

**INITIAL RESTORATION TEAM REVIEW OF 1993 PROJECT IDEAS**

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Recommendation

___ Approved for preparation of brief project description.
___ Rejected.
___ Combined with ideas: _____

Comments:

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4100

January 7, 1993

Mr. Mike Barton
Regional Forester
U.S. Forest Service

Mr. Steven Pennoyer
Director
National Marine Fisheries Service

Mr. Curtis McVee
Special Assistant to the Secretary
U.S. Department of the Interior

Mr. Charles Cole
Attorney General
Department of Law

John A. Sandor
Commissioner
Department of Environmental Conservation

I was recently contacted by members of the Public Advisory Group and local commercial fisheries interest groups about the lack of funding for projects dealing with herring. as you know, those projects were not included in the 1993 Work Plan, because at that time, there was less evidence of population level injury to herring and the Restoration Team wanted to wait until the results of the 1992 field season were available. Since that time, information from the 1992 field season has come to my attention that indicates a population level injury has probably occurred to the herring of Prince William Sound (PWS). Pertinent findings include the following.

1. In 1992, the 1989 year class returned as age-3 first time adult spawners at the lowest level age-3s measured since 1967. This year class represents returning offspring of the largest spawning population in PWS since the early 70s.

2. In 1992, adults from the dominant 1988 year class demonstrated significantly different reproductive capabilities (hatching success from unoiled area eggs was 56 percent versus 20 percent in the oiled areas).

stocks will be further protected because Alaska has the strictest fish disease and genetics regulations and policies in the United States. Before any hatchery fish are released, stocking plans undergo thorough public, state and federal review to ensure protection of wild stocks. Though these fish will be used primarily to mitigate losses to sport fishermen, some will also contribute to commercial fisheries in the impacted area. This project will, therefore, serve several user groups.

The proposed project has an estimated capital cost of $3.6 million. All increased operating expenditures, however, will be funded by the Alaska Department of Fish and Game. (Note that no state General Funds are used to operate the hatchery; it is funded by 25% Fish and Game receipts and 75% Federal matching monies.) The hatchery water usage will have an insignificant impact on the Municipality of Anchorage's water supply.

Each summer, thousands of people from all corners of the world converge on the Kenai Peninsula anticipating a unique outdoor Alaskan experience. Many of the fishermen target the Kenai River where a world class fishery has existed for both king and sockeye salmon. In addition, hundreds of thousands of angler days are spent on the Kenai River by resident Alaskans pursuing salmon. Many of these people have no opportunities to fish other than at roadside locations. This project will affect more people than any other proposed project and restore services that will otherwise be lost for an extended period of time.

Your support for, and subsequent Trustee Council approval of, this project will ameliorate the impact from the loss of one of the most important and valuable recreational fisheries in the state. It is my hope that the Public Advisory Group will seriously assess the merits of this project and consider the social and economic benefits that this project will provide to the Municipality of Anchorage, the Kenai Peninsula and the fishing/tourism industries of our state.

Sincerely,

Will Gay
Executive Manager
Enterprise Activities

cc: Mr. Mike Barton, Regional Forester, U.S. Forest Service
Mr. Charles Cole, Attorney General, State of Alaska
Mr. Dave Gibbons, Interim Administrative Director
Mr. Curt McVee, Special Assist. to the U.S. Dept. of Interior Secretary
Mr. Steve Pennoyer, Director, U.S. Department of Commerce
Mr. Carl Rosier, Commissioner, Alaska Dept. of Fish and Game
Mr. John Sandor, Commissioner, AK Dept. of Envir. Conservation

Municipality of Anchorage

ENTERPRISE ACTIVITIES

279 7611

P.O. BOX 196650
ANCHORAGE, ALASKA 99519-6650
(907) 343-4906

Tom Fink,
Mayor

VOL. I TAB X

January 5, 1993

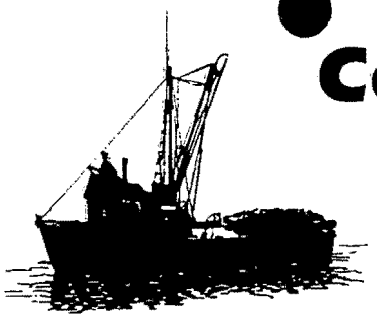
Mr. E. Bradford Phillips, Chairman
Public Advisory group
Phillips Cruises & Tours
P.O. Box 100034
Anchorage, Alaska 99510-0034

Dear Mr. Phillips:

As utilities manager of Anchorage, I am writing to express my support for the Fort Richardson Hatchery Water Pipeline project that has been proposed for funding in the Exxon Valdez Oil Spill Restoration 1993 Draft Work Plan (Project Number 93026). As a result of the Exxon Valdez Oil Spill, overescapement of sockeye salmon occurred in the Kenai River in 1989. These spawners yielded more juveniles than the ecosystem could support and, as a result, few smolts were produced. Studies in 1992 estimated only about 300,000 outmigrating smolts, but 400,000 returning adults are required to meet the minimal escapement goal. Smolt production in previous years was also weak and there is not yet any sign of recovery. Consequently, adults returning in future years are not expected to meet escapement needs and closure of the Kenai River to commercial and sport fishing is anticipated in 1994, 1995 and perhaps for a number of years beyond.

The annual average estimated harvest by Kenai River sport fishermen is 107,000 sockeye salmon. The value of the sport fishery alone is $10,000,000 per year. This loss of angling opportunity will have serious and far reaching impacts for fishermen throughout southcentral Alaska. Other proposed projects (Number 39012 and 93015) attempt to reduce the losses to commercial fisheries, but only the Fort Richardson Hatchery pipeline could provide substantial alternative opportunities for Alaskan sport fishermen and help to maintain the quality of life that they now enjoy.

The Fort Richardson hatchery currently provides some catchable trout and salmon for the areas that have been most severely impacted by the oil spill. The proposed project will fund the construction of a water pipeline system to deliver water from the Municipality of Anchorage's water treatment plant to the hatchery. This will immediately double the hatchery's fish production, increase operational reliability and increase efficiency. This project will provide an additional 250,000 large rainbow trout and 50,000 catchable-sized king salmon for landlocked lakes as well as 800,000 king, 600,000 silver and 2,000,000 pink salmon smolts which are expected to provide over 140,000 angler days. These fish will be released beginning in 1994 in areas accessible to the fishermen who will lose recreational opportunities on the Kenai Peninsula and will redirect pressure away from other wild stocks. Wild



# Cook Inlet Seiners Association

VOL. I TAB X

P.O. Box 4311
Homer, Alaska 99603
235-2656

December 31, 1992

E. Bradford Phillips
Phillips Cruises & Tours
P.O. Box 100034
Anchorage, Alaska 99510-0034

Dear Mr. Phillips:

Cook Inlet Seiners Association (CISA) is writing to convey our ideas and concerns about restoration of the outer coast of the Kenai Peninsula as a result of the 1989 Exxon Valdez oil spill. CISA is a Homer based non-profit organization that represents salmon seiners in the Lower Cook Inlet. Eighty-five percent of the permit holders for this area are members of CISA while over ninety percent are residents of the Kenai Peninsula.

As you are aware, the Lower Cook Inlet was one of the most heavily oil spill damaged area in Alaska, second only to Prince William Sound. It cannot be disputed that the Lower Cook Inlet was seriously damaged by the oil spill. This is graphically displayed by the map on the cover of the Exxon Valdez Oil Spill Restoration 1993 Draft Work Plan.

Since the calamitous impact of the oil spill in 1989, the Lower Cook Inlet has suffered run failures across almost all species of salmon and throughout most of the geographic area. Prior to this time, the Lower Cook Inlet supported healthy salmon fisheries that economically benefited the entire region as well as the state.

In early December of this year, at CISA's Annual Membership Meeting, Dr. Joe Sullivan was a guest speaker. During the meeting, CISA members expressed concern because there were no specific project proposals in the 1993 Draft Work Plan for the Lower Cook Inlet. We were informed that in order to have our concerns and ideas most effectively presented and heard, CISA needed to become more intimately involved in the entire Trustee/

Restoration process. For example, we were encouraged to have a CISA member attend the Trustee meetings in Anchorage which we did. Also, we were told that CISA needed to present our projects directly to the Trustees rather than have the local Department of Fish and Game do so. Prior to this time, we thought that the best route to use was to go through Fish and Game. Obviously, by way of this letter, CISA is directly advocating our proposals and ideas. In addition, we trust this letter clears up any misconceptions about why CISA has not directly addressed the Trustees about restoration of the outer Kenai Peninsula until now.

CISA believes that Exxon Valdez Oil Spill Restoration studies and findings that have been conducted in Prince William Sound are also applicable to the outer coast of the Kenai Peninsula. Salmon in both areas are primarily inter-tidal spawners. This reasoning should also include studies proposed for the Sound in the 1993 Draft Work Plan and those that will follow in coming years. CISA would use the information from the Restoration studies and findings in the Sound as scientific basis in developing and proposing oil spill restoration projects in the outer coast of the Kenai Peninsula. If CISA is correct in this assumption, we need and request this to be specifically and clearly stated and acknowledged by the Trustees at the appropriate level of the process. If CISA is not accurate in this assumption, then we also need to know this because it will vitally impact our proposals to the Trustees. If CISA cannot use Prince William Sound studies and findings as a basis for project proposals for our area, we are requesting that identical studies be conducted in the outer coast of the Kenai Peninsula. As was stated above, this area was the second most heavily oil spill damaged area in the state; there is a dire need of restoration mitigation activities. If additional studies need to be conducted beyond those in the Sound, it is imperative that they begin in 1993. This region has long been ignored; it requires and deserves equal focus, attention, and restoration.

Thank for the opportunity to express our concerns and ideas on this most important issue.

Sincerely,

AlRay Carroll

AlRay Carroll, President
Cook Inlet Seiners Association

December 11, 1992

# A *REVISED* SCHEDULE for the RESTORATION PLAN and ENVIRONMENTAL IMPACT STATEMENT

| | |
|---|---|
| January 1993 | Restoration Team, Trustee Council review alternatives. |
| **Late February 1993** | **Trustee Council revises and approves alternatives.** |
| March 24 | Alternatives information package. |
| **May 16** | **Trustee Council approves Draft Restoration Plan and Draft Environmental Impact Statement.** |
| June 7 | Publish Draft Environmental Impact Statement and Restoration Plan |
| June 7 - Aug. 7 | Public comments and public review of Draft Restoration Plan and Draft Environmental Impact Statement (60 days). |
| Aug. 7 - Sept. 1 | Analyze public comments. |
| Sept. 1 - Nov. 1 | Revise Environmental Impact Statement and Restoration Plan including response to comments. |
| **Nov. 10** | **Trustee Council approval of Final Environmental Impact Statement and Restoration Plan.** |
| Nov. 25 | Publish and distribute Final Environmental Impact Statement and Final Restoration Plan. |
| Nov. 25 - Dec. 25 | 30-day notification period for the Environmental Impact Statement. |
| Dec. 27 | Adopt Final Plan and Record of Decision. |

In PWS, there are five commercial herring fisheries worth an average annual combined exvessel value of $8.3 million. This fishery is of great economic importance to commercial fishermen in Cordova, Valdez, and the smaller communities of PWS. Without better biological information on age class disappearance and reproductive impairment, the department will likely have to implement more conservative management strategies in 1994 with an associated loss to the herring fishery.

Having reviewed the available data we recommend the following as a minimum to increase the management precision necessitated by the oil spill injuries outlined above.

1. Continue to monitor the reproductive success of the 1988 year class, define differences due to individual variability, location, and timing of spawn.

2. Continue to evaluate the reproductive success of the 1989 year class in 1993.

Because of this new information and the concern from special interest groups and the general public, I submit the enclosed project description for our consideration for inclusion in the 1993 Work Plan.

Sincerely,

C Meacham for

Carl L. Rosier
Commissioner

Enclosure

cc: Restoration Team
Dr. Robert Spies

Vol. I Tab IX

# Meeting Summary

**A. MEETING:** Exxon Valdez Oil Spill Public Advisory Group
Kodiak Work Group

**B. DATE/TIME:** January 5, 1993

**C. LOCATION:** Kodiak, Alaska (teleconference with Anchorage)

**D. MEMBERS IN ATTENDANCE:**

| Name | Principal Interest |
|---|---|
| John French | Science/Academic |
| Pam Brodie | Environmental |
| Richard Knecht | Subsistence |
| Rupert Andrews | Sport Hunting and Fishing |
| Doug Mutter | Designated Federal Officer |

**E. OTHER PARTICIPANTS:**

| Name | Organization |
|---|---|
| Kristin Stahl-Johnson | Kodiak |
| Greg Petrich | Kodiak Audubon |
| Jerome Selby | Kodiak Island Borough |
| Bob ~~Owen~~ otto | National Marine Fisheries Service |
| Rita Stevens | Kodiak Area Native Assoc. |
| Heidi Zimmock | KMST Radio |
| Jim ~~Lawson~~ Carmichael | 2 X Afognak Joint Venture |

**F. SUMMARY:**

The following questions, issues and suggestions were raised regarding the proposed 1993 restoration plans:

--general support for the 5 Kodiak Island Borough resolutions previously sent out
--archeology restoration projects should use local organizations
--recommend $250,000 for Kodiak Area Native Assoc. as part of project 93006 for archeology site restoration
--93009, it is not appropriate for USFS to take the lead
--how are archeology sites related to EVOS?
--significance of archeology sites and the direct and indirect impacts due to EVOS were explained
--need local infrastructure for storing artifacts and related data
--using volunteers for site stewardship may cause more problems
--add project for Fisheries Center in Kodiak for research analyses capabilities

--no agreement on the Ft. Richardson pipeline project
--support imminent threat protection on Afognak Island
--what is status of acquisition?
--need for coordinating long-term monitoring efforts
--perhaps bring monitoring needs up at symposium in February

**G. ACTION ITEMS:** None

**H. NEXT MEETING:** None

**I. ATTACHMENTS:** None

MEETING SUMMARY

EVOS-PAG Kodiak Working Group
Meeting #1

The Kodiak Working Group meet from 1:30-3:30 in the Conference Room at the UAF-Fishery Industrial Technology Center with an audio connection to the Oil Spill Center in Anchorage.

The group recommended the following changes in the FY93 Work Plan:

1. Addition of $250,000 to project 93006 as a subcontract to Kodiak Area Native Association for inventory and site specific archaeological restoration of sites on in Kodiak, not covered in the current project.

2. Not funding project 93026 - Fort Richardson Hatchery Water Pipeline.

3. Addition of $800,000 for the design and engineering for the archeological museum and cultural center for Kodiak Area Native Association. See Kodiak Island Borough Resolution 92-52.

4. Addition of $1,000,000 for conceptual planning, architectural design and engineering for the expansion of the Fishery Industrial Technology Center. See Kodiak Island Borough Resolution 92-51.

5. That a significant portion of the funds be protect key habitat areas. Priorities should be set on the importance of the area not just imminent threat.

6. That very serious consideration be given to setting aside a portion of the settlement as an "endowment" to fund research which requires a longer term than the settlement.

Concern was expressed that projects should be kept local, or at least Alaskan, rather than the extensive use of subcontracts outside the State. This concern was applied to projects 93007 and 93008 among others.

Concern was also expressed that some projects are being kept within the Trustee agencies which could better handled by other public and private entities. A specific example was having educational organizations responsible for project 93009 rather than USFS.

It was noted that the RCAC's and other groups are also undertaking monitoring studies. So far these studies are not well coordinated with EVOS studies. There is often little coordination apparent between EVOS studies. The Kodiak Working Group feels it is important to find ways to improve the coordination of methodologies, research and monitoring objectives to maximize the benefits of the dollars spent on scientific studies, including restoration and enhancement projects.

*Submitted by John S. French, Leader, Kodiak Working Group*

# EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION

Project Number:

Project Source: Kodiak Island Borough & University of Alaska Fairbanks

Project Title: **Near Island Fisheries Research Center**
**(expansion of Fishery Industrial Technology Center)**

Project Category: Technical Support

Lead Agency: National Marine Fisheries Service

Cooperating Agencies: University of Alaska Fairbanks, School of Fisheries and Ocean Sciences
Alaska Department of Fish and Game
National Parks Service
U.S. Fish and Wildlife Service
National Weather Service

Project Term: March 1, 1993 to September 30, 1993

## INTRODUCTION

During the *Exxon Valdez* oil spill many fisheries were closed due to the presence of oil in the water and on the beaches. Major lethal effects on fish were documented for pink and sockeye salmon and herring, chronic and sub-lethal effects were difficult to measure. The planning and design funds for the next phase of the multi-agency fishery technology and research would enable the user agencies to (1) initiate research projects on the efficacy of restoration practices, (2) the enhancement of fishery resources in the effected areas, such as king crab, sea urchins, and molluscan shellfish, (3) the enhanced utilization of equivalent fishery resources to those in spill area, such as arrowtooth flounder, and (4) to initiate long term research programs to better understand and ameliorate the effects of oil spills on the fisheries of the western Gulf of Alaska. Seven federal and two State agencies, the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Kodiak Island Borough, and the City of Kodiak have all participated in the planning for the multi-agency facility.

The seawater system and associated facilities will be designed to enhance research on fish behavior, physiology and perception, marine biology, and aquatic toxicology of normal and stressed fisheries. Stressed conditions could include other human activities, including fish harvesting, in addition to spilled crude oil. In addition the completed multi-agency fishery technology and research facility will provide a variety of analytical testing and monitoring capabilities within Kodiak Island Borough. These capabilities were severely lacking during the oil spill when all samples had to be sent off-island for analysis.

The first phase of the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (SFOS), Fishery Industrial Technology Center (FITC) has been completed. It is the

first building of the proposed multi-agency fishery technology and research facilities. The FITC Owen Building is being used by the University of Alaska and National Marine Fisheries Service-Utilization Research Division personnel. Co-location of these two groups has resulted in efficient use of facilities and encouraged pooling of expertise to pursue efficient use fishery resources to produce diverse, high quality products, and eliminate waste.

Currently the other agencies interested in co-locating are isolated from each other, the public and the fishing community, and occupy out dated and inadequate facilities. The importance of the fisheries in the western Gulf of Alaska to the State and nation are expanding, and the oil spill emphasized the need for more specific information on these fisheries. Many of the fisheries activities in Kodiak are expanding to meet these needs. The multi-agency fishery technology and research facilities will be necessary to meet the agencies needs and the public's need for better access to information and training in a timely manner.

The City of Kodiak has donated the land for fisheries research facilities on Near island. The City of Kodiak has committed to using its revenue bonding power to fund construction of portions of these facilities to the extent that lease monies are committed by user groups and agencies, if other funding sources are not available. As one of the users of the expanded facilities the National Marine Fisheries Service has been authorized by congress to lease space on Near Island at an annual lease not to exceed $1,000,000 per year and has appropriated $100,000 for planning the federal needs in the facility.

WHAT

The goal of this project is to follow the recommendation of the Kodiak Island Borough an the FITC Policy Council that the University of Alaska Fairbanks, in conjunction with NOAA and ADFG, develop expanded multi-agency fishery technology and research facilities on Near Island, Kodiak, Alaska. The next phase of this facility which is most critical for restoration, enhancement, enhanced utilization of fishery resources, and better understanding and ameliorating the effects of oil spills in the western Gulf of Alaska will include a gravity fed seawater system, wet and dry marine laboratories, public education facilities and associated systems.

The combined use of state and federal lease monies with funds from the civil EVOS settlement to finish construction of a multi-agency fisheries research center on Near Island in Kodiak will help provide the State of Alaska with state-of-the-art capabilities to undertake critical studies on the restoration, enhancement, and enhanced utilization of fishery resources in the western Gulf of Alaska. These facilities will also provide Alaska's fishing industry with research and technical assistance during the rehabilitation of Alaska's vertebrate and invertebrate fisheries resources. The new facilities will be located in conjunction with existing FITC facilities. These facilities will accommodate NOAA/NMFS and other fisheries research and management groups in addition to the FITC. Land for development of these facilities is being held in trust by the City of Kodiak. Development of these facilities would provide the University of Alaska, State, and Federal agencies resources for evaluating toxicological, physiological, and behavioral effects related to the presence of hydrocarbons.

A principal component of the oil spill related portion of these facilities will be a

controlled environment behavior and sensory physiology wet laboratory. This will be the core unit which will be used to investigate physiological and behavioral effects of long term low level exposure to hydrocarbons. Central to this laboratory is a large swimming pool tank which will provide capabilities to assess how adult organisms perceive and react to stimuli produced by their environment in conjunction with the presence of hydrocarbons. The main support facility for this system is a running seawater system with associated mechanical support and filter beds. Additional facilities include food safety, physiology and toxicology laboratories.

These enhancements to the state/university/federal fisheries research complex on Near Island would enhance research and development activities related to the restoration, enhancement, and economic value of fisheries resources of the oil spill effected areas, especially through better understanding of the behavioral, physiological, and toxicological responses of targeted species. Research in this facility would also lead to the development of better tools to monitor aquatic toxic responses and other physiological changes resulting from oil spills and other anthropogenic activity.

The expanded fisheries research center will house the Biotechnology, Fisheries Science, Fish Harvesting Technology, Food Safety, and Toxicology programs of FITC/SFOS in addition to significantly expanding the public education activities of all parts of the center. Alaska Department of Fish and Game research efforts will probably focus on shellfish enhancement and rehabilitation. In addition to management data acquisition National Marine Fisheries Service activities are expected to include marine mammal studies and the observer program.

WHY

Commercial fishing was directly impacted by the salmon closures in 1989. The large number of other fisheries were adversely impacted by the unavailability of fishing vessels under contract to Exxon and Veco. Damage to pink and sockeye salmon stocks has been demonstrated. Herring stocks also appear to have been damaged. In addition studies since the spill have shown that 0-2 year old halibut are primarily found in shallow bays, some of which were heavily oiled (Norcross et al). Since we do not have an accurate juvenile index, we will not have accurate assessment of damage to the halibut resource for eight years until they are recruited into the commercial fishery. Pink salmon escapements in the oil spill area were unexpectedly high in 1991 and very low in 1992. Southeast and western Alaska returns were much more normal over the same period. There may be a second generation teratogenic effect as there is with some hydrocarbons such as diethylstilbesterol or polybrominated biphenyls. Few, if any, of these effects are legally proven but there is certainly enough information to justify further investigation.

Some of the highest tissue hydrocarbon and florescent metabolite levels that were seen during the subsistence foods study came from the Kodiak archipelago. This evidence is also strongly suggestive of much broader exposure of finfish to oil-derived hydrocarbons than is legally recognized. The expanded fisheries research center would have the capabilities to test food samples within the community.

Several food chain related stresses have been identified during the NRDA process. If

either these or the previous items result in diminished commercial stocks the efficiency and selectivity of fishing gear will become far more critical. If some stocks drop to critical levels or if some stocks have to be closed to fishing in order to protect, restore or enhance other damaged resources than the development of alternative fishery resources will become critical.

The expanded fisheries research center will also provide the technical capabilities to address both food safety and aquatic toxicology issues within the community of Kodiak, at the cross roads of spilled oil coming out of either Cook Inlet or Prince William Sound.

HOW

The FY93 funding will provide for the following planning and design objectives:

1. A master plan which would address the specific positioning and general configuration of all elements of the proposed facility. It would program phased development and identify requirements of the infrastructure (seawater system, support facilities, roads, parking and utilities).

2. A conceptual design which identifies specific elements and programmatic relationships required to effectively address overall programmatic objectives. Programming all elements of the elements of the facility in sufficient detail to develop realistic project cost estimates. Preliminary facility plans, exterior elevations and specifications will be developed indicating the general configuration and components. This information would be presented in a brochure format which could be used to promote the facility and help secure complete funding.

3. A project construction cost estimate will be prepared which would identify the probable cost of each element based on the anticipated year of construction.

4. Detailed engineering, design and permitting will be completed for the gravity fed seawater system. This is a core element to all proposed oil spill related activities.

ENVIRONMENTAL COMPLIANCE

Project compliance with the National Environmental Policy Act (NEPA) will be assessed during the planning and design phase. Until project specifications are finalized, specific NEPA requirements cannot be determined. The seawater system will require a Corps of Engineers' permit and compliance with the Alaska Coastal Management Plan will be required. The required State and Federal permits will be identified and incorporated into the planning process.

WHEN

The planning and design will occur during the period 1 March 1993 to 1 March 1994. The construction project will require approximately 6.5 million dollars above and beyond the funds previously identified. If these funds were available for phased construction during FY95 and FY96, the facilities will be operational by the end of 1996. Careful phasing of the project

could make key aspects of the facility operational sooner.

BUDGET ($K)

| | |
|---|---|
| Contractual to UAF Facilities Planning and Construction | $ 930 |
| Administration to NMFS | 70 |
| Project Total | $1000 |

**Name, Address, Telephone of UAF contact:**

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APPENDIX

## SCHOOL OF FISHERIES AND OCEAN SCIENCES
## FISHERY INDUSTRIAL TECHNOLOGY CENTER
## SCOPE & PROGRAM REVIEW

The School of Fisheries and Ocean Sciences (SFOS) is an integral part of the University of Alaska Fairbanks which is the state-funded Land and Sea Grant institution. As such fish harvesting and seafood processing science and technology are central to the UAF responsibilities in the economic development of Alaska, the enhanced utilization and conservation of the States natural resources, help assure the nutritional well being and safety, and the education and improved quality of life of rural Alaskans, especially those in coastal communities. Alaska's fisheries are a critical component of U.S trade, with Alaska seafood a major foreign trade commodity. One-third of all U.S seafood exports are shipped from Alaska making these seafood products extremely vulnerable to fluctuations in world stocks and prices. Rapid technological developments and an awareness of legal, economic, and social questions associated with implementation of policies such as exclusive economic zones have brought about an awareness of the critical nature of resource utilization. The centrality and relative cost/benefit ratio become even more apparent when the cost of not pursuing research, technological development and training in fish harvesting and seafood processing science and technology. The Davan Study (USDA, 1989) concluded that conducting $38 million of research in high priority areas of food science and technology would produce $840 million in positive returns and failure to conduct the research would result in $368 million of additional costs. Thus the investment in food science research has a 32 to 1 benefit to cost ratio.

By Alaska statute, the duties of the Fishery Industrial Technology Center (FITC) have been defined as providing scientific research and technological support for the conservation and development of seafood harvesting and processing in Alaska to support the state's fishing industry and enhance employment opportunities. The SFOS, through FITC, has an opportunity to develop the Fish Harvesting Science and Technology (FHST) component after initially building the Seafood Processing Science and Technology component. Both areas are central to the University of Alaska's responsibilities in the economic development of Alaska, the enhanced utilization and conservation of the Alaska's natural resources, help assure the nutritional well being and safety, and the education and improved quality of life of rural, especially coastal, Alaskans. There are no comparable programs in the U.S. and only a few in the world that attempt an integrated approach. The FITC Policy Council made FHST the top priority for FITC development at it's spring 1991 meeting.

There are no university level degree programs in FHST in the U.S. However, problems related to FHST have considerable relevance to many aspects of fisheries, fisheries oceanography, resource management, biology, and several areas of engineering. In addition to degree students, many residents of coastal Alaskan communities have expressed interest in learning more about fish perception, behavior, and responses to gear. Alaska residents account for 70% of the work force participating in the harvesting of seafood, and 50% of the work force in processing of seafood.

Alaska fisheries are facing many of the same problems as most major world fisheries are currently experiencing. The total demand for fish being processing of seafood beyond the year

2000 may exceed 100 million tons, however, all major world stocks of demersal fish species are either fully exploited or over-fished. Issues such as selective fishing, by-catch conservation or utilization, gear efficiency, control of exploitation rates, and development of fisheries for underutilized species will require strong research programs addressing both scientific and technological aspects to solve. Improved understanding of FHST, especially to improve the selectivity of the harvest, will be necessary to enhance resource utilization and conservation in Alaska and throughout the world. Other FHST opportunities include determining the distribution of harvestable populations, determining the physiological and behavioral responses of fish and shellfish during capture, improving onboard handling practices, and addressing the issues of overfishing and rehabilitation of previously overharvested species.

The overall approach to solving fish harvesting problems must be a highly integrated collaborative one. Practical modifications in fishing gear must consider all aspects of fishing gear such as mechanics of safe deployment and retrieval, behavior, efficiency and selectivity. This approach requires that several scientists and technical support staff collaborate on a limited number of fairly large projects to result in major progress in understanding how fish and fishing gear interact. Underwater observation is a key element of any successful FHST effort.

Several fish harvesting scientists have strongly expressed the opinion that FITC will continue to have only limited success if it tries to develop a FHST Group without a serious commitment to new personnel. Even the most minimal FHST research at FITC will require a minimum of two faculty researchers, one studying the perspective of the fish, and the other the technical aspects of the gear.

Recent declines in Alaska's oil revenue underscore the need for the state to develop its economy based on resources that can be readily utilized and sustained. It is the role of the food scientist to transform these raw products into the useful, wholesome, value-added products desired by consumers. In addition to educating food science professionals, the existence of such a program would facilitate the education of non-food scientists about the food supply. In addition to being the state's second biggest revenue generator, the seafood industry is Alaska's largest private sector employer.

Although food science research is an important part of every state's land-grant university, very few universities in the U.S. have strong seafood related programs. Therefore, the University of Alaska has an opportunity to become the premier seafood processing science and technology program in the U.S. The sole seafood science and technology research program in Alaska is housed in the FITC in Kodiak. Toward this end, FITC has developed a core nucleus of seafood scientists who have made substantial contributions in several areas of seafood research. Current seafood science and technology opportunities include the development of innovative processing technologies to add maximum values to seafood products and to evaluate their safety, quality and wholesomeness, development of new methods to minimize waste and enhance by-product utilization, and development of innovative approaches to process and market currently underutilized species.

Integration of seafood science with fisheries and business can provide students with opportunities which are unique among U.S. universities. Other potential educational opportunities for the FITC are identified as the development of undergraduate and graduate programs, access to new research and education grants, development of internship programs which provide teachers a multidisciplinary exposure to practical uses of science, development of short courses, creating interest in science for school children, and the development of international scientific exchange programs.

The FITC has been involved in developing a Food Science and Nutrition (FSN) program which emphasizes seafood and subsistence food resources. An *Ad Hoc* FSN Program committee has been established to consolidate efforts and maximize the benefits from a cooperative FSN within SFOS and School of Agriculture and Land Resource Management (SALRM). The development of a comprehensive FSN program will serve to educate the people of Alaska in the development and production of high quality, safe, wholesome and nutritious foods for human and animal consumption. Training to enhance utilization of Alaska's major renewable food resources including finfish, shellfish, aquatic and agricultural crops, livestock, and game animals is mandated by the University of Alaska's land and sea grant mission. A FSN program would provide students with an educational emphasis which would enhance employment opportunities in the management, production, or marketing of these important renewable food resources. Availability of potential employees with this training has been identified as a high priority for the seafood industry. In addition, the Davan Study estimated the return on a $4 million new investment in food science education to be $153 million, for a benefit to cost ratio of 38 to 1.

The FITC can provide assistance in the expansion of Alaska's revenue base from exploitation of renewable oceanic resources, assist in technology transfer through workshops and short courses, and aid in the development of coastal fishery-based economies. Education and collaboration with international students and scientists will enable other countries to wisely developing quality seafood products for export to the U.S. and for acceptance of U.S. products for importation.

The FITC has significant extension and technology transfer responsibilities. Technical information from research projects developed at the FITC or elsewhere in the School can be disseminated through workshops conducted jointly by the FITC and MAP personnel throughout the state. From 1982 until they were stopped due to budget cuts in 1985 FITC presented a series of annual workshops aimed at improving Alaska's fishing industry's technological competitiveness and ability to participate in developing fisheries opportunities. Development of FITC as a state/industry university cooperative research center would enhance assistance provided in the expansion of Alaska's revenue base from exploitation of renewable oceanic resources, assist in technology transfer through internships, workshops and short courses, and enhance the development of coastal fishery-based economies.

## FACILITIES

### *Alfred A. Owen Building*

The FITC laboratories and faculty and staff offices are housed in the Alfred A. Owen building, a 20,200-square foot research facility that was dedicated in 1991. It houses a Pilot Processing Plant for the development, testing, and scale-up of seafood processing operations and includes 0, -20, and -40°C refrigerated walk-in storage units.

Fundamental and applied research takes place in modern biochemistry, chemistry, engineering, microbiology, and sensory evaluation laboratories. An instrument room, a walk-in cool room, and a media preparation room are also available. Public use areas include a research library, lecture room (capacity: 64), and conference room (capacity: 10-15).

## LONG-TERM PLAN

FITC research programs are designed to maximize benefits from Alaska's renewable fisheries resources through the application of modern food science and technology. The primary objectives of FITC programs are to facilitate the profitable production of wholesome, high-quality seafood and to provide training and disseminate information to the industry.

To achieve these objectives, expansion of the current facilities is necessary. The long-term plan to obtain facilities needed by SFOS in Kodiak is to encourage the development of a multi-agency fisheries research complex, including the Owen Building. This would include a gravity-fed seawater system, wet and dry research laboratories, classrooms, offices, and a fisheries and seafood library. The complex is expected to be a cooperative effort of SFOS, the National Marine Fisheries Service, and the Alaska Department of Fish & Game.

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## ADMINISTRATION

**Vera Alexander**, Ph.D., Dean, SFOS
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**John French**, Ph.D., Interim Director, FITC

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**Chris G. Bublitz**, M.S., Research Scientist. Fish physiology, harvesting science and technology.

**Gour S. Choudhury**, Ph.D., Assistant Professor. Seafood engineering, by-product utilization, extrusion, microbial technology, process automation, unit operations, modeling.

**Charles A. Crapo**, M.S., Assistant Professor and Salmon Quality Specialist. Seafood quality, quality assurance, seafood processing and preservation.

**Terry Ellsworth**, B.S., Laboratory Technician. Biochemistry, chemistry.

**John S. French**, Ph.D., Professor. Biochemistry of proteins and lipids, postmortem changes in seafood quality, effects of environmental stress on seafood quality.

**Brian H. Himelbloom**, Ph.D., Assistant Professor. Microbiology of fish and fish products, microbial physiology, applied enzymology.

**John M. Kennish**, Ph.D., Affiliate Professor. Analytical chemistry, seafood quality changes, fish lipids.

**Jong S. Lee**, Ph.D., Professor. Microbiology, food safety, quality control.

**Henry Pennington**, M.S., Assistant Professor, Marine Advisory Program. Fisheries development, marine safety, coastal resource management.

**Robert Pfutzenreuter**, B.S., Laboratory Technician. Microbiology.

## ADMINISTRATIVE & SUPPORT STAFF

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## SELECTED RESEARCH ACTIVITIES

- Improving chilled and refrigerated seawater systems on fishing vessels
- Evaluating *sous-vide* processing for pink salmon
- Developing extrusion processing of salmon muscle proteins
- Evaluating opportunities for flaked products from pink salmon
- Surveying the microbiological quality of Alaskan seafood
- Providing technical support and technological development for surimi manufacturing
- Analyzing flatfish reactions to rig trawls to minimize halibut by-catch through the use of modified trawl gear
- Evaluating pollock trawl fishery selectivity of square mesh codends
- Identifying new methods for detecting and removing parasites in white fish
- Evaluating handling, quality, and stability of whole and minced flatfish
- Characterizing seafood processing by-products for conversion to energy and other products

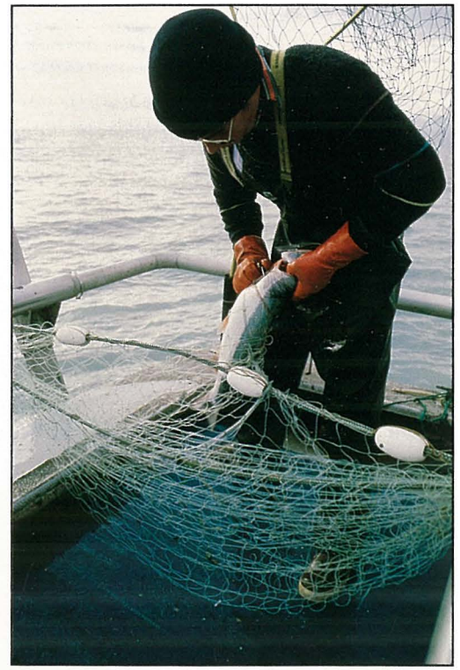

*Fresh seafood product shipped from an Alaskan processor to FITC for chemical and microbial evaluation. (Photo: H. Pennington)*

*COVER PHOTO: A driftnet fisherman picks a red salmon from his net. Research and development at FITC begin with the harvest of fishery resources. (Photo: D. Mercy)*



# FISHERY INDUSTRIAL TECHNOLOGY CENTER

**KODIAK, ALASKA**



**SCHOOL OF FISHERIES & OCEAN SCIENCES**

UNIVERSITY OF ALASKA FAIRBANKS

# FISHERY INDUSTRIAL TECHNOLOGY CENTER

The Fishery Industrial Technology Center (FITC) has grown steadily since its creation in 1981 by an act of the Alaska Legislature. A unit of the University of Alaska Fairbanks (UAF) School of Fisheries and Ocean Sciences (SFOS), FITC conducts a research and development program and provides technology transfer and training to enhance the economic development of the Alaskan fishing industry. Activities are supported by the industry and by state and federal grants.

*Fishery Industrial Technology Center as seen from across Trident Basin in Kodiak. (Photo: B. Himelbloom)*

## PROGRAMS AND OBJECTIVES

### *Fish Harvesting Science and Technology*

FITC personnel conduct research to develop and improve fishing gear and on-board handling technologies to maximize the quality of the harvest. Current research includes:

- fundamental studies on the physiology of harvested species, including
  - perception of fishing baits, gear, and vessels
  - behavior upon encountering and escaping fishing gear
  - factors controlling swimming rates and endurance
- applied studies on the behavior of fishing gear during deployment and use

*Fisherman aboard a seine skiff pulls the net off the back of the fishing boat to make a set. (Photo: D. Mercy)*

- development of fishing gear technology to optimize the efficiency and selectivity of gear to
  - separate targeted and unwanted species
  - separate targeted and undersized fish

### *Seafood Science and Processing Technology*

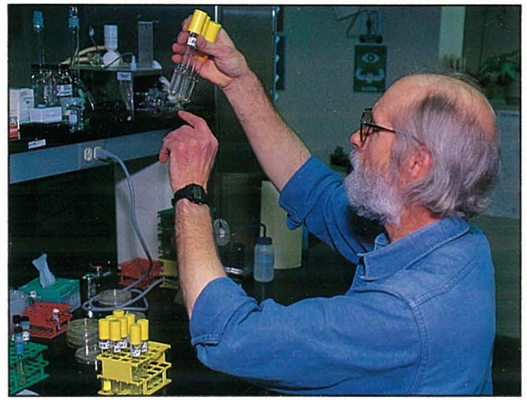
Researchers study the fundamental properties of seafood to enhance its use in safe, nutritious seafood products. They apply concepts of biochemistry, chemistry, microbiology, and seafood engineering to maximize the use of fish, shellfish, and by-product materials. Projects are underway to develop:

- technologies to ensure high product quality from harvest to the consumer
- methods to determine and preserve the nutritional value of Alaskan seafood
- optimum processing protocols through engineering analysis of energy, material, and labor use in seafood-processing operations
- methods to extend the shelf life of fresh and frozen seafoods, including the application of modern packaging and preservation techniques
- new product concepts and to assist the industry in developing and marketing those products

### *Fisheries and Food Science Training*

Training Alaskans in the management and use of their marine resources is part of the University of Alaska land and sea grant mission. FITC faculty contribute to this effort by

- teaching courses for fisheries or management undergraduate students and for other science majors interested in food science
- developing and supervising a student internship program to provide hands-on experience in the industry
- coordinating the University of Alaska portion of the cooperative Bachelor of Science in Food Science and Technology program with Oregon State University
- developing the Food Science and Nutrition program shared by SFOS and the School of Agriculture and Land Resources Management
- providing graduate training opportunities in fish harvesting and food science and nutrition at the M.S. and Ph.D. levels



*FITC personnel work with Alaskan seafood processors to prevent and solve problems. Here Bob Pfutzenreuter prepares microbe samples taken on a seafood line to evaluate cleanup and sanitation procedures. (Photo: H. Pennington)*

### *Technology Transfer*

A primary objective of FITC scientists and educators is to ensure that research results are made known to the people who can use the information. FITC personnel work with the fishing industry and state and federal agencies to identify areas of interest or concern and to develop seminars and workshops on those topics. Other technology transfer activities include:

- providing short courses of specific interest to students and fishing industry personnel
- advising the fishing industry on use of new and existing technologies
- developing cost analyses for the use of new and existing technologies by the fishing industry

*A major goal of the Alaskan fishing industry is to expand beyond traditional canned or whole-frozen markets for pink salmon. Chuck Crapo (white shirt) and Brian Himelbloom prepare pink salmon using European sous-vide processing methods. (Photo: H. Pennington)*

### *Public Service*

Outreach and public service activities are also important responsibilities of the FITC. The Center location and personnel expertise provide a focus for fishing-related public activities in Kodiak. FITC personnel

- serve on various local, state, national, and international professional boards and committees, editorial boards, and advisory groups
- present current information in seminars, workshops, and short courses for the industry
- provide information for K-12 students and teachers on fish harvesting and seafood processing research

Vol I Tab IX

# Meeting Summary

**A. MEETING:** Exxon Valdez Oil Spill Public Advisory Group
Prince William Sound Work Group

**B. DATE/TIME:** January 4, 1993

**C. LOCATION:** Valdez, Alaska (teleconference with Anchorage, Cordova, Chenega, Tatitlek)

**D. MEMBERS IN ATTENDANCE:**

| Name | Principal Interest |
|---|---|
| Donna Fischer | Local Government |
| Pam Brodie | Environmental |
| John McMullen | Aquaculture |
| Charles Totemoff | Native Landowners |
| Doug Mutter | Designated Federal Officer |

**E. OTHER PARTICIPANTS:**

| Name | Organization |
|---|---|
| Michael Brown | Chugach Alaska Corp. |
| Dusty Kaser | Chugach Alaska Corp. |
| Tyler Jones | Chugach Alaska Corp. |
| Thomas Fink | Private Consultant |
| Gail Evanoff | Chenega Corp. |
| Gary Komcoff | Tatitlek Corp. |
| Nancy Leftcoe | Alaska Wilderness Recreation and Tourism Assoc. |
| Mary McBurney | Cordova District Fishermen United |

**F. SUMMARY:**

The following questions, issues and suggestions were raised regarding the proposed 1993 restoration plans:

--a joint proposal for the Chugach Resource Management Agency (attached) was presented
--the 93 work plan tends to create more bureaucracy
--lacking an overall restoration plan or framework for coordinating projects
--need to include more salmon and herring projects, such as coded wire tagging and stock assesment (6 ADF&G projects not in 93 work plan)
--still need to remove oil and garbage from beaches
--need a long-term comprehensive monitoring program
--need a reward for conviction of persons harassing marine wildlife
--administrative costs are too high in 93 work plan

--why the Kenai River sockeye projects?
--the coordinated recreation restoration planning and assesment project presented in November is worth looking at
--need to combine similar projects, eg. Red Lake, archeology
--the following projects were generally supported:

93003
93004
combine 93005, 006, 007, 008
combine 93009, 010, reduce costs
93011
93012, reduce costs
93016, need more funds
93017, contract at lower cost
93019, only if Federal attorneys rule favorably on legality
93024
93034
93038
93039
combine 93043, 045, contract some of it
93046, contract some out

--the following projects were not generally supported:

93015
93028
93029
03051

--the following projects were not agreed upon:

93002 and 93015
93014
93018
93022
93025
93030 and 031
93032
93033
93035
93041
93042
93047
93064

--the remaining projects were not reviewed

**G. ACTION ITEMS:** None

**H. NEXT MEETING:** None

**I. ATTACHMENTS:**

1. Summary of Chugach Resource Management Agency Proposal

# OIL SPILL TRUSTEES
# PUBLIC ADVISORY GROUP
# PRINCE WILLIAM SOUND WORK GROUP

## PRESENTATION

## CHUGACH RESOURCE MANAGEMENT AGENCY PROPOSAL

**PURPOSE** - Combine resource inventory and direct contracting concepts

**ORGANIZATION**

- Four village corporations from the Chugach Region
  Chenega - Tatitlek - Port Graham - English Bay
- Regional Native corporation - Chugach Alaska Corporation

**ADVANTAGES**

- Proven and experienced management team
- Experienced consultants/advisors
- Proven field personnel in the villages
- Local, cost effective employment and equipment
- Local residents participation in PWS restoration
- Opportunity for direct contracting as envisioned by Chenega settlement

**COORDINATION**

- Agencies provide CRMA with refined project scope of work information
- Relevant resource inventory will be provided based on realistic PWS conditions
- Additional technical resources can be located and provided
- Management of direct contracts with village organizations/resources

# EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION

**Project Number:**

**Project Source:**

**Project Title:** Injury to Prince William Sound Herring

**Project Category:** Damage Assessment

**Project Type:** Fish/Shellfish

**Lead Agency:** Alaska Department of Fish and Game

**Cooperating Agencies:**

**Project Term:** **Start Date:** Ongoing (March 1, 1993) **Finish Date:** Continuing (Sept 30,1993)

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## INTRODUCTION:

### A. Background on the Resource/Service

Pacific herring *Clupea pallasi* are a major resource in Prince William Sound (PWS) from both ecological and commercial perspectives. Pacific herring provide important forage for many species including humpbacked whales, seals, sea lions, gulls, sea ducks, shorebirds, halibut, salmon, and other fish. It appears that herring may be critical to the reproductive success of certain gull and shorebird species. Several thousand pounds of herring and herring spawn on kelp are harvested annually for subsistence purposes and form an important part of the local native culture. In addition, five commercial herring fisheries in PWS have an average annual combined ex-vessel value of $8.3 million.

### B. Summary of Injury

The oil spill coincided with the spring migration of herring to the spawning grounds and adult herring transited oiled waters on their way to nearshore staging areas. Significant histopathological damage was measured in adults collected in oiled areas in both 1989 and 1990 confirming exposure of the fish to toxins. Oiling of over 40% of the spawning areas and of migrating adults caused increased egg mortality, elevated levels of abnormalities and gene breakage in newly hatched larvae, and reduced hatching success of the embryos. Over 90% of the summer rearing and feeding areas of herring were oiled in 1989. Direct mortality was significant on young herring in 1989 and sublethal effects were measurable in larvae and adults in 1989 and 1990. Damages observed in 1989 and 1990 lead researchers to believe that adult and juvenile herring were re-exposed to oil after spawning in both years by persistent sheens leaching from beaches and cleaning operations. Laboratory studies measuring the effect of known doses of oil on newly hatched larvae provided a direct link between estimated doses of oil measured in PWS and the level of injury observed in samples collected from the field.

Although many herring typically spawn for the first time at age 3, herring that hatched in 1989 were noticeably absent as 3-year-olds from the 1992 spawning population. Herring survival varies tremendously under normal conditions, but results to date strongly implicate the oil spill as a major cause for this low 3-year-old recruitment. Herring that hatched in 1988 and that were exposed to oil as 1-year-olds at the time of the spill currently dominate (62% in 1992) the PWS herring spawning population. It was hypothesized that damage to germ tissue caused by exposure to oil would result in non-viable embryos and larvae and a pilot experiment to measure the ability of herring from this age class to produce viable offspring was conducted in 1992. Hatching success of eggs collected

from fish spawning in previously oiled areas was less than half that of eggs collected from fish spawning in pristine areas.

**C. Location**

Research will be conducted entirely within the confines of PWS and exact locations will depend upon the distribution of spawning herring. Benefits to improved management of the herring resource will be realized by all participants in the commercial and subsistence fisheries throughout the sound, and by all species which utilize herring as forage. Herring have commercial importance to all communities of PWS and are important for subsistence use at Tatitlek and Chenega and to lesser degrees in other communities.

**WHAT:** The goal of the proposed project is to improve the accuracy of fisheries management of the PWS herring resource. Improved accuracy will allow fishery managers to make fine adjustments to fishing quotas and more effectively result in measurable rehabilitation for PWS herring stocks. Accurate and precise estimation of herring abundance is crucial to the improvement of management accuracy.

Specific objectives to achieve this goal include:

1) Estimate the biomass of spawning herring in PWS using SCUBA diving spawn deposition survey techniques such that the estimate is within $\pm$ 25% of the true value 95% of the time.

2) Estimate the age, weight, length, and sex composition of the spawning herring in PWS such that age composition estimates are within $\pm$ 10% of their true value 95% of the time.

3) Document and estimate the extent of egg retention by spawning females and account for this process in the spawn deposition biomass estimate.

4) Collect and analyze spawning substrate calibration samples for each diver. These samples will be used to estimate diver- and vegetation-specific bias in egg counting to correct the biomass estimate and to provide training for divers in spawn estimation.

**WHY:** The proposed project will provide a relatively low cost, albeit incomplete, tool for restoration of damaged herring resources through the management of human uses, a major source of herring mortality. Herring spawn deposition surveys will permit more intensive management of the resource by providing more accurate biomass estimation than do standard aerial survey methods. However, it should be cautioned that results from spawn deposition surveys will not provide complete assessment of the injury to herring resources nor permit complete evaluation of restoration success. Additional studies to investigate stock discreetness, stock-specific migration patterns, recruitment processes, and the effects of oil on reproductive success are necessary to construct a comprehensive ecological model quantifying the effects of spilled oil and its passage through the environment.

**HOW:**

Aerial surveys conducted by area biologists as a regular part of commercial fishery management activities will be used to estimate the extent and distribution of herring spawn and to provide the basis for locating survey transects at nearshore spawning grounds in a two stage sampling design. Trained and calibrated SCUBA divers stationed aboard a research vessel will conduct surveys along the selected transects to estimate the number of herring eggs deposited on vegetation and bottom substrate. Preserved samples of eggs attached to vegetation will be collected and retained for later laboratory analysis. Field estimates by divers of the number of eggs attached to the vegetation will be compared to more rigorous laboratory egg counts to calculate diver-specific and vegetation-specific bias. Samples of adult female herring will be collected immediately following spawning events to estimate the number of females retaining eggs and the quantity of eggs retained to adjust the spawn deposition biomass estimates.

Area research biologists will collect samples representative of spawning herring for determination of age, weight, length, and sex as part of regular ongoing data collection programs. Egg counts adjusted for measured diver and substrate bias will be combined with estimates of the extent of total spawning area and area sampled to estimate the total number of eggs deposited in PWS. The spawning biomass required to produce this total will be calculated from total egg deposition combined with average fish size and sex ratio for 1993 and average fecundity at size measured in previous studies. Estimated spawning biomass will be adjusted for natural loss of eggs prior to surveys as measured in previous studies and for egg retention in 1993 measured as part of this proposed project.

Estimates of spawning biomass will be included in ongoing ADF&G investigations of age structured analysis of PWS herring stocks to project the biomass of herring returning to spawn (run biomass) in 1994. The forecast of run biomass will be used directly to set guideline harvests for PWS commercial fisheries. Spawning biomass estimates will also be combined with information from previous herring research studies to continue to evaluate oil spill related damage to the resource and to grossly assess the progress of resource rehabilitation. However, results from the proposed project are likely to have only limited utility to assess resource rehabilitation without additional knowledge of stock structure, mixing, and recruitment processes.

**ENVIRONMENTAL COMPLIANCE:** The proposed project is not intrusive. It involves collection of data and does not affect fish and wildlife populations or their habitat.

**WHEN:**

| | |
|---|---|
| Jan-Feb 1993 | Initiate vessel charter bids and contract |
| | Contact and line up divers (ensure certification requirements met or in progress) |
| | Complete sample design for egg retention study |
| | Complete sample design for diver calibration |
| | Order laboratory supplies and field supplies |
| Mar 1993 | Complete any necessary diver certifications |
| | Complete Detailed Study Plan |
| | Hire technician to finish maintenance and assembly of dive gear |
| 1-5 Apr 1993 | Complete all hiring of field personnel and arrange for arrival of divers |
| | Complete vessel contract |
| early Apr 1993 | Diver training/refresher/orientation |
| | Set up laboratory |
| 5-15 Apr 1993 | Initiate diving/field data collection (at onset of spawning) |
| 1-12 May 1993 | Complete field activities |
| | Begin lab processing of calibration samples |
| 30 May 1993 | Complete data entry of diver estimates |
| May-Jun 1993 | Maintain, repair, and store gear |
| 15 Jun 1993 | Complete calibration sample processing |
| 30 Jun 1993 | Data entry of calibration samples |
| | Initiate data analysis |
| 1 Sep 1993 | Finalize estimate of spawning biomass |
| 15 Nov 1993 | Finalize projection of 1994 run biomass |
| Nov/Dec 1993 | Complete annual report |

Project: Injury to Prince William Sound Herring

Description: SCUBA surveys are conducted to quantify herring spawn in areas of spawn identified through aerial surveys. Estimates of deposited spawn are combined with other biological information (age, sex, size, fecundity, etc.) to estimate the biomass of reproducing herring. Biomass estimates are used to forecast future returns and set harvest allocations.

30-Dec-92

| Item | Name | Position | Months Budgeted | Regular Salary | Dive/Sea Duty Premium Pay | 01-Feb-93 28-Feb-93 | 01-Mar-93 30-Jun-93 | 01-Jul-93 30-Sep-93 | TOTAL COST |
|---|---|---|---|---|---|---|---|---|---|
| Personnel Costs | Wilcock | Fisheries Biologist III | 3.0 | $6,069 | $7,876 | $6,069 | $13,945 | $6,069 | $26,082 |
| | Brown | Fisheries Biologist II (PI) | 10.0 | $5,093 | $6,707 | | $27,079 | $30,558 | $57,636 |
| | Bechtol | Fisheries Bilogist II | 1.0 | $5,093 | $6,707 | | $11,800 | | $11,800 |
| | Haley | F&W Technician III | 4.5 | $3,643 | $5,001 | | $19,575 | $1,822 | $21,396 |
| | Becker | F&W Technician II | 1.5 | $3,140 | $3,886 | | $8,596 | | $8,596 |
| | Miller | F&W Technician II | 1.5 | $3,140 | $3,886 | | $8,596 | | $8,596 |
| | Gilman | F&W Technician II | 5.0 | $3,229 | | | $11,301 | $4,843 | $16,145 |
| | | F&W Technician I | 2.0 | $2,717 | | | $5,434 | | $5,434 |
| | | Biometrician II | 1.0 | $5,640 | | | $2,820 | $2,820 | $5,640 |
| | | Research Analyst I | 1.0 | $4,230 | | | | $4,230 | $4,230 |
| | TOTAL | FTE = | 2.5 | | $34,063 | $6,069 | $109,146 | $50,341 | $165,555 |
| Travel | Bechtol - 2 RT Homer/Cordova | | | | | | $2,000 | | $2,000 |
| | Meeting Attendance - 2 RT Anch/Cordova | | | | | | | $800 | $800 |
| Contractual | Vessel Charter - 25 days @ $1500/day | | | | | | $37,500 | | $37,500 |
| | Fuel for dive skiffs | | | | | | $1,000 | | $1,000 |
| | Equipment Maintenance/Repair | | | | | | $1,500 | | $1,500 |
| Commodities | Office and Lab Supplies | | | | | | $1,200 | | $1,200 |
| | Food and Field Supplies | | | | | | $1,500 | | $1,500 |
| Equipment | Dive Gear Replacement | | | | | | | $2,000 | $2,000 |
| General Administration | (15% * personnel cost) | | | | | | | | $24,833 |
| TOTAL PROJECT COST | | | | | | | | | $237,889 |

# EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION

**Project Number:**

**Project Source:**

**Project Title:** **Coded-wire Tag Recoveries from Commercial Catches, Cost Recovery Catches, and Hatchery Brood Stocks in Prince William Sound Chum, Sockeye, Coho, and Chinook Salmon Fisheries**

**Project Category:** Restoration Manipulation and Enhancement

**Project Type:**

**Lead Agency:** Alaska Department of Fish and Game

**Cooperating Agencies:**

| **Project Term:** | **Start Date: 03/01/92** (day/month/year) | **Finish Date:09/30/92** (day/month/year) |
|---|---|---|

**INTRODUCTION:** Each year 40 to 50 million wild chum, sockeye, and coho salmon fry and smolt emerge from lakes and streams throughout Prince William Sound (PWS) and migrate seaward. Adult returns of these wild salmon species to PWS average approximately 700 thousand fish annually. The large outmigrations of wild salmon and subsequent adult returns play a major roles in the Prince William Sound (PWS) ecosystem. Both juveniles and adults are important sources of food for many fish, birds, and mammals and both are also important predators on plankton and other fish. Adults returning from the high seas also convey needed nutrients and minerals from the marine ecosystem to estuaries, freshwater lakes and streams, and terrestrial ecosystems. Wild salmon also play a major role in the economy of PWS because of their contribution to commercial, sport, and subsistence fisheries in the area. Chum, sockeye, and coho salmon are not as numerous as pink salmon but they have a much greater unit value commercial in commercial fisheries. In aggregate these three species account for almost half of ex-vessel value of PWS area salmon fisheries and provide alternate fishing opportunities and income for PWS commercial and sport fishing industries.

Like pink salmon, the majority of PWS chum salmon spend the larval portion of their life in the intertidal portion of streambeds. It is reasonable that chum salmon from oiled streams also experienced many of the oil impacts already demonstrated for pink salmon including higher egg mortalities, larval deformities, and lower juvenile growth rates than stocks from unoiled streams and hatcheries. By similar inference from pink salmon research, chum salmon may also have persistent genetic damage which may have caused reduced egg survival in generations following the spill. Furthermore, coded-wire tag recovery results from NRDA F/S Study 3 indicate that damaged wild pink salmon streams located on hatchery stock migratory corridors in western PWS experience a high incidence of genetic interchange as a result of straying from the burgeoning hatchery populations. Ample evidence in the literature suggests that hatchery fish are ill adapted to wild conditions and that genetic interchange between hatchery and wild stocks may lead to reduced fitness of wild stocks. The extent of straying in chum, sockeye and coho salmon in PWS is unknown but may also be important. Wilds stocks most impacted by the *Exxon Valdez Oil Spill* (EVOS) are also subject to excessive exploitation in mixed stock fisheries of western PWS which are targeting on large hatchery returns. The combined effects of oil damage, excessive harvest, and genetic burden on wild fish may result in an overall reduction in population size, genetic diversity, and fitness of PWS salmon populations.

Presently, the largest single source of mortality to wild salmon stocks in PWS which can be successfully monitored and manipulated by human intervention is the commercial harvest of returning adults. Depleted and less productive oil impacted wild populations cannot sustain as high an exploitation rate as unimpacted

wild and hatchery stocks, consequently they require special protection from commercial fisheries if adequate numbers are to escape and spawn. To reduce harvests on wild stocks and provide this protection, fisheries managers must know time and area abundance trends for both wild and hatchery stocks. The proposed restoration and resource monitoring project will use coded-wire tags as a stock identification tool which enables managers to estimate specific contributions to commercial harvests by time and area. Almost all project funds will be spent to support PWS field studies and will contribute to the local economy of Cordova. The project may result in altered harvest management strategies in PWS fisheries and will contribute to the natural recovery process for PWS salmon populations. The budget attached for this project does not include funding for a project principal investigator or other permanent personnel. It assumes that the tag recovery project for pink salmon will be approved and will fund these full time positions.

**WHAT:** The goal of this project is to restore PWS salmon stocks which may have been injured by EVOS through more precise, stock specific management of fisheries. Although other techniques may be developed, the most effective restoration methods identified at this time is modification of human use of injured salmon stocks while targeting fisheries on undamaged wild and hatchery stocks. The commercial fishery is a major factor controlling salmon population size and reproductive success. Since PWS wild salmon stocks are harvested in mixed stock fisheries dominated by hatchery fish, successful restoration efforts must be based on the State's ability to closely regulate the exploitation of wild stocks. Private, non-profit aquaculture corporations (PNP's) now fund tagging of hatchery releases of chinook, sockeye, chum, and coho salmon of fry and smolt in PWS. However, NRDA funds were used to apply code-wire tags to hatchery releases of chum, sockeye, coho, and chinook salmon in 1989, 1990, and 1991 and to outmigrating sockeye salmon smolt from three wild streams in 1990 and 1991. Because chum, sockeye and chinook salmon mature at varying ages, fish tagged using NRDA funds will continue to return in significant through 1995. This project is a comprehensive program for recovery of tags from these returning adults. Analysis of tag recovery data will provide inseason estimates of hatchery and wild stock abundance and timing. These results will enable fisheries managers to selectively reduce harvests on wild stocks. Tagging data will also provide total return and survival estimates needed to set exploitation rates and assess the success of restoration procedures.

Objectives:

Recovery of coded-wire tags from commercial catches to:

a. estimate temporal and spatial contributions of tagged hatchery stocks to commercial and hatchery harvests; P W S
b. provide timely inseason estimates of stock contributions to harvests by time and area to fisheries managers so they can closely regulate exploitation of injured wild stocks;
c. determine total return and overall survival of tagged salmon stocks.

**WHY:** Legal, practical, and philosophical considerations dictate that a significant effort be made to preserve genetic diversity. In the context of this proposal, it is the genetic diversity of populations of wild salmon that are of interest.

Wild salmon stocks from oiled areas of PWS and salmon stocks which passed through oiled areas during their seaward migration are subjected to extreme fishing pressure in fisheries targeting on hatchery runs. This exploitation may be great enough to drive EVOS damaged stocks to critically low levels and impede the natural recovery process. The ongoing threat of overexploiting wild stocks which has been exacerbated by spill related damages has greatly increased the need for stock identification tools such as the CWT program. Without this project, stock specific timing and distribution data will not be available, and fisheries managers will be unable to control harvests with enough accuracy and precision to protect damaged stocks from overexploitation. Failure to continue this project in 1993 will also prevent continued monitoring of the health of these populations and hinder our understanding of factors limiting their survival and recovery.

**HOW:** Coded-wire tag recoveries from commercial and hatchery harvests will be based on a sampling design stratified by time, area, and processor. For each time and area specific stratum, 25% of the chum, sockeye, coho, and chinook salmon catch will be scanned for fish with clipped adipose fins (indicating presence of a tag). Catch sampling will be done at processing facilities in Cordova, Valdez, Seward, Anchorage, Kenai, Whittier, and floating processors in the PWS area. All deliveries by tenders to these facilities will be monitored by radio and by daily contact with processing plant dispatchers to ensure that the catch deliveries being sampled are from specific fishing periods and districts. In addition to catch sampling at the processing facilities, approximately 25% of the fish in the hatchery cost recovery harvests from terminal areas in front of hatcheries will be scanned for fish with missing adipose fins.

The portion of tagged fish in each tagged hatchery release group must be known to make catch contribution estimates for each tagged group. Although tagged and untagged portions are estimated when fry are released after tagging, some tags are lost and tagged fish may experience different mortality than untagged fish. To adjusted tag ratios in adult returns for this tag loss and differential mortality, at least 50% of the fish of known origin in hatchery brood stocks will be sampled for tag rates. In the catches, terminal cost recovery harvests and brood stocks the total number of fish with missing adipose fins will be recorded. Heads of fin clipped fish will be removed and tagged with uniquely numbered strap tags which are paired with sampling data. Numbered heads and associated sampling data will be sent to the FRED Division Statewide Coded-Wire Tag Laboratory in Juneau where sampling data will be checked for accuracy and completeness, tags will be removed from heads and decoded, and sampling and corresponding tag recovery data will be entered into a statewide database.

A modification of the methods described in an ADF&G technical report by Clark and Bernard (1987) will be used to estimate contribution of each uniquely tagged population to commercial and cost recovery strata. The specific methods, estimators, and confidence interval estimators are described in ADF&G technical reports on two previous studies of salmon in PWS: Peltz and Geiger (1988), and Geiger and Sharr (1989). The total hatchery contribution to each catch strata will be the sum of the contributions from each hatchery and the total hatchery return to PWS will be the sum of contributions of all PWS hatcheries to commercial catches, cost recovery harvests, and brood stocks. Survival estimates for each hatchery stock will be estimated using hatchery fry release and adult return data. Wild stock contributions to each catch strata will be estimated as the difference between the total catch and the hatchery contribution. Total wild returns will be the sum of wild contributions in all catch strata and the estimated number of wild fish spawning in PWS streams (escapement). Inseason catch contribution estimates for wild and hatchery fish will be available within three working days of the data of sampling in fish processing plants. Based on these estimates and wild stock spawning escapement performance fishery managers will adjust fishing time and area to protect oil damaged wild stocks from excessive exploitation, injure adequate wild stock escapement, and optimize the commercial utilization of surplus wild and hatchery fish.

**WHEN:**

| Dates | Activity |
|---|---|
| June 1 - October 30, 1993 | Tag recovery in commercial, cost recovery, and broodstock harvests of salmon. |
| December 30, 1993 | Draft Report |
| February 15, 1994 | Final Report |

Project Description: This project recovers coded–wire tags from adult chum, sockeye, coho, and chinook salmon tagged as fry in streams and at hatcheries in Prince William Sound. It makes estimates of wild and hatchery catch contributions, total returns, and survival rates. In season catch contribution estimates for hatchery and wild fish permit fisheries managers to modify time and area fishing patterns to protect depressed wild populations and target effort on large hatchery returns.

| Budget Category | Proposed 01–Jan–93 30–Sep–93 | FY 94 | FY 95 | FY 96 | FY 97 | Sum FY 98 & Beyond |
|---|---|---|---|---|---|---|
| Personnel | $208,564 | $225,000 | $225,000 | $225,000 | $225,000 | $900,000 |
| Travel | $1,000 | $1,500 | $1,500 | $1,500 | $1,500 | $6,000 |
| Contractual | $6,300 | $6,800 | $6,800 | $6,800 | $6,800 | $27,200 |
| Commodities | $2,000 | $2,500 | $2,500 | $2,500 | $2,500 | $10,000 |
| Equipment | $0 | $0 | $0 | $0 | $0 | $0 |
| Capital Outlay | $0 | $0 | $0 | $0 | $0 | $0 |
| Sub–total | $217,864 | $235,800 | $235,800 | $235,800 | $235,800 | $943,200 |
| General Administration | $31,726 | $34,226 | $34,226 | $34,226 | $34,226 | $136,904 |
| Project Total | $249,590 | $270,026 | $270,026 | $270,026 | $270,026 | $1,080,104 |
| Full–time Equivalents (FTE) | 4.6 | 15.8 | 15.8 | 15.8 | 15.8 | 63.3 |

Budget Year Proposed (FY 93 – 01 Jan thru 30 Sept) Personnel:

| Position | Months Budgeted | Cost | Comment |
|---|---|---|---|
| FIELD & CORDOVA OFFICE PERSONNEL | | | |
| Fisheries Bilogist I | 1.0 | $3,706 | FY 93 Only |
| F&W Technician II | 47.0 | $182,997 | FY 93 Only – Includes Overtime |
| FRED DIVISION TAG LAB PERSONNEL | | | |
| Analyst Programmer | | | FY 93 Only |
| F&W Technician III | | | FY 93 Only |
| F&W Technician II (perm season) | 7.0 | $21,861 | FY 93 Only |
| F&W Technician II (non perm) | | | FY 93 Only |

1993

Project Number:
Project Title: Coded–Wire Tag Recovery in Prince Willaim Sound Pink Salmon
Agency: ADF&G

FORM 2A
PROJECT
DETAIL

30–Dec–92

# EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION

**Project Number:**

**Project Source:**

**Project Title: Coded wire Tag Recoveries from Commercial Catches, Cost Recovery Catches, and Hatchery Brood Stocks in Prince William Sound Pink Salmon Fisheries**

**Project Category:** Restoration Manipulation and Enhancement

**Project Type:**

**Lead Agency:** Alaska Department of Fish and Game

**Cooperating Agencies:**

**Project Term:** **Start Date: 03/01/92** (day/month/year) **Finish Date:09/30/92** (day/month/year)

**INTRODUCTION:** Each year approximately one half billion wild pink salmon fry emerge from streams throughout Prince William Sound (PWS) and migrate seaward. Adult returns of wild pink salmon to PWS average from 10 to 15 million fish annually. These huge outmigrations of wild pink salmon and subsequent adult returns play a major role in the PWS ecosystem. Both juveniles and adults are important sources of food for many fish, birds, and mammals. Adults returning from the high seas also convey needed nutrients and minerals from the marine ecosystem to estuaries, freshwater streams, and terrestrial ecosystems. Wild pink salmon also play a major role in the economy of PWS through their contribution to commercial, sport, and subsistence fisheries in the area.

Wild pink salmon stocks in oiled portions of PWS have experienced higher egg mortalities, larval deformities, and lower juvenile growth rates than stocks from unoiled streams and hatcheries. There is evidence that they may also have sustained genetic damage which has resulted in reduced egg survival in generations following the spill. Furthermore, coded wire tag recovery results from NRDA F/S Study 3 indicate that damaged wild salmon streams located on hatchery stock migratory corridors experience a high incidence of genetic interchange as a result of straying from the burgeoning hatchery populations. Ample evidence in the literature suggests that hatchery fish are ill adapted to wild conditions and that genetic interchange between hatchery and wild stocks may lead to reduced fitness of wild stocks. Wilds stocks most impacted by the *Exxon Valdez Oil Spill* (EVOS) are also subject to excessive exploitation in the mixed stock fisheries of western PWS which are targeting on large hatchery returns. The combined effects of oil damage, excessive harvest, and genetic burden may result in an overall reduction in population size, genetic diversity, and fitness of PWS salmon populations.

Presently, the largest single source of wild pink salmon mortality in PWS which can be successfully monitored and manipulated by human intervention is the commercial harvest of returning adults. Depleted and less productive oil impacted wild populations cannot sustain as high an exploitation rate as unimpacted wild and hatchery stocks; consequently, they require special protection if adequate numbers are to escape and spawn. To reduce wild stock harvests and provide this protection, fisheries managers must know time and area abundance trends for both wild and hatchery fish.

This restoration and resource monitoring project will use coded wire tags as a stock identification tool to enable managers to estimate specific contributions to commercial harvests by time and area. These

estimates coupled with estimates of wild stock spawning escapement provided by existing ADF&G programs and another proposed restoration project will be used inseason for adjusting fishing patterns by time and area to protect impacted wild stocks from overexploitation. Almost all project funds will be spent to support PWS field studies and will contribute to the local economy of Cordova. The project may result in altered harvest management strategies in PWS fisheries and will contribute to the natural recovery process for PWS pink salmon populations.

**WHAT:** The goal of this project is to restore PWS wild pink salmon stocks injured by EVOS through more precise, stock specific fisheries management. Although other techniques may be developed, the most effective restoration methods identified at this time is modification of human use of injured stocks. The commercial fishery is a major factor controlling pink salmon population size and reproductive success. Since PWS wild pink salmon stocks are harvested in mixed stock fisheries dominated by hatchery fish, successful restoration efforts must be based on the ability to closely regulate the exploitation of oil impacted wild stocks. Private non-profit aquaculture associations in PWS already apply coded wire tags to fry releases at their own expense. This project is a comprehensive program for recovery of these tags in returning adults and analysis of tag recovery data which will provide inseason estimates of hatchery and wild stock abundance and timing. Results of this project will enable fisheries managers to selectively reduce harvests on injured wild stocks. Timing and abundance data for wild and hatchery stocks can also be used in salmon run reconstruction models which may be valuable tools for managing for depleted stocks far into the future. Tagging information will also provide total return and survival estimates needed to set exploitation rates and assess the success of restoration procedures.

Objectives:

Recovery of coded wire tags from commercial catches to:

a. estimate temporal and spatial contributions of tagged hatchery stocks to PWS commercial and hatchery harvests;
b. provide timely inseason estimates of stock contributions to harvests by time and area to fisheries managers so they can closely regulate exploitation of injured wild stocks;
c. determine total return and overall survival of tagged pink salmon stocks.

**WHY:** Legal, practical, and philosophical considerations dictate that a significant effort be made to preserve genetic diversity. In the context of this proposal, it is the genetic diversity of populations of wild pink salmon that are of interest.

Wild salmon stocks from oiled streams in southwestern PWS are subjected to extreme fishing pressure in fisheries targeting on hatchery runs. This exploitation may be great enough to drive EVOS damaged stocks to critically low levels and impede the natural recovery process. The ongoing threat of overexploiting wild stocks which has been exacerbated by spill related damages has greatly increased the need for stock identification tools such as the coded wire tag program. Without this project, stock specific timing and distribution data will not be available, and fisheries managers will be unable to control harvests with enough accuracy and precision to protect damaged stocks from overexploitation. Failure to continue this project in 1993 will also prevent continued monitoring of the health of these populations and hinder our understanding of factors limiting their survival and recovery.

**HOW:** Coded wire tag recoveries from commercial and hatchery harvests will be based on a sampling design stratified by time, area, and processor. For each time and area specific stratum, 15% of the pink salmon catch will be scanned for fish with clipped adipose fins (indicating presence of a tag). Catch sampling will be done at processing facilities in Cordova, Valdez, Seward, Anchorage, Kenai, Whittier, Kodiak and floating processors in the PWS area. All deliveries by tenders to these facilities will be monitored by radio and by

daily contact with processing plant dispatchers to ensure the catch deliveries being sampled are from specific fishing periods and districts. In addition to catch sampling at the processing facilities, approximately 15% of the fish in the hatchery cost recovery harvests from terminal areas in front of hatcheries will be scanned for fish with missing adipose fins.

The portion of tagged fish in each hatchery release group must be known to make catch contribution estimates. Although tagged and untagged proportions are estimated when fry are released after tagging, some tags are lost and tagged fish may experience a different mortality rate than untagged fish. To adjusted tag ratios in adult returns for this tag loss and differential mortality, at least 50% of the fish of known origin in hatchery brood stocks will be sampled for tags.

In the catches, terminal cost recovery harvests, and brood stocks the total number of fish with missing adipose fins will be recorded. Heads of fin clipped fish will be removed and tagged with uniquely numbered strap tags which are paired with sampling data. Numbered heads and associated sampling data will be sent to the FRED Division Statewide Coded Wire Tag Laboratory in Juneau where sampling data will be checked for accuracy and completeness, tags will be removed from heads and decoded, and sampling and corresponding tag recovery data will be entered into a statewide database.

A modification of the methods described in an ADF&G technical report by Clark and Bernard (1987) will be used to estimate contribution of each uniquely tagged population to commercial and cost recovery strata. The specific methods, estimators, and confidence interval estimators are described in ADF&G technical reports on two previous studies of pink salmon in PWS: Peltz and Geiger (1988), and Geiger and Sharr (1989). Total hatchery contribution to each catch strata will be the sum of the contributions from each hatchery and the total hatchery return to PWS will be the sum of contributions of all PWS hatcheries to commercial catches, cost recovery harvests, and brood stocks. Survival estimates for each hatchery stock will be estimated using hatchery fry release and adult return data. Wild stock contributions will be estimated as the difference between the total catch and the hatchery contribution. Total wild returns will be the sum of wild contributions in all catch strata and the estimated number of wild fish spawning in PWS streams (escapement).

Inseason catch contribution estimates for wild and hatchery fish will be available within three working days of the date of sampling in fish processing plants. Based on these estimates and wild stock spawning escapement performance fishery managers will adjust fishing time and area to protect oil damaged wild stocks from excessive exploitation, insure adequate wild stock escapement, and optimize the commercial utilization of surplus wild and hatchery fish.

WHEN:

| Dates | Activity |
|---|---|
| June 1 - September 15, 1993 | Tag recovery in commercial, cost recovery, and broodstock harvests of pink salmon. |
| December 30, 1993 | Draft Report |
| February 15, 1994 | Final Report |

Project Description: This project recovers coded–wire tags from adult pink salmon tagged as fry in streams and at four hatcheries in Prince William Sound. It makes estimates of wild and hatchery catch contributions, total returns, and survival rates. In season catch contribution estimates for hatchery and wild fish permit fisheries managers modify time and area fishing patterns to protect oil damaged wild pink salmon stocks.

| Budget Category | Proposed 01–Jan–93 30–Sep–93 | FY 94 | FY 95 | FY 96 | FY 97 | Sum FY 98 & Beyond |
|---|---|---|---|---|---|---|
| Personnel | $650.9 | $751.3 | $751.3 | $751.3 | $751.3 | $3,005.3 |
| Travel | $5.0 | $5.0 | $5.0 | $5.0 | $5.0 | $19.9 |
| Contractual | $11.7 | $15.6 | $15.6 | $15.6 | $15.6 | $62.3 |
| Commodities | $7.5 | $10.0 | $10.0 | $10.0 | $10.0 | $40.0 |
| Equipment | $0.0 | $1.0 | $1.0 | $1.0 | $1.0 | $4.0 |
| Capital Outlay | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 |
| Sub–total | $675.1 | $782.9 | $782.9 | $782.9 | $782.9 | $3,131.4 |
| General Administration | $98.5 | $113.8 | $113.8 | $113.8 | $113.8 | $455.2 |
| Project Total | $773.6 | $896.7 | $896.7 | $896.7 | $896.7 | $3,586.6 |
| Full–time Equivalents (FTE) | 13.9 | 15.8 | 15.8 | 15.8 | 15.8 | 63.3 |

Budget Year Proposed (FY 93 – 01 Jan thru 30 Sept) Personnel:

| Position | Months Budgeted | Cost | Comment |
|---|---|---|---|
| FIELD & CORDOVA OFFICE PERSONNEL | | | |
| Fisheries Biologist III (PI) | 6.0 | $39.0 | FY 93 Only |
| Fisheries Biologist II | 7.0 | $29.4 | FY 93 Only |
| Fisheries Bilogist I | 4.0 | $14.8 | FY 93 Only |
| Fisheries Bilogist I | 7.0 | $25.9 | FY 93 Only |
| Biometrician I | 6.0 | $26.8 | FY 93 Only |
| Research Analyst I | 6.0 | $21.0 | FY 93 Only |
| F&W Technician III | 7.0 | $25.0 | FY 93 Only – Includes Overtime |
| F&W Technician III | 4.0 | $15.6 | FY 93 Only – Includes Overtime |
| F&W Technician II | 42.0 | $168.3 | FY 93 Only – Includes Overtime |
| F&W Technician II | 16.0 | $73.5 | FY 93 Only – Includes Overtime |
| F&W Technician II | 12.0 | $44.6 | FY 93 Only – Includes Overtime |
| F&W Technician II (short term) | 4.0 | $16.6 | FY 93 Only – Includes Overtime |
| F&W Technician II (short term) | 2.0 | $8.3 | FY 93 Only – Includes Overtime |
| Program Managers | 7.0 | $15.0 | FY 93 Only |
| Analyst Programer IV | 0.5 | $2.7 | FY 93 Only |
| Analyst Programer II | 0.5 | $2.1 | FY 93 Only |
| Publication Specialist II | 0.5 | $2.2 | FY 93 Only |
| FRED DIVISION TAG LAB PERSONNEL | | | |
| Analyst Programmer | 7.0 | $35.8 | FY 93 Only |
| F&W Technician III | 7.0 | $24.0 | FY 93 Only |
| F&W Technician II (perm season) | 15.5 | $48.4 | FY 93 Only |
| F&W Technician II (non perm) | 6.0 | $12.0 | FY 93 Only |

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NARRATIVE PRESENTATION TO PAG WORK GROUP 1/4/93
By
C.W. Totemoff

My name is Chuck Totemoff and I serve as CEO of Chenega Corporation. I acknowledge conflicting roles as a member of the PAG representing ANCSA Corporation landowners and as representative of five ANCSA corporations seeking to form a joint venture to contract part of the PWS restoration work. Today I want to discuss our joint ventures' intended positive impact on PWS restoration.

The Trustees have received a proposal for direct contracting from a joint venture of the Village corporations of Chenega, Tatitlek, Port Graham, and English Bay. They have also received a proposal from Chugach Alaska Corp. to form the Chugach Resource Management Agency, (hereafter CRMA) which intends to inventory contractible resources of manpower, equipment, and services in PWS and to direct agencies to appropriate resources. Since early December the five corporations have negotiated intensely to meld together the best points of these two previous proposals into a single new joint venture proposal. Let me describe this more efficient service entity which will provide **both organized resource inventories and direct contracting on some projects of mutual interest approved by the Trustees Council.**

Our management planning team currently consists of the following well qualified individuals; we will expand it with equally well qualified individuals as CRMA becomes operational;

**Michael Brown** has an M.S. in Meteorology and is a retired

Naval commander including service as Commander[ING] officer of the Naval Arctic Research Laboratory managing the ~~filed~~ field operations program for ~~Naval~~ FEDERAL research in North Alaska[redacted]. He later retired to become CEO of Piquinik, MANAGEMENT CORP a joint venture of several North Slope Native corporations which he a 10 year history of business successes in Alaska ~~such~~ as (~~Mike fills in here~~) A CONTRACTOR TO THE FEDERAL GOVERNMENT. Last year he joined Chugach Alaska Corp. as President; he has been very active in promoting the business aspects of PWS restoration and has experience in dealing with the Alaska business community.

I, Charles W. Totemoff, am President and CEO of Chenega Corporation. I have held management positions with Chenega Corporation since 1988. I have been on the Chenega Corporation Board of Directors for 6 1/2 years. I have devoted the past 4 years of my professional life in responding to the oil spill and its devastating aftermath on my community, Village Corporation and the spill impacted areas. Management experiences during the past 4 years have included management of sediment gathering programs, monitoring clean-up, archeological and cultural resources protection, management of Exxon-Chenega Corporation clean-up contracts in excess of $1.5 million dollars, State local response programs in excess of $500,000, management of meteorological studies involving data gathering, and management of logistics for some of the restoration studies. In addition, Chenega Corporation has also been involved in licensing programs with the Alaska Department of Fish & Game with regard to research stations on Chenega Corporation lands, and I have managed the Chenega

Corporation portion of those programs. I also assisted in the development of numerous suggestions to the Trustees Council for work plans for 1993, including the Chenega and Chinook and Coho programs, subsistence studies program, spring 1993 assessment programs, and other programs. I have considerable experience in dealing and representing communities throughout the Prince William area.

**Tyler Jones**, Bachelor's in Organizational Management, Alaska Pacific University, is a consultant on marine and business management; formerly he was Chief of Staff to Senator Mike Gravel and Director of the Port of Anchorage. He has a unique Alaskan experience in government transportation and logistical management. **(Add more)**

**Thomas R. Fink** has a Ph.D in physical and biological chemistry from Yale University. After university teaching and industrial research, he joined ARCO Alaska 14 years ago as chief environmental officer reporting to the President or Vice-President for External Affairs which enables him to deal with both the physics of engineering and practical field operations and also technical and regulatory aspects of environmental protection and restoration. For 9 years, Dr. Fink had oversight responsibility for all ARCO environmental programs and managed many of those out of the Anchorage head office. He is one of the most experienced senior environmental manages in the state. He will be responsible for advising our venture on all aspects of planning restoration activity and technical environmental quality control of our

operations.

CRMA's primary advantage to the PWS restoration effort is its intention to capitalize on our personnel and equipment already being close to the sites of much restoration activity enabling us to provide quality services more cost effectively than our competition. We will be able to move equipment and people rapidly from one restoration site to another thus reducing duplication of personnel and equipment and associated environmental and financial impacts.

Other benefits to consider about our joint proposal are:

1. Local residents will have the satisfaction of their own participation in restoration since we intend to include in our inventory everybody in PWS willing to work who has the equipment or the skills.

2. There are possible opportunities for 93-638 contracting.

3. This local participation is envisioned in Chenega Village etal, settlement and in various statutes.

Right now CRMA needs a refined scope of work for each of the projects to assemble an inventory of relevant resources. CRMA must continue communication on detailed work scopes with agencies as we develop inventory and they refine work plans. This will yield better work scopes based on the realities of PWS logistics and a more relevant inventory based on a better understanding of what is needed. (If asked what this means say that, by example, informal communication with USF&W indicates they have sufficient Boston

Whalers for sea otter and bird surveys, but probably need a dormitory vessel for March, so CRMA is looking for a suitable dormitory vessel, but not Boston Whalers). CRMA requests that agencies cooperate actively on facilitate communication.

We envision the CRMA inventory as a continuously updated as equipment or personnel are available or unavailable or as requirements change. By matching the inventory with the requirements of the work scopes CRMA intends to maximize cost effectiveness of inventory effort to searching out appropriate equipment and personnel.

We also will be prepared to contract and subcontract directly for individual project arrangements. As necessary we will identify and retain technical experts to plan and to exercise control over certain contracted functions.

**DO NOT OVER EMPHASIZE** If needed, insert here example of technical expert use like:

Dave Schmidt, Fishery Biologist with Dames & Moore, experienced in monitoring of marine organism impact with EVOS. he is qualified to translate work scope of Subsistence Restoration Project (93017) into filed work plan, supervise field work of study, and execute data analysis. There is considerable local interest in Chenega in this project and we are confident that, with Schmidt's help, CRMA could execute the field work - Give examples of local Chenega personnel who could help.

In summation, Chugach Resource Management Agency (CRMA), with government agency cooperation in fully understanding project work scopes, will be prepared to effectively inventory contractible resources and to contract directly to execute certain project functions or even complete projects.

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# CHENEGA CORPORATION

Post Office Box 60
Chenega Bay, Alaska 99574-0060
(907) 573-5118


MEMORANDUM

TO: Public Advisory Group

FR: Charles W. Totemoff, Native Landowners Representative

RE: EVOS Restoration Projects' Comments

DATE: January 6, 1993

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**Project No. 93002: Sockeye Overescapement.**

This project appears to be one of an abundance of fish in 1989. The plan is to study the Kenai Peninsula, Tustumena and Kenai River Lake system; also Kodiak and Red Lake system. The proposal is merely to collect data. Its high priced, $714,600. We believe that the Red Lake project makes sense; however, we are concerned about what appears as a disproportionate amount of money spent on indirect effects the Kenai River area.

Suggestion:

Why not cut down a little bit on the Kenai River Lake system and include additional research at Eshamy and Jack Pot re: sockeyes?

**Project No. 93003: Effect of Oil on Pink Salmon Eggs.**

The budget is for a two year cycle at $686,000 total, including contractual of $200,000. This project appears to involve work through PWSAC, and is certainly of importance to the entire oil impacted area.

**Project No. 93004: Preservation of Wild Populations of Pink Salmon Impacted by EVOS.**

The budget is $899,000, including $168,500 contractual. These take place in the Cordova area. No specific areas have been identified, however. However, the important thing about these studies is that they appear to relate to the health of the wild stock and the impact of oil. The write up is a little bit confusing. Please tell us where the streams are, and what information is anticipated to be collected.

**Project No. 93005: Cultural Resources Information, Education, and Interpretation.**

This is a six month project with a budget of $399,400. The proposal is to let the public know about the value of cultural heritage information preserved in archaeological sites. Basically, it is not clear whether the purpose is to explain what is valuable or what is archaeological. ADNR proposes to organize and promote, from oil spill affected communities, groups to go out and conduct archaeological work. This is extremely sensitive; the affected Native community ought to be able to contract their own archaeologists to conduct mitigation efforts without public involvement. We suggest that grants be provided to the affected ANCSA Corporation, Tribes under ARPA, to hire archaeologists to undertake the mitigation efforts in conjunction with ADNR oversight.

**Project No. 93006: Sites of Specific Archaeological Restoration.**

The budget for this project is $259,000. This is a nine year program involving monitoring, restoration assessment, field work, and proposed restoration assessments and treatment actions. We note that the environmental compliance description requires compliance with the Historical Preservation Act, the Archaeological Resources Protection Act, and the Native American Graves and Repatriation Act. The United States Forest Service and the Department of the Interior are both involved. Thus it is necessary to consult with the Native landowners, as a matter of law. The Pacific Rim Village Coalition joint venture proposal contains information on these acts and their relationship to cultural resources. Specifically, the Federal agencies, and to the same extent the State agencies, must consult with the Native landowner. In addition, contracting could be required. It is unclear how implementation of the program will occur in light of the environmental compliance section. The idea is important; the manner of implementation is unknown. The agencies must be aware that, Natives already suffered the oil spill's impact on cultural resources, ANCSA land owners must be an integral part of cultural resources restoration and protection work.

**Project No. 93007: Archaeological Site Stewardship Program.**

This program focuses on training local residents to protect archaeological resources and obtaining agreements with private landowners and agencies to participate in the stewardship program. Personnel is high at $94,000 and contractual is $46,000. The total budget is $194,000 for a two year program. Again, we believe that

the personnel costs might be cut down in favor of direct contracting for protection and stewardship with ANCSA land owners.

**Project No. 93008: Archaeological Site Patrol and Monitoring.**

The budget for this project is $297,000, of which $117,500 is contractual. This program is to be coordinated with the Archaeological Site Stewardship Program. Environmental compliance requires the consultation requirements previously discussed. Alot of the program involves watching certain sites by patrol and monitor. Annual reports are required. Who will be the field personnel? How will this be controlled? The project is necessary; implementation should involve ANCSA corporation consultation and involvement at every step of the way.

**Project No. 93009: Public Information, Education and Interpretation.**

Budget: $316,700

This project involves public information outreach in order to inform and educate the public on the effects and impacts of the Exxon Valdez oil spill and to enhance eco-tourism.

The program is presently slated with an emphasis on the communities of "Valdez, Whittier, Cordova, Seward, Homer, Kodiak, and the Municipality of Anchorage." Public information should emphasize interested Native communities in the spill impact area. Alaska corporation have cooperated in the past with the governments and have worked with the National Park Service (Port Graham and English Bay) and the Alaska Department of Fish & Game and the USFS (Chenega). One of the problems with this project is that it will more than likely (because the state and NPS involved) involve use of ANCSA lands, whether intentionally or not. It also is a source of advertising of ANCSA ownership interest and perhaps tourism projects.[1]

**Project No. 93010: Reduce Disturbance Near Murre Colonies.**

The budget for this project is $56,800. This is probably a really good project. It seems to affect the Port Graham, English Bay, as well as the Chignik Bay areas.

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[1] We note that a DEC publication made available to the public several years ago depicted oil damaged beaches in PWS, the Kenai Peninsula, Kodiak and the Alaska Peninsula. No mention was made of the fact that the uplands were privately held by ANCSA corporations. We are concerned that such future publications serve to educate the public on private rights, as well.

**Project No. 93011: Harvest Guidelines to Aid Restoration of River Otters and Harlequin Duck.**

Harlequin Ducks are of importance subsistence wise. The total budget is $11,200. Basically, what is proposed is to make recommendations on season and bag limits to the Board of Game. There ought to be more local community input as a part of this function. The local advisory groups for the Board of Game must be consulted as a part of this process.

**Project No. 93012: Genetic Stock Identification of Kenai River Sockeye Salmon.**

The budget for this project is $300,600.

We are uncertain how this project is distinguishable from 93002. It also seems like it is expensive and far removed. How does this project relate to the restoration program?

**Project No. 93014: Quality Assurance for Coded Wire Tagged Application and Fish Restoration Project.**

The budget for this project is $94,800. The purpose of this is to study the coded wire tag system. We believe training should include assisting local employment. We support this project, which also examines the effects of an oil spill.

**Project No. 93015: Kenai River Sockeye Salmon Restoration.**

The budget for this project is $732,600. Why is this needed? Basically, it looks as if ADF&G wants to replace some escapement monitor equipment.

**Project No. 93016: Subsistence Restoration Project.**

This is a combination project between the ADF and NOAA which has a two year life and a budget of $360,000, of which $135,000 is contractual. It is sort of a blow up of an earlier Chenega proposal. There is some coordination and community mapping. However, it is again going to be from outside the community looking in. The project does include all of the affected Native villages. However, personnel could be reduced in favor of local hire, with oversight by the agencies.

**Project No. 93017: Subsistence Restoration Project**

Funds Available: $360,300 of which $135,000 is presently contractual.

This is a two year study to restore subsistence use of fish and wildlife damaged by the Exxon Valdez, and includes community meetings to identify and map specific areas and resources of continued concern to subsistence users. Some of our members have started auto-cad mapping their lands. It would seem that this would certainly assist in presenting a focused approach to the Trustees Council, and establish a past pattern. In addition, the project includes, at least in part, Chenega's proposal for funds to be made available to support subsistence food sharing program between communities. Further, samples will be collected, and there will need to be imputing with regard to the planned 1993 spring shoreline survey.

The "How" section of 93017 is especially important. Discussion concerns "involving subsistence users and decisions affecting mitigation ...." and also discusses the subsistence study. We support this project. We also believe that data and resources owned by the ANCSA corporations may be available, and ANCSA corporations must be consulted regarding work scope.

**Project No. 93018: Enhanced Management of Wild Stock, PWS, Emphasis on Cutthroat Trout and Dolly Varden**

Budget: $285,300 - 18 months

This project would involve monitoring of weirs, obtaining scales, and so on. The areas include Native corporation owned lands (for example, Eshamy Lake which is surrounded by Chenega lands). The program is oriented towards sparts fishermen. However, the agencies do need to consult with the ANCSA corporations regarding access, and the public needs to be educated regarding the fact that the habitat impacts, to a large extent, riparian and littoral interests of ANCSA corporations.

**Project No. 93019: Mariculture Project.**

This project seeks to <u>restore</u> services by introducing a new technology in order to restore or enhance populations. It is strongly supported by the Chugach area villages and village corporations. A State AG legal opinion was requested.

**Project No. 93022: Evaluating the Feasibility of Enhancing Productivity of Murres by Using Decoys, Dummy Eggs, and Recording of Murre Calls to Stimulate Normal Densities at Breeding Colonies.**

The budget for this project is $281,000. Even Dr. Speese liked this one.

**Project No. 93024: Restoration of Coghill Lake Sockeye Salmon Stock.**

The budget for this project is $191,900. This is a pretty complicated study in order to figure out all sorts of things about sockeye. Our question is, why are you proposing so much to study Kenai River Sockeye, and so little to restore sockeye in PWS?

**Project No. 93025: Montague Island Chum Salmon Restoration.**

Budget: $81,500

The project appears worthwhile and is supported.

**Project No. 93026: The Fort Richardson Hatchery Water Pipe.**

The project total is $3,617,000. There are even typos in the **WHEN** (which starts at 1992 and ends in 1984). We fail to see how this project is oil spill restoration oriented.

**Project No. 93028: Restoration and Migration of Wetland Habitat for Injured Prince William Sound Fish and Wildlife Species.**

We need further information concerning this project which involves fixing a water course. It is not altogether clear what is intended to be accomplished.

**Project No. 93029: Prince William Sound Second Growth Management**

This project is intended to inventory data bases, habitat, and to improve habitat for "pink and chum salmon harlequin duck, marbled murrelet, river otter and bald eagle. It may involve acquisition of habitat and is important from a land owners perspective as well as for the public perception of restoration of critically injured habitat.

**Project No. 93030: Red Lake Restoration (Kodiak Island).**

Budget: $77,200

Perhaps the money should be transferred from 93002 to Red Lake and reduce the Kenai River and Lake system's attention.

**Project No. 93031: Red Lake Mitigation for Red Salmon Fishery.**

Budget: $153,700

The project is intended to improve a hatchery, with a large percentage of the budget going to equipment.

**Project No. 93032: Pink and Cold Creek Pink Salmon Restoration.**

Budget: $36,000

This proposal is to evaluate pink salmon escapement, bypass bariers and evaluate fish passage through barrier bypasses. It appears to address short term needs and is thus an important part of the overall restoration effort.

**Project No. 93033: Harlequin Duck Restoration Monitoring Study in PWS, Kenai, and Afognak.**

Budget: $717,900

All ADF&G. The project is fairly technical, but is intended to characterize nesting habitat, reproductive failure, and whether or not reproductive failure exist elsewhere than western PWS, i.e.: the Kenai coast and Afognak Island. It therefore is land specific, important to subsistence users, and should involve ANCSA corporation consultation.

**Project No. 93034: Pigeon Guillemot Colony Survey.**

Budget: $165,800

The purpose of this study is to conduct a colony census and to figure out how badly damaged the populations are. The areas include, Naked Island and Afognak Island. The location of most of the study will be primarily focused in the Western PWS. This seems to be an important study, with the identification and mapping of the colonies within the area of the EVOS. We believe uplands use will occur. Therefore, Native landowner consent is required. Question: Is this a habitat acquisition study?

**Project No. 93035: Potential Impacts of Oiled Mussel Beds on Higher Organisms**

This is another Fish & Wildlife Service sponsored study. It, however, ties into the oil musseled beds studies referenced above.

The information is important in order to obtain a further understanding of the adverse effects of persistent oil contamination. Chenega is an area with a high degree of persistent oil contamination. Although this study focuses on oyster catchers and harlequin duck, the source of pollution to be examined is oiled mussel beds. We believe that the study is imperative. We would also suggest studies on the effects of persistent oiling on octopus. Octopus are also a primary food source of harbor seals. The less octopus, the less harbor seal. Perhaps this interplay on persistence also should be examined.

**Project No. 93036: Recovery Monitoring and Restoration of Intertidal Oiled Mussel Beds in PWS.**

Total Budget: $404,800

This project involves the sampling of mussels and sediments for petroleum hydro carbon following a protocol established by NOAA and the DRDA process. In addition, there will be efforts to identify new areas of continued contamination. Presently, the National Parks Services surveying and sampling mussels and sediments along the Kenai Peninsula. It is anticipated that the project may be extended to the Kodiak area. This project is supported and is important, especially to the human populations in areas with continued contamination.

**Project No. 93038: Shoreline Assessment, Restoration Monitoring.**

Total Project: $520,700

This project is for a term beginning January 1 and ending September 30, 1993. It is divided into two phases; phase one is a physical survey of selected shoreline and phase two is restoration of land and resource uses by light duty pickup during and after survey. In addition "larger scale treatment work, if necessary, would be identified on work orders and restoration crews from Chenega, Port Graham or other areas would be hired to preform the identified work."

The areas include Knight, LaTouche, Evans, Errlington, Green and Disk islands in Prince William Sound and Tanzina Bay, Windy Bay and Chugach Bay in the Gulf of Alaska.

Chenega Corporation successfully bid upon Exxon clean-up contracts in 1991 and 1992. Further, additional determination is planned for clean-up of oiled mussel beds and the 1993 spring survey of mussel beds (93036, see infra). Further, the Trustees Council allows for additional funds to expand the effort.

This project is very important and both to the health of the resources as well as the residents of contaminated areas. Any restoration-related activities on or adjacent to ANCSA lands should also involve the consent and consultation requirements. In addition, the project, upon completion, if maps are created, should identify individual ANCSA corporation ownerships.

**Project No. 93039: Herring Bay experimental and Monitoring Studies.**

Budget: $507,000

This study focuses on fucus and limpets. It is especially concerned with the Herring Bay area. It is proposed that there will be 3-4 10 day visits to the Herring Bay area during the summer low tide, with equipment. It's an ADF&G project and the contractual amount is $478,700. The study will look at other invertebrates, including barnacles. Question: Is data to be examined from any other areas, or will there be extrapolations? It's an important study. What is planned for follow-up?

**Project No. 93041: Comprehensive Restoration Monitoring Program Phase 2: Monitoring Plan Development.**

This is to design the monitoring component of the restoration plan. It's going to be looking at a number of different flora and fauna groups as well as archaeological resources that were injured. Basically, it's going to involve "monitoring". It is thought that resources and services that are not recovering quickly will be used as candidates for restoration actions and resources and services that are found to be recovering faster than anticipated may allow for an earlier completion of the restoration end point. The problem is, what are you studying, where are you going to study? Is the budget sufficient?

**Project No. 93042: Recovery Monitoring of PWS Killer Whales.**

Budget: $127,000

This is a study project, again. It is importance from an aesthetics stand-point, the importance of a feeling of well being by residents, and the need to restore such services. That is, killer whales are beautiful animals and native to PWS waters.

**Project No. 93043: Sea Otter Population Demographics and Habitat Use in Areas Affected by the EVOS.**

Budget: $291,900

This study looks at what happened to the sea otters, and whether or not areas ought to be purchased for sea otter habitat for possible protection. It's an interesting project.

**Project No. 93045: Surveys to Monitor Marine Bird and Sea Otter Populations.**

Budget: $262,400

This is a boat survey program. Purpose is to figure out whether marine bird and otter populations are recovering. Also to look at habitat protection. The project is a worthy study, and is supported.

**Project No. 93046: Habitat Use, Behavior and Monitoring of Harbor Seals in PWS**

Budget: $230,500

The project will involve aerial surveys and visits to Chenega Bay and Tatitlek once a year to discuss "survey results with residents." It is recognized that seal is important for subsistence purposes, but aerial visits do not appear to provide sufficient information. We know there aren't many harbor seals. Did they die or leave? Besides looking at food sources and source contamination, why not involve the affected communities more? <u>See also</u> comments to Project No. 90035 - octopus populations should also be examined, the effects of oil persistence on harbor seals directly <u>and</u> indirectly should be examined. In addition, Native community input is very important. The project, as structured has little to no involvement. We also have information to share, and concerns.

**Project No. 93047: Subtidal Monitoring Recovery of Sediments**

Total Budget: $1,700,000

An important project, which appears ready to identify oil persistence and toxicity. This project involves recovery of hydrocarbons and subtidal sediments over a two year period. Oiled sites include Chenega's Sleepy Bay require such heavily oiled sites and Port Graham's Windy Bay. We recommend additional upper tidal research.

**Project No. 93050: Update Restoration Feasibility Study No. 5.**

Budget: $10,200

Purpose is to add additional information to the existing DNR data base, which will be made available to the public. The information should be useful to any modifications to the restoration plan. However, private landowners should be identified.

**Project No. 93051: Habitat Protection Information for Anadromous Streams and Marbled Murrelets.**

Budget: $1,179,800

Purpose is to obtain information on habitat protection and acquisition. This is an important project for ANCSA corporations. It's unclear what is planned, however.

**Project No. 93052: Identification and Protection of Important Bald Eagle Habitats.**

Budget: $188,000

See comments to Project No. 93051. Mapping and GIS are also anticipated. Jurisdictional ownership should be included.

**Project No. 93053: Hydrocarbon Data Analysis, Interpretation, and Database Maintenance.**

Budget: $105,500

The purpose is to gather hydrocarbon data of areas affected by the oil spill to figure out whether or not oil is weathering. This is a pretty complicated project, but it could be very important from a recovery standpoint. What is the reporting period? How is data anticipated to impact the Restoration Plan. Why such a limited study?

**Project No. 93057: Damage Assessment GIS.**

Again, this would be useful for the purposes of land acquisition and habitat acquisition and protection. The more GIS is developed the more information the Trustees will have to work on injured resources restoration. However, ANCSA corporation ownership must also be described.

**Project No. 93059: Habitat Identification Workshop.**

Budget: $42,300

It appears that the basic point of this program is to figure out when habitat is necessary to be protected and acquired, and where the immanent threats are. It's data gathering, and the cost is $42,300. It will be strictly contractual. The parameters are not clear.

**Project No. 93060: Accelerated Data Acquisition.**

The purpose of this program is to put together in a quicker fashion a data base with numerous layers, each of the layers to be worked on by various agencies. The total cost is $43,900, all of which is contractual. The goal is to accelerate the habitat protection and acquisition office by collecting an organized resource data to evaluate habitat protection and acquisition proposal.

Many of the data base layers appear important for restoration planning and assessment. It's not a big ticket item, and would certainly assist with implementation of a restoration plan. When and what data will be made public? What are the plans are for analysis? How will the data be analyzed? How often will it be updated? And what are the criteria?

**Project No. 93061: New Data Acquisition.**

Budget: $535,000

This a 9 month project. The idea here is to evaluate habitat protection and acquisition proposals, to develop new data to evaluate such options, including long term protection and acquisition of habitat. See questions to 93061. This project is supported.

**Project No. 93062: Restoration GIS.**

Budget: $138,400

The purpose of this project is to provide statistical and spacial analysis and GIS mapping support for "approved restoration projects". Does this include all restoration projects? It should. It looks like an interesting program, and develops a series of themes for habitat protection.

**Project No. 93063: Survey and Evaluation of Instream Habitat and Stock Restoration Techniques for Anadromous Fish.**

Budget: $59,400

This project is going to develop proposals and designs for instream habitat and stock restoration projects. It's more study in order to figure what other project designs can be implemented with regard to restoration of anadromous streams. The idea is to retrieve equipment, analyze data, collect additional engineering design data and prepare new project proposals. It is unclear, however what the point is.

**Project No. 93064: Habitat Protection Fund**

The project term is to begin on October 1, 1992 and there's no date set to end. What are the plans with regard to habitat protection and acquisition? Is this a project which will require annual funding? Or is this a sinking fund?

**Project Title: Coordinated Recreation Restoration Planning and Assessment.**

This is the Alaska Park Service Proposal. It is strongly supported by Chenega Corporation, Tatitlek Corporation, Port Graham Corporation, English Bay Corporation and Chugach Alaska Corporation. The idea, to involve ANCSA corporations in public recreation and environmental restoration, is sound public policy.

**Project title: Chugach Resources Management Agency.**

This is now a joint proposal involving a facilitating restoration projects and direct contracting. The request for direct contracting is not a new proposal, but rather, is intended to

implement settlements and laws. We are encouraging the PAG to encourage the Trustees and the agencies. The proposal also involves a comprehensive methodology for facilitating work project equipment and other needs. It is suggested that the CRMA would constitute a basic method of reducing project costs, and at the same time, assure that work is carried out efficiently, by interfacing agency needs with regional support groups.

CWT:cb/pr/1-4.mem

# OIL SPILL TRUSTEES
# PUBLIC ADVISORY GROUP
# PRINCE WILLIAM SOUND WORK GROUP

## PRESENTATION

## CHUGACH RESOURCE MANAGEMENT AGENCY PROPOSAL

**PURPOSE** - Combine resource inventory and direct contracting concepts

**ORGANIZATION**

- Four village corporations from the Chugach Region
  Chenega - Tatitlek - Port Graham - English Bay
- Regional Native corporation - Chugach Alaska Corporation

**ADVANTAGES**

- Proven and experienced management team
- Experienced consultants/advisors
- Proven field personnel in the villages
- Local, cost effective employment and equipment
- Local residents participation in PWS restoration
- Opportunity for direct contracting as envisioned by Chenega settlement

**COORDINATION**

- Agencies provide CRMA with refined project scope of work information
- Relevant resource inventory will be provided based on realistic PWS conditions
- Additional technical resources can be located and provided
- Management of direct contracts with village organizations/resources

**EXXON VALDEZ OIL SPILL TRUSTEES**
**PUBLIC ADVISORY GROUP**

## RESOLUTION

Whereas:

The Public Advisory Group has been reviewing, commenting on and voting on various projects proposed for inclusion in the 1993 Work Plan;

Proposals not included in the 1993 Draft Work Plan have been presented to the Public Advisory Group for consideration;

The Chugach Resource Management Agency (CRMA) is a new project proposed for 1993 which was not included in the 1993 Draft Work Plan;

The CRMA will identify available project-related resources in the Prince William Sound area for all state and federal agencies involved in oil spill restoration;

The CRMA will involve Prince William Sound area residents in the restoration effort;

The CRMA will reduce the physical impact of the restoration effort by using locally available resources, facilities and equipment and it will coordinate assignment of locally available resources to eliminate or reduce logistics and procurement redundancy;

The CRMA will reduce restoration logistics and resource expenditures by using locally available resources to address spill impacts, creating financial efficiencies;

The CRMA will in some instances submit competitive proposals to perform 1993 Work Plan Projects.

Therefore:

1. The Exxon Valdez Oil Spill Trustees Public Advisory Group endorses the concept of the Chugach Resource Management Agency and encourages the federal and state agencies which support the Trustee Council to fund its resource inventory and project work scope support elements.

2. The Public Advisory Group recommends that federal and state agencies enlist the active participation of the CRMA in development of work scopes for approved projects in order to insure the creation of a relevant inventories.

# Table of Contents

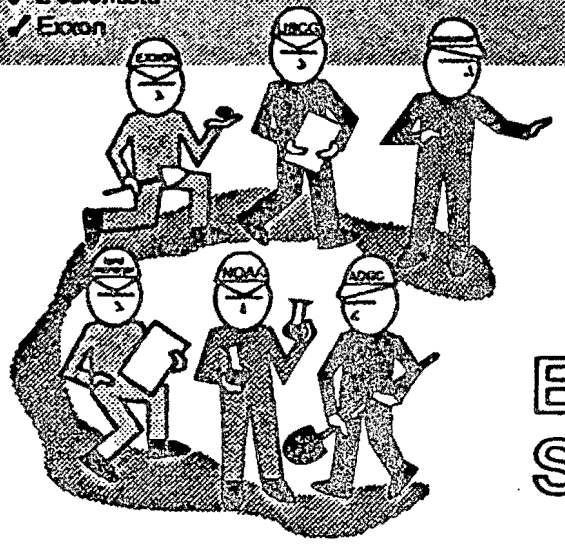


# Exxon Valdez 1990 Oil Spill Clean up Process

Graphic by
PA2 Kathleen Potter
Concept by
CWO2 Dan Dewell

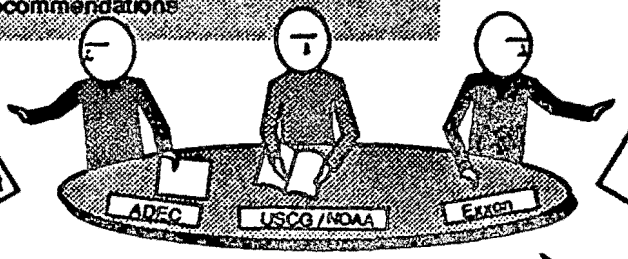
## Spring shoreline assessments

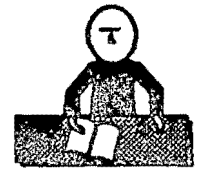
- ✓ FOSC, land & resource managers, and communities plan shoreline survey schedule.
- ✓ Shoreline surveys done by Spring Shoreline Assessment Teams (SSATs) consisting of:
- ✓ C.G. or National Oceanic and Atmospheric Administration (NOAA)
- ✓ Alaska Dept. of Environ. Conservation (ADEC)
- ✓ Land or resource manager
- ✓ 2 scientists
- ✓ Exxon




## Technical Advisory Group (TAG)

- ✓ C.G. or NOAA, ADEC, Exxon
- ✓ Reviews SSAT surveys
- ✓ Receives input from land and resource managers
- ✓ Develops shoreline treatment recommendations



Land & Resource Managers

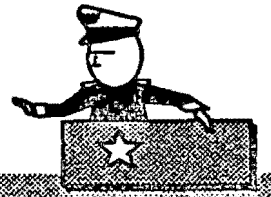
input

input

assessment

Proposed Exxon treatment plan/TAG recommendation

not approved

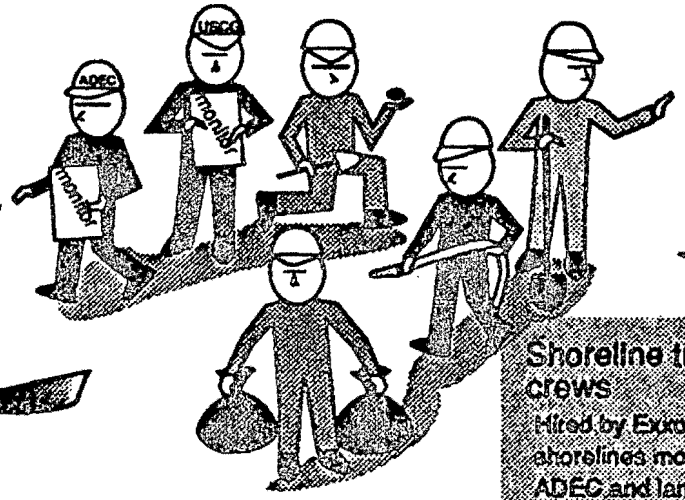


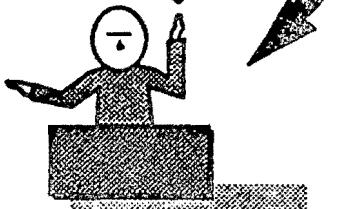
## Federal On-Scene Coordinator (FOSC)

- ✓ Receives treatment proposal
- ✓ Approves recommendation and sends it to Exxon or,
- ✓ Disapproves it and changes as necessary

approved work proposal

work order



## Exxon

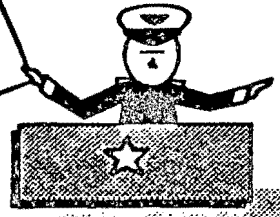
Writes work orders and tasks treatment crews

## Shoreline treatment crews

Hired by Exxon to treat oiled shorelines monitored by C.G., ADEC and land & resource managers

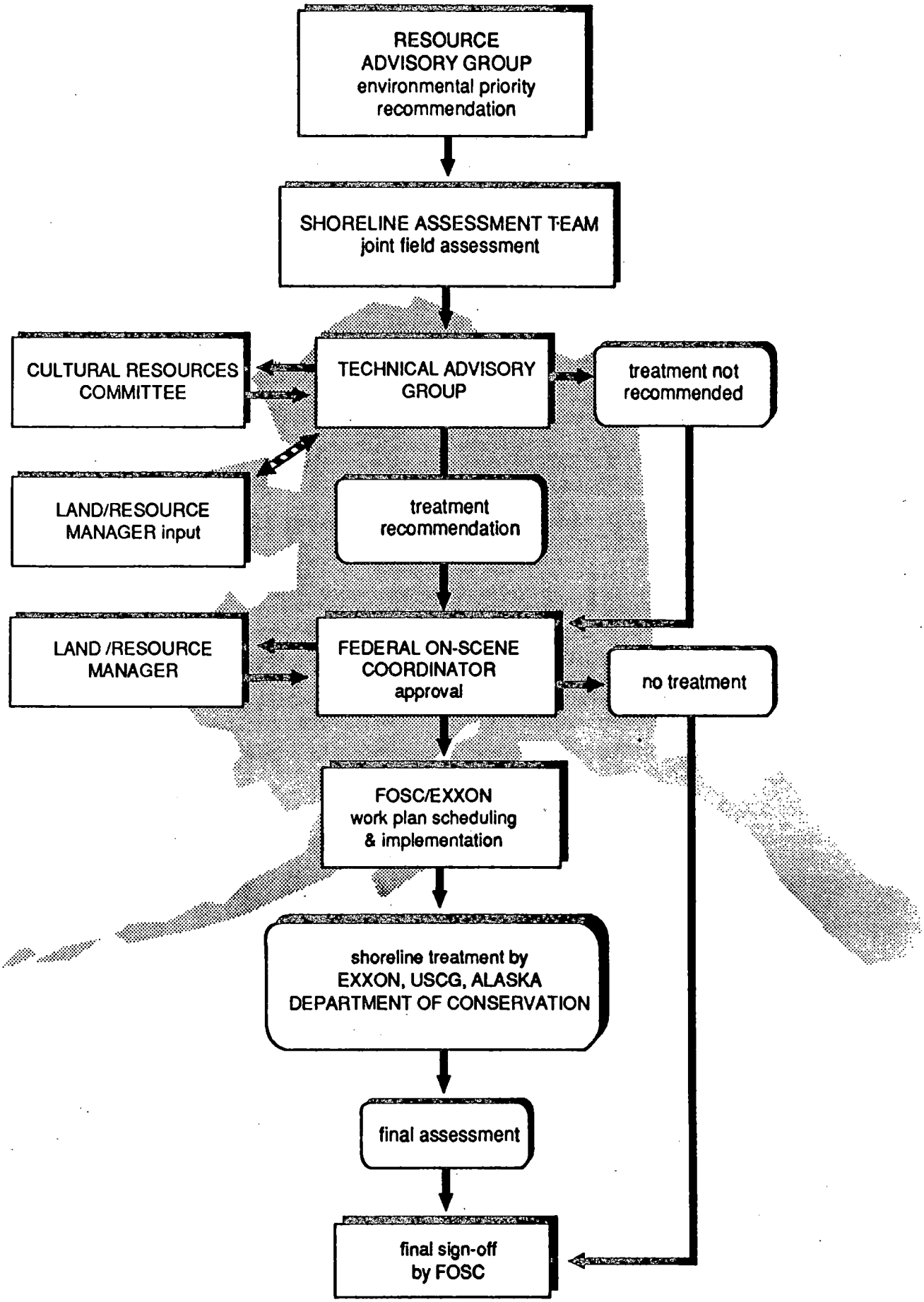
APPROVED

assessment

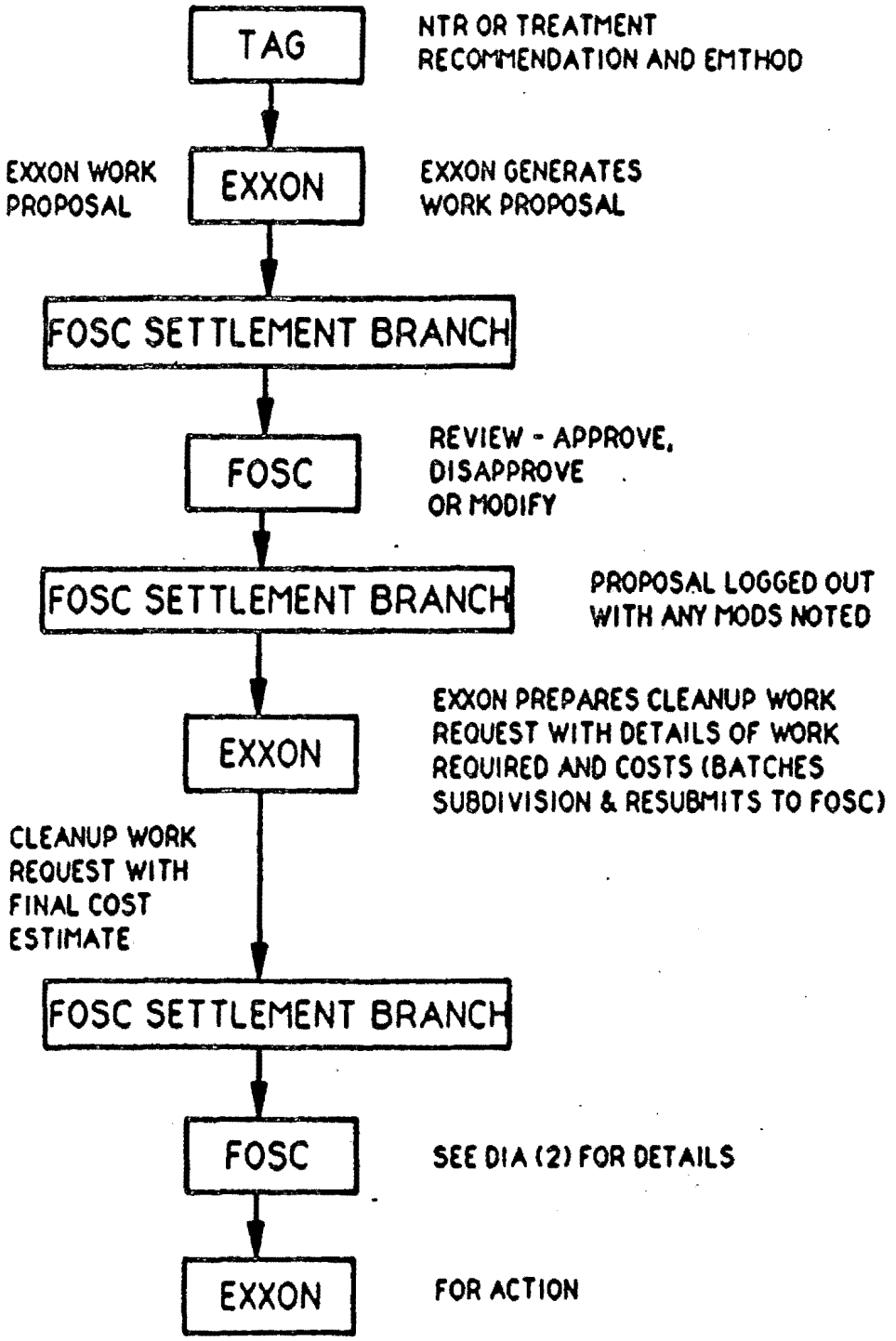


## FOSC reviews assessment for final approval

# Exxon Valdez Summer 1990
# Shoreline Decision Chart

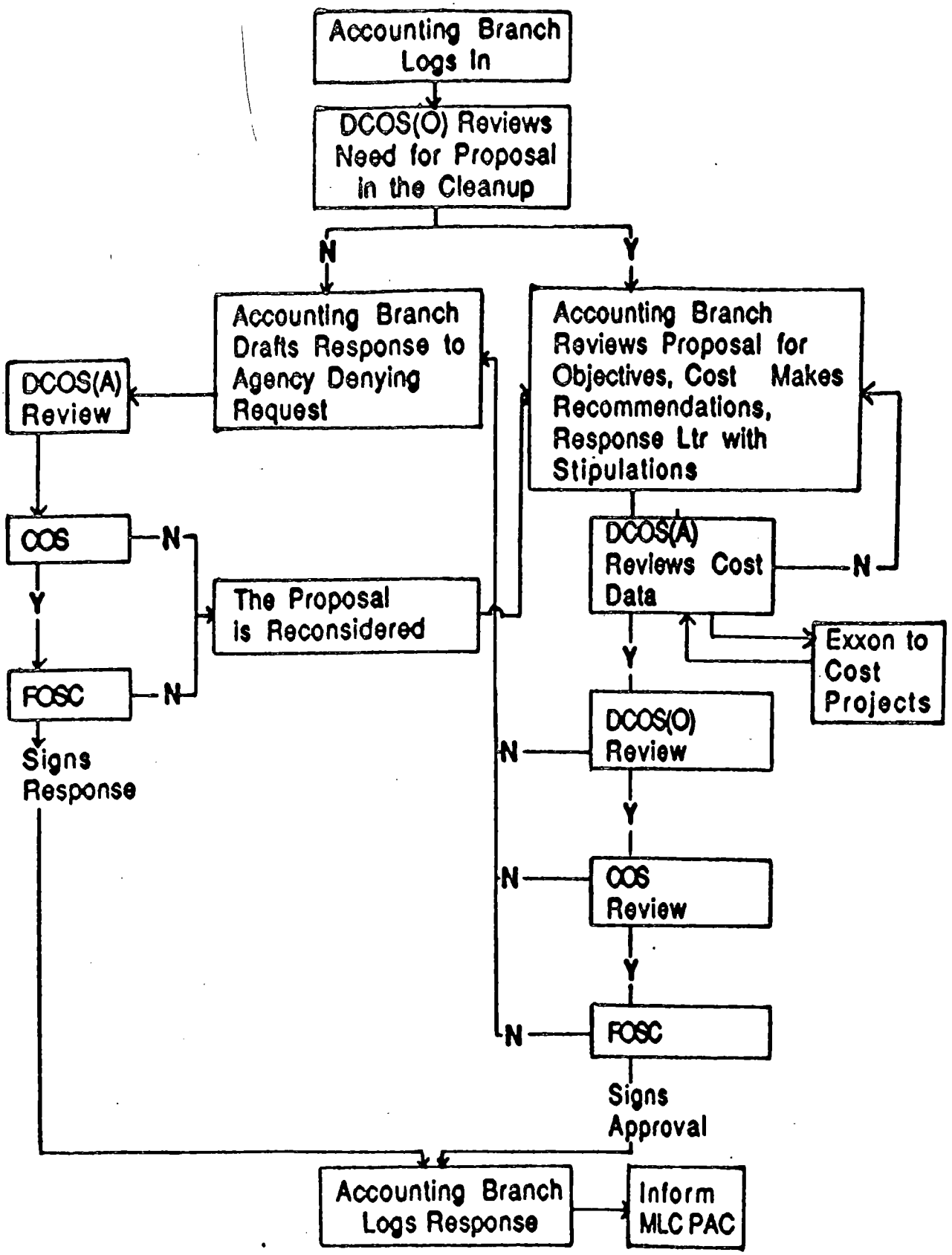


# SHORELINE TREATMENT REVIEW PROCESS

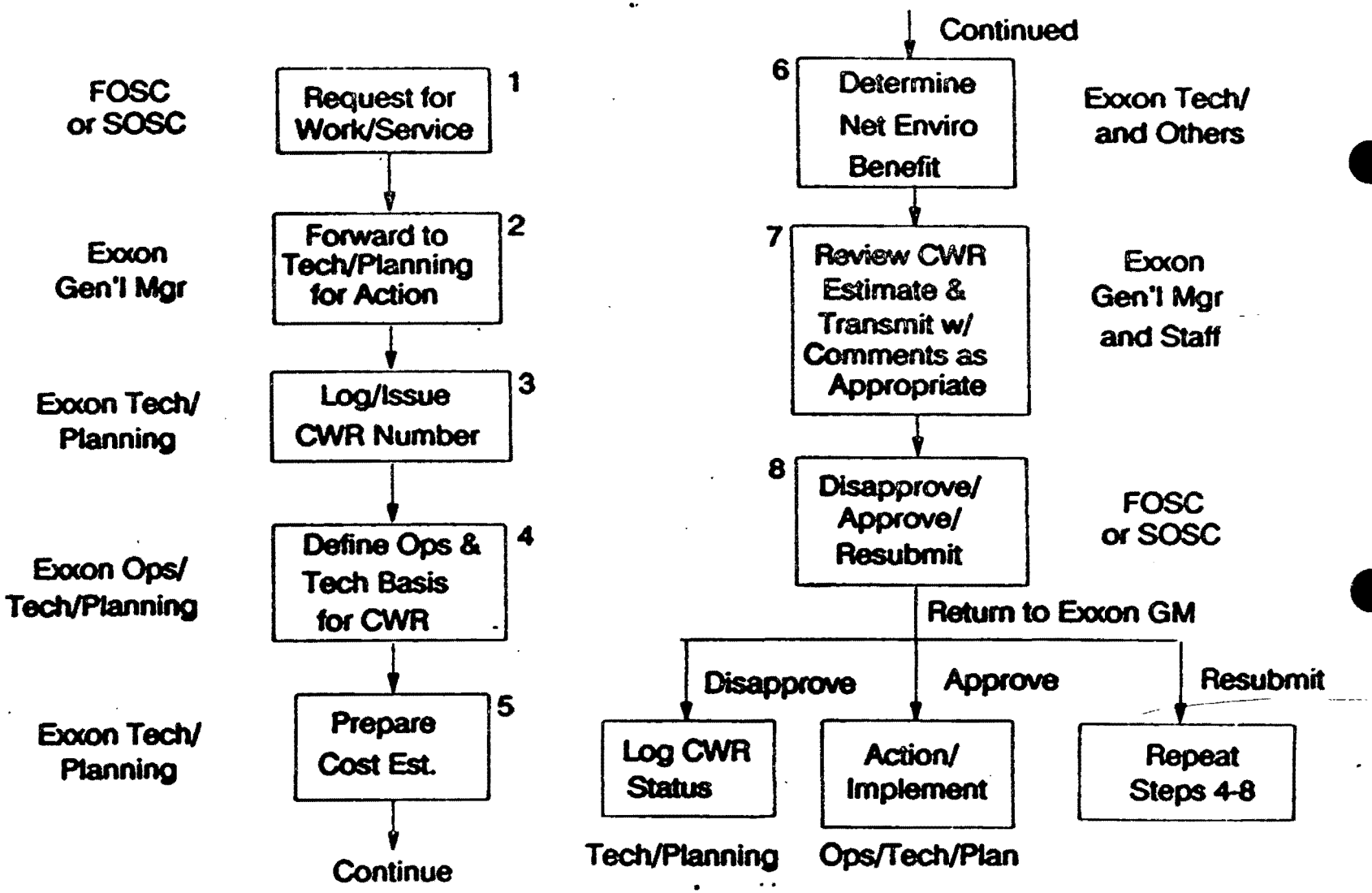



DIA (3)

# PROPOSAL REVIEW PROCESS



# CLEANUP WORK REQUESTS (CWR) APPROVAL/HANDLING PROCESS



# MAYSAP

# MAY SHORELINE ASSESSMENT PROGRAM

Report #12

5/20/91

# MAYSAP SURVEY PROGRESS REPORT

**Through 5/19/91**

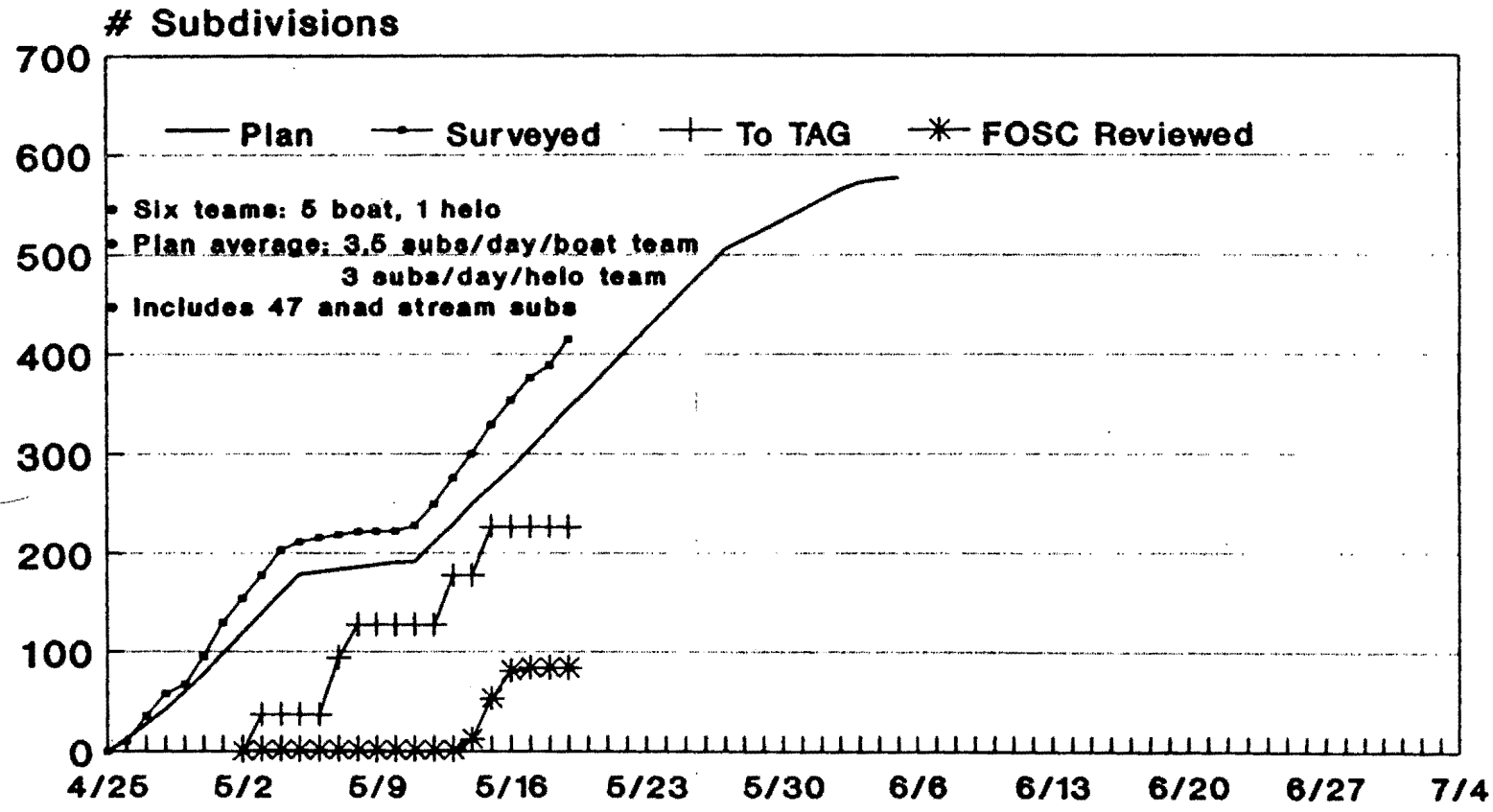
| | PWS | | GOA | | TOTAL | |
|---|---|---|---|---|---|---|
| | ACTUAL | PLAN | ACTUAL | PLAN | ACTUAL | PLAN |
| TOTAL SUBDIVISIONS SURVEYED | 341 | 291 | 74 | 55 | 415 | 346 |
| SUBDIVISIONS ON 5/19/91 | 19 | 14 | 7 | 6 | 26 | 20 |

| TEAMS IN THE FIELD ON 5/19/91 | | |
|---|---|---|
| | PWS | GOA |
| VESSEL BASED | 4 | 1 |
| HELICOPTER BASED | 0 | 1 |

| SHORELINE OILING (LINEAR MILES) | | | |
|---|---|---|---|
| | PWS | GOA | TOTAL |
| WIDE | 0.9 | 0.00 | 0.9 |
| MODERATE | 3.8 | 0.00 | 3.8 |
| NARROW | 4.5 | 0.07 | 4.6 |
| VERY LIGHT | 12.7 | 0.55 | 13.2 |
| NO OIL | 64.5 | 5.7 | 70.2 |
| TOTAL | 86.3 | 6.3 | 92.6 |
| SUBDIVISIONS MAPPED | 216 | 17 | 233 |

COMMENTS:

# 1991 MAYSAP
# SUBDIVISIONS SURVEYED/ASSESSED
# Through 5/19/91



# PROTOCOL FOR A FINANCIAL REVIEW OF FOSC APPROVED EXPENDITURES BY EXXON, USA ON THE T/V EXXON VALDEZ OIL SPILL FOR THE PERIOD

# JANUARY 1, 1991 THRU MARCH 31, 1992

**Objective:** To perform a financial review of Exxon's supporting documents for expenditures made by Exxon and pre-approved by the Coast Guard Federal On Scene Coordinator.

## A. BACKGROUND:

From 01 January 91 through 12 March 91, the Exxon Valdez Settlement Agreement allows Exxon to recover costs relating to the cleanup for an amount not to exceed $4,000,000. From 13 March 91 to the present, the FOSC has pre-approved Exxon's estimated cleanup expenses. Under the Settlement Agreement, Exxon will take a credit for expenditures made during these two periods against their 01 December 92 payment to the Trustees. These expenses are referred to as the "X" fund in the Settlement Agreement. After several meetings, the staffs from FOSC, G-MEP, G-LCL, G-CFM, NPFC(cf) and MLCPAC(f) concluded that a financial review of the "X" fund should be done to examine actual expenses. A review of "actuals" vs. "estimated" is consistent with good business practices. Accordingly, the Federal On Scene Coordinator will examine the actual costs and supporting documentation for the 1991 cleanup.

Paragraph 8(b) of the Settlement Agreement provides for an audit by the governments of Exxon expenditures incurred after 01 January 1991. This financial review is for the purpose of examining actual cost records for the FOSC and not necessarily to comply with Paragraph 8(b).

## B. REVIEW SCHEDULE:

1. The review will be performed at Exxon U.S.A.'s headquarters at 4550 Dacoma, Houston, TX 77092 during the period 07 April 92 through 15 April 92.

2. A Coast Guard team consisting of three members will perform the review. The team members will be:

CAPT Ralph Anderson, MLCPAC (f), Chief, Finance Division
Mr. Al Thuring, NPFC(cf-1), Chief, Fund Operations
CWO4 Larry Porter, FOSC(f&s), Fiscal & Supply Officer

## C. SCOPE OF REVIEW:

1. The review will cover expenditures incurred from 01 January 91 through 12 March 1991 (a maximum of $4,000,000), and for the period 13 March 91 through 31 March 92. At the conclusion of the review, a recommendation will be made for a review covering the period 01 April 92 through 31 October 92. A second review, if performed, could be accomplished after the October 92 accounting period cutoff which will be on or about 08 November 92. This will provide enough time for Exxon to prepare for the scheduled 01 December 92 payment.

2. Exxon costs for the Valdez spill, since 01 January 91, are segregated into three categories: "Law Group," "Asset and Disposal" and "Operations." The "X" fund referred to in the Settlement Agreement relates only to the actual cost of Operations and that is the only category to be reviewed.

## D. STATEMENT OF WORK:

1. There are approximately 9,000 invoices totalling approximately $30,000,000 subject to review, (see Enclosure 1). Labor transactions with Detail Codes of 143, 315, 316, 1421, 1422, 1424, 3401, 3402, 3511 and 3512, (see Enclosure 2), will be grouped separately from other invoices and each group will then be sampled in each of the cost levels, as shown in Enclosure 1, to determine compliance with pre-approved cost proposals. Non-payroll documents will be selected based upon the following for each Cleanup Work Request (CWR).

a. CWRs reviewed in their entirety:

(1) #3 Berm Relocation

(2) #4 Subsistence Study
(3) #5 CG Housing
(4) #6 NOAA
(5) #7 Inipol Purchase
(6) #8 Eagle Study
(7) #9 Seal Island
(8) #11 Bioremediation

b. refer to Enclosure 3 for the sampling criteria for CWRs #1, 10, 13 and 14.

c. refer to Enclosure 4 for the number of invoice samples to be taken in each cost category of labor documents and invoices for CWRs #1, 10, 13 and 14.

d. issues that will be addressed when reviewing labor documents are:

(1) the policy statement for charging Exxon company personnel to the project

(2) the costing of time sheets based on the number of hours worked each day, (such as, 8 hours one day, 16 hours the next)

(3) the location of personnel if not in Alaska

(4) consistency of reporting from location to location

(5) were people doing what they were employed to be doing

2. A judgmental sampling of invoices meeting the following criteria will also be performed.

a. <u>unusual vendor</u>: such as a payment to a vendor or type of vendor which does not appear to be in the "normal" range of a particular activity.

b. <u>invoice dates</u>: such as invoices dated prior to January, 1991. Invoices will be reviewed to determine if services or products were rendered before or after 13 March 91 to account for costs in the proper period.

c. unusual invoice price for a vendor: such as a noticeable difference in the amount that a given vendor normally would reflect on an invoice.

d. credit invoices: all credit invoices in excess of $1,000 will be reviewed to ensure proper handling.

e. Exxon's Detail Codes 338 and 345: the titles of these two codes are "Contributions" and "Grants" respectfully.

## TRANSACTIONS (QUANTITY AND COST) BY CWR

| PROGRAM NAME | | INVOICES >$10,000 | INVOICES $1,001 - $10,000 | INVOICES $101 - $1,000 | INVOICES $0-$100 | CREDITS | TOTAL |
|---|---|---|---|---|---|---|---|
| BERM | # OF INV.--> | 4 | 2 | | | | 6 |
| | $ AMOUNT--> | 84,739 | 8,368 | | | | 93,107 |
| BIO | # OF INV.--> | 9 | 12 | 8 | 5 | | 34 |
| | $ AMOUNT--> | 489,123 | 45,897 | 3,057 | 154 | | 538,231 |
| CLEAN | # OF INV.--> | 181 | 333 | 546 | 920 | 68 | 2,048 |
| | $ AMOUNT--> | 8,962,983 | 1,253,360 | 184,520 | 28,753 | (267,797) | 10,161,819 |
| CG HOUSING | # OF INV.--> | | 8 | 4 | 8 | | 20 |
| | $ AMOUNT--> | | 12,020 | 1,886 | 438 | | 14,344 |
| EAGLE | # OF INV.--> | 1 | 1 | | 2 | | 4 |
| | $ AMOUNT--> | 29,432 | 1,627 | | 112 | | 31,171 |
| INIPOL | # OF INV.--> | 3 | 3 | 2 | 1 | | 9 |
| | $ AMOUNT--> | 93,724 | 11,418 | 450 | 51 | | 105,643 |
| MAYSAP | # OF INV.--> | 314 | 1,528 | 1,967 | 3,093 | 163 | 7,065 |
| | $ AMOUNT--> | 14,305,492 | 4,279,268 | 720,689 | 112,038 | (205,759) | 19,211,728 |
| NOAA | # OF INV.--> | 3 | 9 | 4 | 3 | | 19 |
| | $ AMOUNT--> | 52,935 | 15,799 | 1,157 | 100 | | 69,991 |
| SEAL | # OF INV.--> | 1 | | | | | 1 |
| | $ AMOUNT--> | 13,665 | | | | | 13,665 |
| SUBSISTENCE | # OF INV.--> | 6 | 10 | 7 | 2 | | 25 |
| | $ AMOUNT--> | 90,577 | 49,026 | 2,265 | 169 | | 142,037 |
| | TOTAL INVOICES | 522 | 1,906 | 2,538 | 4,034 | | 9,231 |
| | TOTAL COSTS | 24,122,670 | 5,676,783 | 914,024 | 141,815 | | 30,381,736 |



ENCLOSURE ( / )

# ADDENDUM 1

## PROTOCOL FOR A FINANCIAL REVIEW OF FOSC APPROVED EXPENDITURES BY EXXON, USA ON THE T/V EXXON VALDEZ OIL SPILL FOR THE PERIOD

## JANUARY 1, 1991 THRU SEPTEMBER 30, 1992

**Objective:** To continue the financial review of Exxon's supporting documents for expenditures made by Exxon and pre-approved by the Coast Guard Federal On Scene Coordinator.

### A. BACKGROUND:

After evaluating the results of the initial financial review, a decision was made to examine subsequent Exxon expenditures.

### B. REVIEW SCHEDULE:

1. The review will be performed at Exxon U.S.A.'s headquarters at 4550 Dacoma, Houston, TX 77092 during the period 06 October 92 through 15 October 92.

2. A Coast Guard team consisting of three members will perform the review. The team members will be:

CAPT Ralph Anderson, USCG(Ret.), (formally MLCPAC(f))
CWO4 Larry Porter, FOSC, Fiscal & Supply Officer
Mr. Pat Fedorowicz, NPFC(cf-1), Fund Operations

### C. SCOPE OF REVIEW:

1. The review will cover expenditures incurred from 01 January 91 through 30 September 1992 which occurred subsequent to the April 1992 review.

2. The conclusions of the April 1992 review will be discussed with Exxon to assure understanding of the protocol and application to the expenditures.

## D. STATEMENT OF WORK:

1. There are approximately 740 invoices totalling approximately $4,000,000 subject to review. The majority of the invoices represent expenditures for the 1992 FINSAP CWR. All documents will be reviewed. FINSAP, MAYSAP and CLEAN invoices will again be grouped by labor and non-labor and separated by dollar amount, the same as during the April review.

2. Based on the discussions of the April, 1992 review, additional documents from that review may be examined.

(1) Review performed 6-15 April and 6-15 October, 1992 in Houston, TX by CAPT R. Anderson, MLCPAC(f); CWO4 L. Porter, FOSC(f&s); Mr. A. Thuring (April), and Mr. P. Fedorowicz (October), NPFC(cf-1)

(2) Program totals before and after the review are as follows:

| PROGRAM NAME | BEGINNING BAL EXXON LEDGER (COL. 1) | FOSC APPROVED CEILING* (COL. 2) | FOSC VALIDATED AS "X" COSTS (COL. 3) | DIFFERENCE CEILING vs "X" (COL. 2 - COL. 3) |
|---|---|---|---|---|
| SPRING | $5,193,858.52 | $4,000,000.00 * | $4,000,000.00 * | $0.00 |
| CWRs | $1,081,074.45 | $1,520,700.00 | $1,053,117.76 | $467,582.24 |
| MAYSAP | $22,033,318.67 | $22,200,000.00 | $21,881,643.29 | $318,356.71 |
| CLEAN | $9,004,210.07 | $12,865,000.00 | $8,781,367.68 | $4,083,632.32 |
| FINSAP | $4,192,556.52 | $4,225,000.00 | $4,087,319.72 | $137,680.28 |
| STATE OSC | $110,343.03 | $0.00 | $110,239.73 | ($110,239.73) |
| TOTALS | $41,615,361.26 | $44,810,700.00 | $39,913,688.18 | $4,897,011.82 |

* The ceiling of $4 million for the period 1/1/91 - 3/12/91 was established by the Settlement Agreement, not the FOSC

(3) Original gross charges of $41,615,361 consisted of 11,904 line items. Of the line items, 17.32% were reviewed which represented $17,375,678, or 41.75% of the gross dollars before adjustments

(4) Of the examined dollars, 88.7% remained unchanged with the remaining 11.3% requiring a redistribution to other FOSC approved programs or reclassified by Exxon to other activities

(5) The review resulted in a reduction of "X" costs by approximately $1,166,923 including an adjustment of $225,000 for insurance

Vol II - 3

# MEMO to the Exxon Valdez Oil Spill Public Advisory Group

January 8, 1993

From: Brad Phillips, Chair

Subject: January and February Meetings

Attached is a copy of the vote record on the 1993 Work Plan projects from our January 6-7, 1993 meeting. This is being forwarded to the Trustee Council and the Restoration Team for their use at the January 19, 1993 Trustee Council meeting. Since I will be out of state at that time, Vice-chairperson, Donna Fischer, will present our report to the Trustee Council. When the transcript of the meeting is available, it will be forwarded to the Trustee Council so they can see the discussion on each project--a copy will be available in the Oil Spill Information Center library. Just a summary note: the Restoration Team's proposed 1993 Work Plan totalled $37,832,600, plus $4,611,600 in possible projects that were not recommended--the total as a result of the PAG's vote is approximately $44,056,600, excluding our request combine and reduce costs of some projects.

If you plan to attend the Exxon Valdez Oil Spill Symposium on February 2-5, 199 Anchorage, please make your travel arrangements the same way as done for PAG meetin The registration fee can be put on your expense voucher.

The next meeting of the PAG is scheduled for Wednesday, February 10, 1993 at 9:30 a.m. at 645 G Street in Anchorage--an agenda will be sent later.

See you in February!

OK
Brad Phillips

cc: Doug Mutter, Designated Federal Officer
Dave Gibbons, Interim Administrative Director, Restoration Team
Trustee Council
Restoration Team

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt

( Andrews
2 French

Date: 1-6-93

Issue: 93002

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | X | | | |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |

passed 9 5

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

are to adopt
1 McCorkle
2 Andrews

Date: 1-6-93

Issue: 93003

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

OK- passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Andrews
2 McMullen

Date: 1-6-93

Issue: 93004

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | | | | X |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | | X | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | X | |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | | X | | |
| John Sturgeon | | X | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

passed 8 3 2

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
: Andrews
- Fisher

Date: 1-6-93

Issue: 93005 - 93006 - 93007 - 93008 - 93009

combine these - restructure to reduce costs and emphasize use of loc and Alaska people and resou

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | X | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed with amendment move by unanimous consent

Sept 13

Tabled 1:40
1 - Andrews
2 - Fischer

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Knecht
2 McCorkle

Date: 1-6-93

Issue: 93011

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | X |
| Pamela Brodie | | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | | X | |
| Donna Fischer | X | | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | X | | | |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

passed 9 3 1

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 McCorkle
2 Fischer

Date: 1-6-93

Issue: 93012 + 93015
combine with reduced costs

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by
unanimous consent
with note above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Cloud
2 Fischer

Date: 1-6-93

Issue: 93016
add $25,000 for contractual for fish production at hatcher

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | X | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by
unanimous consent, one abstain
with note about

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 McCorkle
2 Knecht

Date: 1-6-93

Issue: 93017

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

try to have affected communities show support of project before getting started.
need to communicate clearly project planning.

passed by unanimous consent with note above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fisher
2 Andrews

: 1-6-93

e: 93018

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| ert Andrews | | | | |
| ela Brodie | | | | |
| es Cloud | | | | |
| es Diehl | | | | X |
| hard Eliason | | | | |
| na Fischer | | | | |
| n French | | | | |
| l V. Gavora | | | | X |
| es King | | | | |
| hard Knecht | | | | |
| n C. McCorkle | | | | |
| ald McCune | | | | X |
| n McMullen | | | | |
| d Phillips | | | | |
| n Sturgeon | | | | |
| rles Totemoff | | | | |
| ewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 McCorkle
2 Fischer

Date: 1-6-93

Issue: 93022

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

Failed by ~~unanimous~~ vote with note below.

hope will be dealt with in Restoration Plan

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Andrews
2 Cloud

Date: 1-7-93

Issue: 93024

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | X |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 French
2 Fischer

Date: 1-7-93

Issue: 93025

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | X |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Andrews
2 Fisher

Date: 1-7-93

Issue: 93028

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | | X | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | X | | | |
| John Sturgeon | | | | X |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

Failed to pass

Minority report from Andrews: voted yes because we should encourage the USFS to develop more wildlife habitat.

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move + adopt
1 cloud
2 Fisher

Date: 1-7-93

Issue: 93029

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | | X | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | X | | | |
| John Sturgeon | | | | X |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | | | | X |
| | | | | |
| | | | | |

tie vote

5 5 1

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Cloud
2 French

Date: 1-7-93

Issue: 93030

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | ~~X~~ |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | ~~X~~ |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Cloud
2 Fisher

Date: 1-7-93

Issue: 93031

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | | X | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | X | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

Passed 10 2

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Andrews
2 French

Date: 1-7-93

Issue: 93032

and approve project
Landowners must be consulted prior ~~to the projects to the~~ after

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
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passed ~~by unanimous~~
with note above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Mo. to adopt
1 Fisher
2 Andrews

Date: 1-7-93

Issue: 93033

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fiske
2 Andrews

Date: 1-7-93

Issue: 93034

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Andrews
2 Fischer

Date: 1-7-93

Issue: 93035

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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Passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fisher
2 Cloud

Date: 1-7-93

Issue: 93036

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Cloud
2 Fischer

Date: 1-7-93

Issue: 93038

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | X | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by all members present

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Date: 1-7-93

move to adopt
1 Knecht
2 [illegible]

Issue: 93039
concerned about high costs of this project - reexamine cost

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent
with note above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fidler
2 Andrews

Date: 1-7-93

Issue: 93041

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | | X | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

passed 5 4 1

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Fisher
2 Andrews

Date: 1-7-93

Issue: 93042

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 - Knecht
2 - Fischer

Date: 1-7-93

Issue: 93043

TC consider contracting this project

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

5 5

passed with hat above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fisher
2 Knecht

Date: 1-7-93

Issue: 93046

Put more emphasis on interaction with people living in the area

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | X | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed with unanimous consent and make a part

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fischer
2 Andrews

Date: 1-7-93

Issue: 93047

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

, move to adopt
1 Fischer
2 Andrews

Date: 1-7-93

Issue: 93051
Delet channel typing portions of project

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | | X | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

passed with amendment above

9 4

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fischer
2 French

Date: 1-7-93

Issue: 93053

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fiscus
2 McMullen

Date: 1-7-93

Issue: 93057

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
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passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fisher
2 Totemoff

Date: 1-7-93

Issue: 93061

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | | X | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

11 2

passed

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Fisher
2 French

Date: 1-7-93

Issue: 93062

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by [illegible]

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Knecht
2 King

Date: 1-7-93

Issue: 93063

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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pass to chairman 5-24-93

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Andrews
2 Fisher

Date: 1-7-93

Issue: 93064

Ask TC to consult with PAG on individual parcel prop

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | | | X | |
| Charles Totemoff | | | X | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

6 1 2

passes with note, above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 French
2 Andrews

Date: 1-7-93

Issue: increase PAG budget for 1993 to $225,000 to cover 6 meetings rather than 4,

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

11 2

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Knecht
2 Fiesler

Date: 1-7-93

Issue: TC should have an independent reviewer examine administrative costs to ensure there is no double dipping by agencies

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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passed by unanimous consent

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Fischer
2 Knecht+

Date: 1-7-93

Issue: 93010

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | X | | |
| Pamela Brodie | | X | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | | X | | |
| John Sturgeon | | X | | |
| Charles Totemoff | | X | | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |

Failed

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1 Cloud
2 Fisher

Date: 1-7-93

Issue: 93014

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | X | | |
| Pamela Brodie | | X | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | | X | | |
| Donna Fischer | | X | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | | X | | |
| John Sturgeon | | X | | |
| Charles Totemoff | | X | | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |

Failed

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1 Fischer
2 Andrews

Date: 1-7-93

Issue: 93019
Make contingent upon favorable legal opinion

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | X | | |
| Pamela Brodie | | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | X | | | |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |

passed with 8 4
note above

~~Fabbot~~ ~~L. Williams~~

~~Yes~~ ~~11~~

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1 Cloud
2 Fisher

Date: 1-7-93

Issue: 93020
make contingent on favorable legal opinion

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

~~Failed by Chair~~

~~yes - 10~~

~~no - 3~~

Passed by unanimous consent with note above

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Moved to adopt
1 F. Sisley
2 Andrews

Date: 1-7-93

Issue: 93 026

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | X | | | |
| Donna Fischer | X | | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

passed 9 4

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1 Fisher
2 Andrews

Date: 1-7-93

Issue: 93052

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | ✓ | | |
| Pamela Brodie | | ✓ | | |
| James Cloud | | ✓ | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | | ✓ | | |
| John French | ✓ | | | |
| Paul V. Gavora | | | | X |
| James King | ✓ | | | |
| Richard Knecht | | ✓ | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | ✓ | | | |
| Brad Phillips | | | | |
| John Sturgeon | | ✓ | | |
| Charles Totemoff | | ✓ | | |
| Llewellyn W. Williams Jr. | | ✓ | | |
| | | | | |
| | | | | |

Failed

3 yea 8 No

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1 McMullen
2 Fischer

Date: 1-7-93

Issue: CRMA proposal & Forward Resolution to TC (attached)

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | X | | |
| Pamela Brodie | | X | | |
| James Cloud | | X | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | X | X | | |
| John French | | X | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | | X | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | X | | |
| Brad Phillips | | X | | |
| John Sturgeon | | | X | |
| Charles Totemoff | | | X | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |

Failed 1 9 2

**EXXON VALDEZ OIL SPILL TRUSTEES**
**PUBLIC ADVISORY GROUP**

**RESOLUTION**

Whereas:

The Public Advisory Group has been reviewing, commenting on and voting on various projects proposed for inclusion in the 1993 Work Plan;

Proposals not included in the 1993 Draft Work Plan have been presented to the Public Advisory Group for consideration;

The Chugach Resource Management Agency (CRMA) is a new project proposed for 1993 which was not included in the 1993 Draft Work Plan;

The CRMA will identify available project-related resources in the Prince William Sound area for all state and federal agencies involved in oil spill restoration;

The CRMA will involve Prince William Sound area residents in the restoration effort;

The CRMA will reduce the physical impact of the restoration effort by using locally available resources, facilities and equipment and it will coordinate assignment of locally available resources to eliminate or reduce logistics and procurement redundancy;

The CRMA will reduce restoration logistics and resource expenditures by using locally available resources to address spill impacts, creating financial efficiencies;

The CRMA will in some instances submit competitive proposals to perform 1993 Work Plan Projects.

Therefore:

1. The Exxon Valdez Oil Spill Trustees Public Advisory Group endorses the concept of the Chugach Resource Management Agency and encourages the federal and state agencies which support the Trustee Council to fund its resource inventory and project work scope support elements.

2. The Public Advisory Group recommends that federal and state agencies enlist the active participation of the CRMA in development of work scopes for approved projects in order to insure the creation of a relevant inventories.

Move McMullen

2nd Fiscler

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

moved to adopt
1
2

Date: 1-7-93

Issue: Idea 920616310
[redacted] Support funding $100,000 for planning for Fisheries

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | X | | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | X | | | |
| John French | | | X | |
| Paul V. Gavora | | | | X |
| James King | X | | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | | X | | |
| John Sturgeon | | X | | |
| Charles Totemoff | | X | | |
| Llewellyn W. Williams Jr. | | X | | |
| | | | | |
| | | | | |
| | 7 | 4 | 1 | |

passed

Industrial Techno
center

# EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION

Project Number: 310

Project Source: Kodiak Island Borough & University of Alaska Fairbanks

Project Title: **Near Island Fisheries Research Center**
**(expansion of Fishery Industrial Technology Center)**

Project Category: Technical Support

Lead Agency: National Oceanographic and Atmospheric Administration

Cooperating Agencies: University of Alaska Fairbanks, School of Fisheries and Ocean Sciences
Alaska Department of Fish and Game
National Parks Service
U.S. Fish and Wildlife Service
National Weather Service

Project Term: March 1, 1993 to September 30, 1993

## INTRODUCTION

During the *Exxon Valdez* oil spill many fisheries were closed due to the presence of oil in the water and on the beaches. Major lethal effects on fish were documented for pink and sockeye salmon and herring, chronic and sub-lethal effects were difficult to measure. The planning and design funds for the next phase of the multi-agency fishery technology and research would enable the user agencies to (1) initiate research projects on the efficacy of restoration practices, (2) the enhancement of fishery resources in the effected areas, such as king crab, sea urchins, and molluscan shellfish, (3) the enhanced utilization of replacement fishery resources to those in spill area, such as arrowtooth flounder, and (4) to initiate long term research programs to better understand and ameliorate the effects of oil spills on the fisheries of the western Gulf of Alaska. Seven federal and two State agencies, the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Kodiak Island Borough, and the City of Kodiak have all participated in the planning for the multi-agency facility.

The seawater system and associated facilities will be designed to enhance research on fish behavior, physiology and perception, marine biology, and aquatic toxicology of normal and stressed fisheries. Stressed conditions could include other human activities, including fish harvesting, in addition to spilled crude oil. In addition the completed multi-agency fishery technology and research facility will provide a variety of analytical testing and monitoring capabilities within Kodiak Island Borough. These capabilities were severely lacking during the oil spill when all samples had to be sent off-island for analysis.

The first phase of the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences (SFOS), Fishery Industrial Technology Center (FITC) has been completed. It is the

first building of the proposed multi-agency fishery technology and research facilities. The FITC Owen Building is being used by the University of Alaska and National Marine Fisheries Service-Utilization Research Division personnel. Co-location of these two groups has resulted in efficient use of facilities and encouraged pooling of expertise to pursue efficient use fishery resources to produce diverse, high quality products, and eliminate waste.

Currently the other agencies interested in co-locating are isolated from each other, the public and the fishing community, and occupy out dated and inadequate facilities. The importance of the fisheries in the western Gulf of Alaska to the State and nation are expanding, and the oil spill emphasized the need for more specific information on these fisheries. Many of the fisheries activities in Kodiak are expanding to meet these needs. The multi-agency fishery technology and research facilities will be necessary to meet the agencies needs and the public's need for better access to information and training in a timely manner.

The City of Kodiak has donated the land for fisheries research facilities on Near island. The City of Kodiak has committed to using its revenue bonding power to fund construction of portions of these facilities to the extent that lease monies are committed by user groups and agencies, if other funding sources are not available. As one of the users of the expanded facilities the National Marine Fisheries Service has been authorized by congress to lease space on Near Island at an annual lease not to exceed $1,000,000 per year and has appropriated $100,000 for planning the federal needs in the facility.

WHAT

The $100,000 in this project will be used to match the federal planning money to initiate planning and design of expanded multi-agency fishery technology and research facilities on Near Island, Kodiak, Alaska following the recommendation of the Kodiak Island Borough an the FITC Policy Council. The University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, in conjunction with NOAA and ADFG, will lead the development. The next phase of this facility which is most critical for restoration, enhancement, enhanced utilization of fishery resources, and better understanding and ameliorating the effects of oil spills in the western Gulf of Alaska will include a gravity fed seawater system, wet and dry marine laboratories, public education facilities and associated systems.

The combined use of state and federal lease monies with funds from the civil EVOS settlement to finish construction of a multi-agency fisheries research center on Near Island in Kodiak will help provide the State of Alaska with state-of-the-art capabilities to undertake critical studies on the restoration, enhancement, and enhanced utilization of fishery resources in the western Gulf of Alaska. These facilities will also provide Alaska's fishing industry with research and technical assistance during the rehabilitation of Alaska's vertebrate and invertebrate fisheries resources. The new facilities will be located in conjunction with existing FITC facilities. These facilities will accommodate NOAA/NMFS and other fisheries research and management groups in addition to the FITC. Land for development of these facilities is being held in trust by the City of Kodiak. Development of these facilities would provide the University of Alaska, State, and Federal agencies resources for evaluating toxicological, physiological, and behavioral effects related to the presence of hydrocarbons.

A principal component of the oil spill related portion of these facilities will be a controlled environment behavior and sensory physiology wet laboratory. This will be the core unit which will be used to investigate physiological and behavioral effects of long term low level exposure to hydrocarbons. Central to this laboratory is a large swimming pool tank which will provide capabilities to assess how adult organisms perceive and react to stimuli produced by their environment in conjunction with the presence of hydrocarbons. The main support facility for this system is a running seawater system with associated mechanical support and filter beds. Additional facilities include food safety, physiology and toxicology laboratories.

These enhancements to the state/university/federal fisheries research complex on Near Island would enhance research and development activities related to the restoration, enhancement, and economic value of fisheries resources of the oil spill effected areas, especially through better understanding of the behavioral, physiological, and toxicological responses of targeted species. Research in this facility would also lead to the development of better tools to monitor aquatic toxic responses and other physiological changes resulting from oil spills and other anthropogenic activity.

The expanded fisheries research center will house the Biotechnology, Fisheries Science, Fish Harvesting Technology, Food Safety, and Toxicology programs of FITC/SFOS in addition to significantly expanding the public education activities of all parts of the center. Alaska Department of Fish and Game research efforts will probably focus on shellfish enhancement and rehabilitation. In addition to management data acquisition National Marine Fisheries Service activities are expected to include marine mammal studies and the observer program.

WHY

Commercial fishing was directly impacted by the salmon closures in 1989. The large number of other fisheries were adversely impacted by the unavailability of fishing vessels under contract to Exxon and Veco. Damage to pink and sockeye salmon stocks has been demonstrated. Herring stocks also appear to have been damaged. In addition studies since the spill have shown that 0-2 year old halibut are primarily found in shallow bays, some of which were heavily oiled (Norcross et al). Since we do not have an accurate juvenile index, we will not have accurate assessment of damage to the halibut resource for eight years until they are recruited into the commercial fishery. Pink salmon escapements in the oil spill area were unexpectedly high in 1991 and very low in 1992. Southeast and western Alaska returns were much more normal over the same period. There may be a second generation teratogenic effect as there is with some hydrocarbons such as diethylstilbesterol or polybrominated biphenyls. Few, if any, of these effects are legally proven but there is certainly enough information to justify further investigation.

Some of the highest tissue hydrocarbon and florescent metabolite levels that were seen during the subsistence foods study came from the Kodiak archipelago. This evidence is also strongly suggestive of much broader exposure of finfish to oil-derived hydrocarbons than is legally recognized. The expanded fisheries research center would have the capabilities to test food samples within the community.

Several food chain related stresses have been identified during the NRDA process. If either these or the previous items result in diminished commercial stocks the efficiency and selectivity of fishing gear will become far more critical. If some stocks drop to critical levels or if some stocks have to be closed to fishing in order to protect, restore or enhance other damaged resources than the development of alternative fishery resources will become critical.

The expanded fisheries research center will also provide the technical capabilities to address both food safety and aquatic toxicology issues within the community of Kodiak, at the cross roads of spilled oil coming out of either Cook Inlet or Prince William Sound.

HOW

The FY93 funding will provide for the following planning and design objectives:

1. A master plan which would address the specific positioning and general configuration of all elements of the proposed facility. It would program phased development and identify requirements of the infrastructure (seawater system, support facilities, roads, parking and utilities).

2. A conceptual design which identifies specific elements and programmatic relationships required to effectively address overall programmatic objectives. Programming all elements of the elements of the facility in sufficient detail to develop realistic project cost estimates. Preliminary facility plans, exterior elevations and specifications will be developed indicating the general configuration and components. This information would be presented in a brochure format which could be used to promote the facility and help secure complete funding.

3. A project construction cost estimate will be prepared which would identify the probable cost of each element based on the anticipated year of construction.

ENVIRONMENTAL COMPLIANCE

Project compliance with the National Environmental Policy Act (NEPA) will be assessed during the planning and design phase. Until project specifications are finalized, specific NEPA requirements cannot be determined. The seawater system will require a Corps of Engineers' permit and compliance with the Alaska Coastal Management Plan will be required. The required State and Federal permits will be identified and incorporated into the planning process.

WHEN

The planning and design will occur during the period 1 March 1993 to 30 September 1993. Final architechure, design and engineering will require an additional $1,000,000 in FY94. The construction project will require approximately 6.5 million dollars above and beyond the funds previously identified. If these funds were available for phased construction during FY95 and FY96, the facilities will be operational by the end of 1996. Careful phasing of the project could make key aspects of the facility operational sooner.

BUDGET ($K)

| | |
|---|---|
| Personnel | $ 0.0 |
| Travel | 0.0 |
| Contractual | 93.0 |
| Commodities | 0.0 |
| Equipment | 0.0 |
| Capital Outlay | 0.0 |
| Sub-total | $ 93.0 |
| General Administration | $ 7.0 |
| Project Total | $100.0 |

Contractual is a subcontract to UAF Facilities Planning and Construction

**Name, Address, Telephone of UAF contact:**

Kathleen Schedler, Director
UAF Facilities Planning & Construction
Butrovich Building, Suite 211
University of Alaska
Fairbanks, AK 99775

Voice: (907) 474-5026
FAX: (907) 474-7554

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

move to adopt
1 Andrews
2 French

Date: 1-7-93

Issue: Kodiak
92298-17

support Kodiak museum project as modified (attached)

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | |
| Richard Eliason | | | | |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | |
| Gerald McCune | | | | |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
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passed by unanimous consent

EXXON V DEZ OIL SPILL TRUSTEE COU L

FORMAT FOR IDEAS FOR RESTORATION PROJECTS

Document ID Number 92061S279

- [ ] A-92 WPWG
- [x] B-93 WPWG
- [ ] C-RFWG
- [ ] D-PAG
- [ ] E-MISC.

Title of Project: ALUTIIQ MUSEUM AND CULTURE CENTER: PHASE ONE CONSTRUCTION

Justification: (Link to Injured Resource or Service) (SEE PAGE 2)

Description of Project: (e.g. goal(s), objectives, location, rationale, and technical approach)

~~The goal of the project is to provide a regional facility dedicated to the preservation~~ of cultural resources, traditional Native Culture, and Public education.

The research, education programs, and collections now maintained by the Kodiak Area Native Association's Alutiiq Culture Center will be transferred to this facility. Archaeological and ethnographic collections totaling more than ~~35,000~~ 133,000 pieces are already in hand.

A building of ~~6,500~~ 3,000 square feet would house artifact storage facilities, lab space and exhibits. ~~An operations endowment is included in construction costs to insure that the facility can be kept fully functional for the long term.~~

This project has been in the planning process for the past five years. An already urgent race against time; to preserve sites against destruction was e even more crtical by the 1989 spill. A fifty-year lease for 2.5 acres of d for the project has already been granted by the City of Kodiak. A building program and preliminary plans is also in place. We have raised $250,000 in cash to cover initial expenses.

Estimated Duration of Project: One Year construction time.

Estimated Cost per Year: ~~$5,000,000~~ $800,000. for FY 93 ~~and $4,000,000 for FY 94.~~

Other Comments: This proposal addresses Options 1, 10, and 35 in the Exxon valdez Oil Spill Restoration Framework, Volume I.

Name, Address, Telephone:

KODIAK AREA NATIVE ASSOCIATION
402 CENTER AVENUE
KODIAK AK 99615
ATTN: RICK KNECHT, DIRECTOR,
TIIQ CULTURE CENTER

Oil spill restoration is a public process. Your ideas and suggestions will not be proprietary, and you will not be given any exclusive right or privilege to them.

JUSTIFICATION: The Kodiak Archipelago has the highest archaeological site density of the Exxon-Valdez spill area. Of the 22 sites impacted by vandalism in 1989, 17 were in the Kodiak region. A permanent center would serve as a focal point for archaeological research and survey. Public educational programs are the only effective way to address the problems created by the widespread knowledge of site locations. The museum would also serve as a regional repository for artifacts from the spill area. The cultural center would preserve the traditional lifeways of the Native community, many of which were also disrupted by the oil spill. The project would be a permanent, valued addition to the Native, and non-Native community.

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Move to adopt
1 Williams
2 McMullen

Date: 1-7-93

Issue: PWS Herring Damage Assessment
(Based on the latest findings) (attached)

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | | | | |
| Pamela Brodie | | | | |
| James Cloud | | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | | | |
| Richard Knecht | | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | | | | |
| Brad Phillips | | | | |
| John Sturgeon | | | | |
| Charles Totemoff | | | | |
| Llewellyn W. Williams Jr. | | | | |
| | | | | |
| | | | | |

passed by unanimous consent

# *EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION*

**Project Number:**

**Project Source:**

**Project Title:** Injury to Prince William Sound Herring

**Project Category:** Damage Assessment

**Project Type:** Fish/Shellfish

**Lead Agency:** Alaska Department of Fish and Game

**Cooperating Agencies:**

**Project Term:** **Start Date:** Ongoing (March 1, 1993) **Finish Date:** Continuing (Sept 30,1993)

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INTRODUCTION:

A. Background on the Resource/Service

Pacific herring *Clupea pallasi* are a major resource in Prince William Sound (PWS) from both ecological and commercial perspectives. Pacific herring provide important forage for many species including humpbacked whales, seals, sea lions, gulls, sea ducks, shorebirds, halibut, salmon, and other fish. It appears that herring may be critical to the reproductive success of certain gull and shore species. Several thousand pounds of herring and herring spawn on kelp are harvested annually subsistence purposes and form an important part of the local native culture. In addition, five commercial herring fisheries in PWS have an average annual combined ex-vessel value of $8.3 million.

B. Summary of Injury

The oil spill coincided with the spring migration of herring to the spawning grounds and adult herring transited oiled waters on their way to nearshore staging areas. Significant histopathological damage was measured in adults collected in oiled areas in both 1989 and 1990 confirming exposure of the fish to toxins. Oiling of over 40% of the spawning areas and of migrating adults caused increased egg mortality, elevated levels of abnormalities and gene breakage in newly hatched larvae, and reduced hatching success of the embryos. Over 90% of the summer rearing and feeding areas of herring were oiled in 1989. Direct mortality was significant on young herring in 1989 and sublethal effects were measurable in larvae and adults in 1989 and 1990. Damages observed in 1989 and 1990 lead researchers to believe that adult and juvenile herring were re-exposed to oil after spawning in both years by persistent sheens leaching from beaches and cleaning operations. Laboratory studies measuring the effect of known doses of oil on newly hatched larvae provided a direct link between estimated doses of oil measured in PWS and the level of injury observed in samples collected from the field.

Although many herring typically spawn for the first time at age 3, herring that hatched in 1989 were noticeably absent as 3-year-olds from the 1992 spawning population. Herring survival varies tremendously under normal conditions, but results to date strongly implicate the oil spill as a major cause for this low 3-year-old recruitment. Herring that hatched in 1988 and that were exposed to oil as 1-year-olds at the time of the spill currently dominate (62% in 1992) the PWS herring spawning population. It was hypothesized that damage to germ tissue caused by exposure to oil would result in non-viable embryos and larvae and a pilot experiment to measure the ability of herring from this age class to produce viable offspring was conducted in 1992. Hatching success of eggs collected

from fish spawning in previously oiled areas was less than half that of eggs collected from fish spawning in pristine areas.

## C. Location

Research will be conducted entirely within the confines of PWS and exact locations will depend upon the distribution of spawning herring. Benefits to improved management of the herring resource will be realized by all participants in the commercial and subsistence fisheries throughout the sound, and by all species which utilize herring as forage. Herring have commercial importance to all communities of PWS and are important for subsistence use at Tatitlek and Chenega and to lesser degrees in other communities.

**WHAT:** The goal of the proposed project is to improve the accuracy of fisheries management of the PWS herring resource. Improved accuracy will allow fishery managers to make fine adjustments to fishing quotas and more effectively result in measurable rehabilitation for PWS herring stocks. Accurate and precise estimation of herring abundance is crucial to the improvement of management accuracy.

Specific objectives to achieve this goal include:

1) Estimate the biomass of spawning herring in PWS using SCUBA diving spawn deposition survey techniques such that the estimate is within $\pm$ 25% of the true value 95% of the time.

2) Estimate the age, weight, length, and sex composition of the spawning herring in PWS such that age composition estimates are within $\pm$ 10% of their true value 95% of the time.

3) Document and estimate the extent of egg retention by spawning females and account for this process in the spawn deposition biomass estimate.

4) Collect and analyze spawning substrate calibration samples for each diver. These samples will be used to estimate diver- and vegetation-specific bias in egg counting to correct the biomass estimate and to provide training for divers in spawn estimation.

**WHY:** The proposed project will provide a relatively low cost, albeit incomplete, tool for restoration of damaged herring resources through the management of human uses, a major source of herring mortality. Herring spawn deposition surveys will permit more intensive management of the resource by providing more accurate biomass estimation than do standard aerial survey methods. However, it should be cautioned that results from spawn deposition surveys will not provide complete assessment of the injury to herring resources nor permit complete evaluation of restoration success. Additional studies to investigate stock discreetness, stock-specific migration patterns, recruitment processes, and the effects of oil on reproductive success are necessary to construct a comprehensive ecological model quantifying the effects of spilled oil and its passage through the environment.

**HOW:**

Aerial surveys conducted by area biologists as a regular part of commercial fishery management activities will be used to estimate the extent and distribution of herring spawn and to provide the basis for locating survey transects at nearshore spawning grounds in a two stage sampling design. Trained and calibrated SCUBA divers stationed aboard a research vessel will conduct surveys along the selected transects to estimate the number of herring eggs deposited on vegetation and bottom substrate. Preserved samples of eggs attached to vegetation will be collected and retained for later laboratory analysis. Field estimates by divers of the number of eggs attached to the vegetation will be compared to more rigorous laboratory egg counts to calculate diver-specific and vegetation-specific bias. Samples of adult female herring will be collected immediately following spawning events to estimate the number of females retaining eggs and the quantity of eggs retained to adjust the spawn deposition biomass estimates.

Area research biologists will collect samples representative of spawning herring for determination of age, weight, length, and sex as part of regular ongoing data collection programs. Egg counts adjusted for measured diver and substrate bias will be combined with estimates of the extent of total spawning area and area sampled to estimate the total number of eggs deposited in PWS. The spawning biomass required produce this total will be calculated from total egg deposition combined with average fish size and sex r[illegible] for 1993 and average fecundity at size measured in previous studies. Estimated spawning biomass will be adjusted for natural loss of eggs prior to surveys as measured in previous studies and for egg retention in 1993 measured as part of this proposed project.

Estimates of spawning biomass will be included in ongoing ADF&G investigations of age structured analysis of PWS herring stocks to project the biomass of herring returning to spawn (run biomass) in 1994. The forecast of run biomass will be used directly to set guideline harvests for PWS commercial fisheries. Spawning biomass estimates will also be combined with information from previous herring research studies to continue to evaluate oil spill related damage to the resource and to grossly assess the progress of resource rehabilitation. However, results from the proposed project are likely to have only limited utility to assess resource rehabilitation without additional knowledge of stock structure, mixing, and recruitment processes.

**ENVIRONMENTAL COMPLIANCE:** The proposed project is not intrusive. It involves collection of data and does not affect fish and wildlife populations or their habitat.

| | | |
|---|---|---|
| **WHEN:** | Jan-Feb 1993 | Initiate vessel charter bids and contract |
| | | Contact and line up divers (ensure certification requirements met or in progress) |
| | | Complete sample design for egg retention study |
| | | Complete sample design for diver calibration |
| | | Order laboratory supplies and field supplies |
| | Mar 1993 | Complete any necessary diver certifications |
| | | Complete Detailed Study Plan |
| | | Hire technician to finish maintenance and assembly of dive gear |
| | 1-5 Apr 1993 | Complete all hiring of field personnel and arrange for arrival of divers |
| | | Complete vessel contract |
| | early Apr 1993 | Diver training/refresher/orientation |
| | | Set up laboratory |
| | 5-15 Apr 1993 | Initiate diving/field data collection (at onset of spawning) |
| | 1-12 May 1993 | Complete field activities |
| | | Begin lab processing of calibration samples |
| | 30 May 1993 | Complete data entry of diver estimates |
| | May-Jun 1993 | Maintain, repair, and store gear |
| | 15 Jun 1993 | Complete calibration sample processing |
| | 30 Jun 1993 | Data entry of calibration samples |
| | | Initiate data analysis |
| | 1 Sep 1993 | Finalize estimate of spawning biomass |
| | 15 Nov 1993 | Finalize projection of 1994 run biomass |
| | Nov/Dec 1993 | Complete annual report |

Project: Injury to Prince William Sound Herring

Description: SCUBA surveys are conducted to quantify herring spawn in areas of spawn identified through aerial surveys. Estimates of deposited spawn are combined with other biological information (age, sex, size, fecundity, etc.) to estimate the biomass of reproducing herring. Biomass estimates are used to forecast future returns and set harvest allocations.

30-Dec-92

| Item | Name | Position | Months Budgeted | Regular Salary | Dive/Sea Duty Premium Pay | 01-Feb-93 28-Feb-93 | 01-Mar-93 30-Jun-93 | 01-Jul-93 30-Sep-93 | TOTAL COST |
|---|---|---|---|---|---|---|---|---|---|
| Personnel Costs | Wilcock | Fisheries Biologist III | 3.0 | $6,069 | $7,876 | $6,069 | $13,945 | $6,069 | $26,082 |
| | Brown | Fisheries Biologist II (PI) | 10.0 | $5,093 | $6,707 | | $27,079 | $30,558 | $57,636 |
| | Bechtol | Fisheries Bilogist II | 1.0 | $5,093 | $6,707 | | $11,800 | | $11,800 |
| | Haley | F&W Technician III | 4.5 | $3,643 | $5,001 | | $19,575 | $1,822 | $21,396 |
| | Becker | F&W Technician II | 1.5 | $3,140 | $3,886 | | $8,596 | | $8,596 |
| | Miller | F&W Technician II | 1.5 | $3,140 | $3,886 | | $8,596 | | $8,596 |
| | Gilman | F&W Technician II | 5.0 | $3,229 | | | $11,301 | $4,843 | $16,145 |
| | | F&W Technician I | 2.0 | $2,717 | | | $5,434 | | $5,434 |
| | | Biometrician II | 1.0 | $5,640 | | | $2,820 | $2,820 | $5,640 |
| | | Research Analyst I | 1.0 | $4,230 | | | | $4,230 | $4,230 |
| | TOTAL | FTE = | 2.5 | | $34,063 | $6,069 | $109,146 | $50,341 | $165,555 |
| Travel | Bechtol - 2 RT Homer/Cordova | | | | | | $2,000 | | $2,000 |
| | Meeting Attendance - 2 RT Anch/Cordova | | | | | | | $800 | $800 |
| Contractual | Vessel Charter - 25 days @ $1500/day | | | | | | $37,500 | | $37,500 |
| | Fuel for dive skiffs | | | | | | $1,000 | | $1,000 |
| | Equipment Maintenance/Repair | | | | | | $1,500 | | $1,500 |
| Commodities | Office and Lab Supplies | | | | | | $1,200 | | $1,200 |
| | Food and Field Supplies | | | | | | $1,500 | | $1,500 |
| Equipment | Dive Gear Replacement | | | | | | | $2,000 | $2,000 |
| General Administration | (15% * personnel cost) | | | | | | | | $24,833 |
| TOTAL PROJECT COST | | | | | | | | | $237,889 |

STATE OF ALASKA

WALTER J. HICKEL, GOVERNOR

DEPARTMENT OF FISH AND GAME

OFFICE OF THE COMMISSIONER

P.O. BOX 25526
JUNEAU, ALASKA 99802-5526
PHONE: (907) 465-4100

January 7, 1993

Mr. Mike Barton
Regional Forester
U.S. Forest Service

Mr. Steven Pennoyer
Director
National Marine Fisheries Service

Mr. Curtis McVee
Special Assistant to the Secretary
U.S. Department of the Interior

Mr. Charles Cole
Attorney General
Department of Law

John A. Sandor
Commissioner
Department of Environmental Conservation

I was recently contacted by members of the Public Advisory Group and local commercial fisheries interest groups about the lack of funding for projects dealing with herring. as you know, those projects were not included in the 1993 Work Plan, because at that time, there was less evidence of population level injury to herring and the Restoration Team wanted to wait until the results of the 1992 field season were available. Since that time, information from the 1992 field season has come to my attention that indicates a population level injury has probably occurred to the herring of Prince William Sound (PWS). Pertinent findings include the following.

1. In 1992, the 1989 year class returned as age-3 first time adult spawners at the lowest level age-3s measured since 1967. This year class represents returning offspring of the largest spawning population in PWS since the early 70s.

2. In 1992, adults from the dominant 1988 year class demonstrated significantly different reproductive capabilities (hatching success from unoiled area eggs was 56 percent versus 20 percent in the oiled areas).

In PWS, there are five commercial herring fisheries worth an average annual combined exvessel value of $8.3 million. This fishery is of great economic importance to commercial fishermen in Cordova, Valdez, and the smaller communities of PWS. Without better biological information on age class disappearance and reproductive impairment, the department will likely have to implement more conservative management strategies in 1994 with an associated loss to the herring fishery.

Having reviewed the available data we recommend the following as a minimum to increase the management precision necessitated by the oil spill injuries outlined above.

1. Continue to monitor the reproductive success of the 1988 year class, define differences due to individual variability, location, and timing of spawn.

2. Continue to evaluate the reproductive success of the 1989 year class in 1993.

Because of this new information and the concern from special interest groups and the general public, I submit the enclosed project description for our consideration for inclusion in the 1993 Work Plan.

Sincerely,

C Meacham for

Carl L. Rosier
Commissioner

Enclosure

cc: Restoration Team
Dr. Robert Spies

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Moved to adopt
1 Andrews
2 Fischer

Date: 1-7-93

Issue: PWS Pink salmon coded wire tag project (attached)

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | ~~X~~ | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | | | | X |
| John French | X | | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | | X | | |
| Charles Totemoff | | X | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

8 3

passed

# *EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION*

**Project Number:**

**Project Source:**

**Project Title: Coded wire Tag Recoveries from Commercial Catches, Cost Recovery Catches, and Hatchery Brood Stocks in Prince William Sound Pink Salmon Fisheries**

**Project Category:** Restoration Manipulation and Enhancement

**Project Type:**

**Lead Agency:** Alaska Department of Fish and Game

**Cooperating Agencies:**

**Project Term:** **Start Date: 03/01/92** (day/month/year) **Finish Date:09/30/92** (day/month/year)

**INTRODUCTION:** Each year approximately one half billion wild pink salmon fry emerge from streams throughout Prince William Sound (PWS) and migrate seaward. Adult returns of wild pink salmon to PWS average from 10 to 15 million fish annually. These huge outmigrations of wild pink salmon and subsequent adult returns play a major role in the PWS ecosystem. Both juveniles and adults are important sources of food for many fish, birds, and mammals. Adults returning from the high seas also convey needed nutrients and minerals from the marine ecosystem to estuaries, freshwater streams, and terrestrial ecosystems. Wild pink salmon also play a major role in the economy of PWS through their contribution to commercial, sport, and subsistence fisheries in the area.

Wild pink salmon stocks in oiled portions of PWS have experienced higher egg mortalities, larval deformities, and lower juvenile growth rates than stocks from unoiled streams and hatcheries. There is evidence that they may also have sustained genetic damage which has resulted in reduced egg survival in generations following the spill. Furthermore, coded wire tag recovery results from NRDA F/S Study 3 indicate that damaged wild salmon streams located on hatchery stock migratory corridors experience a high incidence of genetic interchange as a result of straying from the burgeoning hatchery populations. Ample evidence in the literature suggests that hatchery fish are ill adapted to wild conditions and that genetic interchange between hatchery and wild stocks may lead to reduced fitness of wild stocks. Wilds stocks most impacted by the *Exxon Valdez Oil Spill* (EVOS) are also subject to excessive exploitation in the mixed stock fisheries of western PWS which are targeting on large hatchery returns. The combined effects of oil damage, excessive harvest, and genetic burden may result in an overall reduction in population size, genetic diversity, and fitness of PWS salmon populations.

Presently, the largest single source of wild pink salmon mortality in PWS which can be successfully monitored and manipulated by human intervention is the commercial harvest of returning adults. Depleted and less productive oil impacted wild populations cannot sustain as high an exploitation rate as unimpacted wild and hatchery stocks; consequently, they require special protection if adequate numbers are to escape and spawn. To reduce wild stock harvests and provide this protection, fisheries managers must know time and area abundance trends for both wild and hatchery fish.

This restoration and resource monitoring project will use coded wire tags as a stock identification tool to enable managers to estimate specific contributions to commercial harvests by time and area. These

estimates coupled with estimates of wild stock spawning escapement provided by existing ADF&G programs and another proposed restoration project will be used inseason for adjusting fishing patterns by time and area to protect impacted wild stocks from overexploitation. Almost all project funds will be spent to support PWS field studies and will contribute to the local economy of Cordova. The project may result in altered harv management strategies in PWS fisheries and will contribute to the natural recovery process for PWS p salmon populations.

**WHAT:** The goal of this project is to restore PWS wild pink salmon stocks injured by EVOS through more precise, stock specific fisheries management. Although other techniques may be developed, the most effective restoration methods identified at this time is modification of human use of injured stocks. The commercial fishery is a major factor controlling pink salmon population size and reproductive success. Since PWS wild pink salmon stocks are harvested in mixed stock fisheries dominated by hatchery fish, successful restoration efforts must be based on the ability to closely regulate the exploitation of oil impacted wild stocks. Private non-profit aquaculture associations in PWS already apply coded wire tags to fry releases at their own expense. This project is a comprehensive program for recovery of these tags in returning adults and analysis of tag recovery data which will provide inseason estimates of hatchery and wild stock abundance and timing. Results of this project will enable fisheries managers to selectively reduce harvests on injured wild stocks. Timing and abundance data for wild and hatchery stocks can also be used in salmon run reconstruction models which may be valuable tools for managing for depleted stocks far into the future. Tagging information will also provide total return and survival estimates needed to set exploitation rates and assess the success of restoration procedures.

Objectives:

Recovery of coded wire tags from commercial catches to:

a. estimate temporal and spatial contributions of tagged hatchery stocks to PWS commercial a hatchery harvests;
b. provide timely inseason estimates of stock contributions to harvests by time and area to fisheries managers so they can closely regulate exploitation of injured wild stocks;
c. determine total return and overall survival of tagged pink salmon stocks.

**WHY:** Legal, practical, and philosophical considerations dictate that a significant effort be made to preserve genetic diversity. In the context of this proposal, it is the genetic diversity of populations of wild pink salmon that are of interest.

Wild salmon stocks from oiled streams in southwestern PWS are subjected to extreme fishing pressure in fisheries targeting on hatchery runs. This exploitation may be great enough to drive EVOS damaged stocks to critically low levels and impede the natural recovery process. The ongoing threat of overexploiting wild stocks which has been exacerbated by spill related damages has greatly increased the need for stock identification tools such as the coded wire tag program. Without this project, stock specific timing and distribution data will not be available, and fisheries managers will be unable to control harvests with enough accuracy and precision to protect damaged stocks from overexploitation. Failure to continue this project in 1993 will also prevent continued monitoring of the health of these populations and hinder our understanding of factors limiting their survival and recovery.

**HOW:** Coded wire tag recoveries from commercial and hatchery harvests will be based on a sampling design stratified by time, area, and processor. For each time and area specific stratum, 15% of the pink salmon catch will be scanned for fish with clipped adipose fins (indicating presence of a tag). Catch sampling be done at processing facilities in Cordova, Valdez, Seward, Anchorage, Kenai, Whittier, Kodiak and float processors in the PWS area. All deliveries by tenders to these facilities will be monitored by radio and by

daily contact with processing plant dispatchers to ensure the catch deliveries being sampled are from specific fishing periods and districts. In addition to catch sampling at the processing facilities, approximately 15% of the fish in the hatchery cost recovery harvests from terminal areas in front of hatcheries will be scanned for fish with missing adipose fins.

The portion of tagged fish in each hatchery release group must be known to make catch contribution estimates. Although tagged and untagged proportions are estimated when fry are released after tagging, some tags are lost and tagged fish may experience a different mortality rate than untagged fish. To adjusted tag ratios in adult returns for this tag loss and differential mortality, at least 50% of the fish of known origin in hatchery brood stocks will be sampled for tags.

In the catches, terminal cost recovery harvests, and brood stocks the total number of fish with missing adipose fins will be recorded. Heads of fin clipped fish will be removed and tagged with uniquely numbered strap tags which are paired with sampling data. Numbered heads and associated sampling data will be sent to the FRED Division Statewide Coded Wire Tag Laboratory in Juneau where sampling data will be checked for accuracy and completeness, tags will be removed from heads and decoded, and sampling and corresponding tag recovery data will be entered into a statewide database.

A modification of the methods described in an ADF&G technical report by Clark and Bernard (1987) will be used to estimate contribution of each uniquely tagged population to commercial and cost recovery strata. The specific methods, estimators, and confidence interval estimators are described in ADF&G technical reports on two previous studies of pink salmon in PWS: Peltz and Geiger (1988), and Geiger and Sharr (1989). Total hatchery contribution to each catch strata will be the sum of the contributions from each hatchery and the total hatchery return to PWS will be the sum of contributions of all PWS hatcheries to commercial catches, cost recovery harvests, and brood stocks. Survival estimates for each hatchery stock will be estimated using hatchery fry release and adult return data. Wild stock contributions will be estimated as the difference between the total catch and the hatchery contribution. Total wild returns will be the sum of wild contributions in all catch strata and the estimated number of wild fish spawning in PWS streams (escapement).

Inseason catch contribution estimates for wild and hatchery fish will be available within three working days of the date of sampling in fish processing plants. Based on these estimates and wild stock spawning escapement performance fishery managers will adjust fishing time and area to protect oil damaged wild stocks from excessive exploitation, insure adequate wild stock escapement, and optimize the commercial utilization of surplus wild and hatchery fish.

WHEN:

| Dates | Activity |
|---|---|
| June 1 - September 15, 1993 | Tag recovery in commercial, cost recovery, and broodstock harvests of pink salmon. |
| December 30, 1993 | Draft Report |
| February 15, 1994 | Final Report |

Project Description: This project recovers coded-wire tags from adult pink salmon tagged as fry in streams and at four hatcheries in Prince William Sound. It makes estimates of wild and hatchery catch contributions, total returns, and survival rates. In season catch contribution estimates for hatchery and wild fish permit fisheries managers modify time and area fishing patterns to protect oil damaged wild pink salmon stocks.

| Budget Category | Proposed 01-Jan-93 30-Sep-93 | FY 94 | FY 95 | FY 96 | FY 97 | Sum FY 98 & Beyond |
|---|---|---|---|---|---|---|
| Personnel | $650.9 | $751.3 | $751.3 | $751.3 | $751.3 | $3,005.3 |
| Travel | $5.0 | $5.0 | $5.0 | $5.0 | $5.0 | $19.9 |
| Contractual | $11.7 | $15.6 | $15.6 | $15.6 | $15.6 | $62.3 |
| Commodities | $7.5 | $10.0 | $10.0 | $10.0 | $10.0 | $40.0 |
| Equipment | $0.0 | $1.0 | $1.0 | $1.0 | $1.0 | $4.0 |
| Capital Outlay | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 |
| Sub-total | $675.1 | $782.9 | $782.9 | $782.9 | $782.9 | $3,131.4 |
| General Administration | $98.5 | $113.8 | $113.8 | $113.8 | $113.8 | $455.2 |
| Project Total | $773.6 | $896.7 | $896.7 | $896.7 | $896.7 | $3,586.6 |
| Full-time Equivalents (FTE) | 13.9 | 15.8 | 15.8 | 15.8 | 15.8 | 63.3 |

Budget Year Proposed (FY 93 - 01 Jan thru 30 Sept) Personnel:

| Position | Months Budgeted | Cost | Comment |
|---|---|---|---|
| FIELD & CORDOVA OFFICE PERSONNEL | | | |
| Fisheries Biologist III (PI) | 6.0 | $39.0 | FY 93 Only |
| Fisheries Biologist II | 7.0 | $29.4 | FY 93 Only |
| Fisheries Bilogist I | 4.0 | $14.8 | FY 93 Only |
| Fisheries Bilogist I | 7.0 | $25.9 | FY 93 Only |
| Biometrician I | 6.0 | $26.8 | FY 93 Only |
| Research Analyst I | 6.0 | $21.0 | FY 93 Only |
| F&W Technician III | 7.0 | $25.0 | FY 93 Only - Includes Overtime |
| F&W Technician III | 4.0 | $15.6 | FY 93 Only - Includes Overtime |
| F&W Technician II | 42.0 | $168.3 | FY 93 Only - Includes Overtime |
| F&W Technician II | 16.0 | $73.5 | FY 93 Only - Includes Overtime |
| F&W Technician II | 12.0 | $44.6 | FY 93 Only - Includes Overtime |
| F&W Technician II (short term) | 4.0 | $16.6 | FY 93 Only - Includes Overtime |
| F&W Technician II (short term) | 2.0 | $8.3 | FY 93 Only - Includes Overtime |
| Program Managers | 7.0 | $15.0 | FY 93 Only |
| Analyst Programer IV | 0.5 | $2.7 | FY 93 Only |
| Analyst Programer II | 0.5 | $2.1 | FY 93 Only |
| Publication Specialist II | 0.5 | $2.2 | FY 93 Only |
| FRED DIVISION TAG LAB PERSONNEL | | | |
| Analyst Programmer | 7.0 | $35.8 | FY 93 Only |
| F&W Technician III | 7.0 | $24.0 | FY 93 Only |
| F&W Technician II (perm season) | 15.5 | $48.4 | FY 93 Only |
| F&W Technician II (non perm) | 6.0 | $12.0 | FY 93 Only |

1993

Project Number:
Project Title: Coded Wire Tag Recovery in Prince Willaim Sound Pink Salmon
Agency: ADF&G

FORM 2A
PROJECT
DETAIL

# Exxon Valdez Oil Spill

## Public Advisory Group
## Voting Record

Moved to adopt
1 Andrews
2 Fischer

Date: 1-7-93

Issue: Coded wire tag project for PWS chum, Sockeye, Coho, Chinook (attached)

| Name | YES | NO | ABSTAIN | ABSENT |
|---|---|---|---|---|
| Rupert Andrews | X | | | |
| Pamela Brodie | ~~X~~ | X | | |
| James Cloud | X | | | |
| James Diehl | | | | X |
| Richard Eliason | | | | X |
| Donna Fischer | X | | | |
| John French | | | | |
| Paul V. Gavora | | | | X |
| James King | | X | | |
| Richard Knecht | X | | | |
| Vern C. McCorkle | | | | X |
| Gerald McCune | | | | X |
| John McMullen | X | | | |
| Brad Phillips | X | | | |
| John Sturgeon | X | | | |
| Charles Totemoff | X | | | |
| Llewellyn W. Williams Jr. | X | | | |
| | | | | |
| | | | | |

10 1

# *EXXON VALDEZ OIL SPILL PROJECT DESCRIPTION*

Project Number:

Project Source:

Project Title: **Coded-wire Tag Recoveries from Commercial Catches, Cost Recovery Catches, and Hatchery Brood Stocks in Prince William Sound Chum, Sockeye, Coho, and Chinook Salmon Fisheries**

Project Category: Restoration Manipulation and Enhancement

Project Type:

Lead Agency: Alaska Department of Fish and Game

Cooperating Agencies:

| Project Term: | Start Date: 03/01/92 (day/month/year) | Finish Date:09/30/92 (day/month/year) |
|---|---|---|

**INTRODUCTION:** Each year 40 to 50 million wild chum, sockeye, and coho salmon fry and smolt emerge from lakes and streams throughout Prince William Sound (PWS) and migrate seaward. Adult returns of these wild salmon species to PWS average approximately 700 thousand fish annually. The large outmigrations of wild salmon and subsequent adult returns play a major roles in the Prince William Sound (PWS) ecosystem. Both juveniles and adults are important sources of food for many fish, birds, and mammals and both are also important predators on plankton and other fish. Adults returning from the high seas also convey need nutrients and minerals from the marine ecosystem to estuaries, freshwater lakes and streams, and terrestr ecosystems. Wild salmon also play a major role in the economy of PWS because of their contribution to commercial, sport, and subsistence fisheries in the area. Chum, sockeye, and coho salmon are not as numerous as pink salmon but they have a much greater unit value commercial in commercial fisheries. In aggregate these three species account for almost half of ex-vessel value of PWS area salmon fisheries and provide alternate fishing opportunities and income for PWS commercial and sport fishing industries.

Like pink salmon, the majority of PWS chum salmon spend the larval portion of their life in the intertidal portion of streambeds. It is reasonable that chum salmon from oiled streams also experienced many of the oil impacts already demonstrated for pink salmon including higher egg mortalities, larval deformities, and lower juvenile growth rates than stocks from unoiled streams and hatcheries. By similar inference from pink salmon research, chum salmon may also have persistent genetic damage which may have caused reduced egg survival in generations following the spill. Furthermore, coded-wire tag recovery results from NRDA F/S Study 3 indicate that damaged wild pink salmon streams located on hatchery stock migratory corridors in western PWS experience a high incidence of genetic interchange as a result of straying from the burgeoning hatchery populations. Ample evidence in the literature suggests that hatchery fish are ill adapted to wild conditions and that genetic interchange between hatchery and wild stocks may lead to reduced fitness of wild stocks. The extent of straying in chum, sockeye and coho salmon in PWS is unknown but may also be important. Wilds stocks most impacted by the *Exxon Valdez Oil Spill* (EVOS) are also subject to excessive exploitation in mixed stock fisheries of western PWS which are targeting on large hatchery returns. The combined effects of oil damage, excessive harvest, and genetic burden on wild fish may result in an overall reduction in population size, genetic diversity, and fitness of PWS salmon populations.

Presently, the largest single source of mortality to wild salmon stocks in PWS which can be successfu monitored and manipulated by human intervention is the commercial harvest of returning adults. Deplet and less productive oil impacted wild populations cannot sustain as high an exploitation rate as unimpacted

wild and hatchery stocks, consequently they require special protection from commercial fisheries if adequate numbers are to escape and spawn. To reduce harvests on wild stocks and provide this protection, fisheries managers must know time and area abundance trends for both wild and hatchery stocks. The proposed restoration and resource monitoring project will use coded-wire tags as a stock identification tool which enables managers to estimate specific contributions to commercial harvests by time and area. Almost all project funds will be spent to support PWS field studies and will contribute to the local economy of Cordova. The project may result in altered harvest management strategies in PWS fisheries and will contribute to the natural recovery process for PWS salmon populations. The budget attached for this project does not include funding for a project principal investigator or other permanent personnel. It assumes that the tag recovery project for pink salmon will be approved and will fund these full time positions.

**WHAT:** The goal of this project is to restore PWS salmon stocks which may have been injured by EVOS through more precise, stock specific management of fisheries. Although other techniques may be developed, the most effective restoration methods identified at this time is modification of human use of injured salmon stocks while targeting fisheries on undamaged wild and hatchery stocks. The commercial fishery is a major factor controlling salmon population size and reproductive success. Since PWS wild salmon stocks are harvested in mixed stock fisheries dominated by hatchery fish, successful restoration efforts must be based on the State's ability to closely regulate the exploitation of wild stocks. Private, non-profit aquaculture corporations (PNP's) now fund tagging of hatchery releases of chinook, sockeye, chum, and coho salmon of fry and smolt in PWS. However, NRDA funds were used to apply code-wire tags to hatchery releases of chum, sockeye, coho, and chinook salmon in 1989, 1990, and 1991 and to outmigrating sockeye salmon smolt from three wild streams in 1990 and 1991. Because chum, sockeye and chinook salmon mature at varying ages, fish tagged using NRDA funds will continue to return in significant through 1995. This project is a comprehensive program for recovery of tags from these returning adults. Analysis of tag recovery data will provide inseason estimates of hatchery and wild stock abundance and timing. These results will enable fisheries managers to selectively reduce harvests on wild stocks. Tagging data will also provide total return and survival estimates needed to set exploitation rates and assess the success of restoration procedures.

Objectives:

Recovery of coded-wire tags from commercial catches to:

a. estimate temporal and spatial contributions of tagged hatchery stocks to commercial and hatchery harvests; P W S
b. provide timely inseason estimates of stock contributions to harvests by time and area to fisheries managers so they can closely regulate exploitation of injured wild stocks;
c. determine total return and overall survival of tagged salmon stocks.

**WHY:** Legal, practical, and philosophical considerations dictate that a significant effort be made to preserve genetic diversity. In the context of this proposal, it is the genetic diversity of populations of wild salmon that are of interest.

Wild salmon stocks from oiled areas of PWS and salmon stocks which passed through oiled areas during their seaward migration are subjected to extreme fishing pressure in fisheries targeting on hatchery runs. This exploitation may be great enough to drive EVOS damaged stocks to critically low levels and impede the natural recovery process. The ongoing threat of overexploiting wild stocks which has been exacerbated by spill related damages has greatly increased the need for stock identification tools such as the CWT program. Without this project, stock specific timing and distribution data will not be available, and fisheries managers will be unable to control harvests with enough accuracy and precision to protect damaged stocks from overexploitation. Failure to continue this project in 1993 will also prevent continued monitoring of the health of these populations and hinder our understanding of factors limiting their survival and recovery.

**HOW:** Coded-wire tag recoveries from commercial and hatchery harvests will be based on a sampling design stratified by time, area, and processor. For each time and area specific stratum, 25% of the chum, sockeye, coho, and chinook salmon catch will be scanned for fish with clipped adipose fins (indicating presence a tag). Catch sampling will be done at processing facilities in Cordova, Valdez, Seward, Anchorage, Ken..., Whittier, and floating processors in the PWS area. All deliveries by tenders to these facilities will be monitored by radio and by daily contact with processing plant dispatchers to ensure that the catch deliveries being sampled are from specific fishing periods and districts. In addition to catch sampling at the processing facilities, approximately 25% of the fish in the hatchery cost recovery harvests from terminal areas in front of hatcheries will be scanned for fish with missing adipose fins.

The portion of tagged fish in each tagged hatchery release group must be known to make catch contribution estimates for each tagged group. Although tagged and untagged portions are estimated when fry are released after tagging, some tags are lost and tagged fish may experience different mortality than untagged fish. To adjusted tag ratios in adult returns for this tag loss and differential mortality, at least 50% of the fish of known origin in hatchery brood stocks will be sampled for tag rates. In the catches, terminal cost recovery harvests and brood stocks the total number of fish with missing adipose fins will be recorded. Heads of fin clipped fish will be removed and tagged with uniquely numbered strap tags which are paired with sampling data. Numbered heads and associated sampling data will be sent to the FRED Division Statewide Coded-Wire Tag Laboratory in Juneau where sampling data will be checked for accuracy and completeness, tags will be removed from heads and decoded, and sampling and corresponding tag recovery data will be entered into a statewide database.

A modification of the methods described in an ADF&G technical report by Clark and Bernard (1987) will be used to estimate contribution of each uniquely tagged population to commercial and cost recovery strata. The specific methods, estimators, and confidence interval estimators are described in ADF&G technical reports on two previous studies of salmon in PWS: Peltz and Geiger (1988), and Geiger and Sharr (198... The total hatchery contribution to each catch strata will be the sum of the contributions from each hatche and the total hatchery return to PWS will be the sum of contributions of all PWS hatcheries to commercial catches, cost recovery harvests, and brood stocks. Survival estimates for each hatchery stock will be estimated using hatchery fry release and adult return data. Wild stock contributions to each catch strata will be estimated as the difference between the total catch and the hatchery contribution. Total wild returns will be the sum of wild contributions in all catch strata and the estimated number of wild fish spawning in PWS streams (escapement). Inseason catch contribution estimates for wild and hatchery fish will be available within three working days of the data of sampling in fish processing plants. Based on these estimates and wild stock spawning escapement performance fishery managers will adjust fishing time and area to protect oil damaged wild stocks from excessive exploitation, injure adequate wild stock escapement, and optimize the commercial utilization of surplus wild and hatchery fish.

**WHEN:**

| Dates | Activity |
|---|---|
| June 1 - October 30, 1993 | Tag recovery in commercial, cost recovery, and broodstock harvests of salmon. |
| December 30, 1993 | Draft Report |
| February 15, 1994 | Final Report |

Project Description: This project recovers coded-wire tags from adult chum, sockeye, coho, and chinook salmon tagged as fry in streams and at hatcheries in Prince William Sound. It makes estimates of wild and hatchery catch contributions, total returns, and survival rates. In season catch contribution estimates for hatchery and wild fish permit fisheries managers to modify time and area fishing patterns to protect depressed wild populations and target effort on large hatchery returns.

| Budget Category | Proposed 01-Jan-93 30-Sep-93 | FY 94 | FY 95 | FY 96 | FY 97 | Sum FY 98 & Beyond |
|---|---|---|---|---|---|---|
| Personnel | $208,564 | $225,000 | $225,000 | $225,000 | $225,000 | $900,000 |
| Travel | $1,000 | $1,500 | $1,500 | $1,500 | $1,500 | $6,000 |
| Contractual | $6,300 | $6,800 | $6,800 | $6,800 | $6,800 | $27,200 |
| Commodities | $2,000 | $2,500 | $2,500 | $2,500 | $2,500 | $10,000 |
| Equipment | $0 | $0 | $0 | $0 | $0 | $0 |
| Capital Outlay | $0 | $0 | $0 | $0 | $0 | $0 |
| Sub-total | $217,864 | $235,800 | $235,800 | $235,800 | $235,800 | $943,200 |
| General Administration | $31,726 | $34,226 | $34,226 | $34,226 | $34,226 | $136,904 |
| Project Total | $249,590 | $270,026 | $270,026 | $270,026 | $270,026 | $1,080,104 |
| Full-time Equivalents (FTE) | 4.6 | 15.8 | 15.8 | 15.8 | 15.8 | 63.3 |

Budget Year Proposed (FY 93 - 01 Jan thru 30 Sept) Personnel:

| Position | Months Budgeted | Cost | Comment |
|---|---|---|---|
| FIELD & CORDOVA OFFICE PERSONNEL | | | |
| Fisheries Bilogist I | 1.0 | $3,706 | FY 93 Only |
| F&W Technician II | 47.0 | $182,997 | FY 93 Only - Includes Overtime |
| FRED DIVISION TAG LAB PERSONNEL | | | |
| Analyst Programmer | | | FY 93 Only |
| F&W Technician III | | | FY 93 Only |
| F&W Technician II (perm season) | 7.0 | $21,861 | FY 93 Only |
| F&W Technician II (non perm) | | | FY 93 Only |

# CERTIFICATE OF REGISTRATION

FORM TX
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TXu 545 416

TX TXU

EFFECTIVE DATE OF REGISTRATION

APR 27 1992
Month Day Year

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

**1** TITLE OF THIS WORK ▼

Millennium (see) page #10
Section 1. Inherent Rights
Alaska's Constitution

~~PREVIOUS OR~~ ALTERNATIVE ~~TITLES~~ ▼

| peo'ple-king', n. A people as sovereign.

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

**2** NAME OF AUTHOR ▼ — DATES OF BIRTH AND DEATH (Year Born ▼ / Year Died ▼)

a Charles Edison McKee — 9-8-53

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE (Name of Country) OR { Citizen of ▶ U.S.A. / Domiciled in ▶ Anchorage, AK }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK — Anonymous? ☐ Yes ☐ No / Pseudonymous? ☐ Yes ☐ No — If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by this author in which copyright is claimed. ▼

ENTIRE TEXT*

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

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b Charles Edison McKee — 9-8-53

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AUTHOR'S NATIONALITY OR DOMICILE (Name of Country) OR { Citizen of ▶ U.S.A. / Domiciled in ▶ Anchorage, AK }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK — Anonymous? ☐ Yes ☐ No / Pseudonymous? ☐ Yes ☐ No — If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by this author in which copyright is claimed. ▼

NAME OF AUTHOR ▼ — DATES OF BIRTH AND DEATH (Year Born ▼ / Year Died ▼)

c Charles Edison McKee — 9-8-53

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE (Name of Country) OR { Citizen of ▶ U.S.A. / Domiciled in ▶ Anchorage, AK }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK — Anonymous? ☐ Yes ☐ No / Pseudonymous? ☐ Yes ☐ No — If the answer to either of these questions is "Yes," see detailed instructions.

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**3** YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases. 1991* ◀ Year

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK — Complete this information ONLY if this work has been published. Month ▶ ____ Day ▶ ____ Year ▶ ____ U.S.A.* ◀ Nation

**4** COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Charles Edison McKee
7800 DeBarr Rd. E #63
Anchorage, AK 99508

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 are different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

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ONE DEPOSIT RECEIVED

TWO DEPOSITS RECEIVED APR 27 1992

REMITTANCE NUMBER AND DATE

MORE ON BACK ▶ * Complete all applicable spaces (numbers 1-11) on the reverse side of this page.

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05009931 6*
916660050

*Amended by C.O. authority pe :lephone conversation of. 12-18-92 with Charles McK__.

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CORRESPONDENCE Yes

DEPOSIT ACCOUNT FUNDS USED

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PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box) ▼

☐ This is the first published edition of a work previously registered in unpublished form.

☑ This is the first application submitted by this author as copyright claimant.

☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▼ Year of Registration ▼

5

DERIVATIVE WORK OR COMPILATION Complete both space 6a & 6b for a derivative work; complete only 6b for a compilation.

a. Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Relativity (Albert Einstein), The Original Seal of the Treasury of North America

b. Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

ADDITIONAL TEXT AND COMPILATION*

6

See instructions before completing this space

MANUFACTURERS AND LOCATIONS If this is a published work consisting preponderantly of nondramatic literary material in English, the law may require that the copies be manufactured in the United States or Canada for full protection. If so, the names of the manufacturers who performed certain processes, and the places where these processes were performed must be given. See instructions for details.

| Names of Manufacturers ▼ | Places of Manufacture ▼ |
|---|---|
| Charles Edison McKee | Anchorage Municipal Assembly |
| | |
| | |

7

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See instructions

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Name ▼ Account Number ▼

9

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/Zip ▼

Charles Edison McKee, 7800 DeBarr Rd. E #63
Anchorage, Alaska 99508

Area Code & Telephone Number ▶ (907) 337-4144

Be sure to give your daytime phone number

CERTIFICATION* I, the undersigned, hereby certify that I am the

Check one ▶

☐ author
☐ other copyright claimant
☐ owner of exclusive right(s)
☐ authorized agent of _____

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

10

Typed or printed name and date ▼ If this is a published work, this date must be the same as or later than the date of publication given in space 3.

Charles Edison McKee date ▶ 1-14 1992

Handwritten signature (X) ▼

X Charles E. McKee

MAIL CERTIFICATE TO

Certificate will be mailed in window envelope

Name ▼ Charles Edison McKee

Number/Street/Apartment Number ▼ 7800 DeBarr Rd. E #63

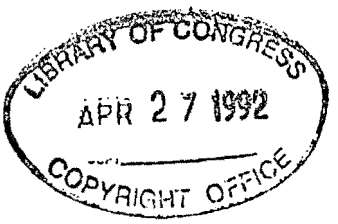
City/State/ZIP ▼ Anchorage, AK 99504

Have you:
- Completed all necessary spaces?
- Signed your application in space 10?
- Enclosed check or money order for $10 payable to *Register of Copyrights*?
- Enclosed your deposit material with the application and fee?

MAIL TO: Register of Copyrights, Library of Congress, Washington D.C. 20559

17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

U.S. GOVERNMENT PRINTING OFFICE: 1983 381-274/527




January 14, 1992

Ronald V. Dellums (chair)
District of Columbia
Municipal Affairs of Public Libraries

Re: Municipality of Anchorage, Alaska Public Libraries

The U.S. Congress wrote and passed the Alaska Statehood Act in 1958.

Alaska's first Governor, William A. Eagan (D) who deliberately went against New York Life and became our first "freeboater," and ordered shots fired across the bow of the contracted Japanese fishing boats, that had been seen laying nets completely closing the entrance to rivers to entrap the returning salmon. Before this, adherence to a one million acre land trust was created by congress in 1956, to fund mental health programs in Alaska. Our resources were considered high risk, (although in abundance) of which gave us a credit rating of zero and a "callable note." This instrument used to dismantle our "at liberty" of individuality, by master criminals. This sets up the most difficult challenge for posterity of We the People, in Alaska, or anywhere else for that matter. You see, the root of all key transportation systems "must" be a common carrier available to all! By this time, we had no common carrier, we had credit with interest applied "before" purchase. If we were to borrow, to "invent" more posterity or, market the new, the transfer of our posterity of our "at liberty" and likewise "peopleking" would be alienated by raw material cartels!!! So our representative government's commit illegal acts through legislation such as, divorcing our

Lodged

AUG 10 1992

Charles McKee
7800 East Debarr, # 63
Anchorage, Alaska 99504

INTHE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ALASKA

| | |
|---|---|
| Charles E. McKee ~~et al.~~, PEOPLE-KING, CLASS SUITE TEST SUIT (QUASI-CRIMINAL), | QUI TAM PRO DOMINO REGE ET SEQUITOR PRO SE IPSE<br>People King(s) |
| Plaintiffs, | CLASS SUIT, TEST SUIT, (QUASI-CRIMINAL) |
| vs. | Case No. A90-0061 MISC |
| STATE OF ALASKA, EXECUTIVE BRANCH, LEGISLATIVE BRANCH, JUDICIAL BRANCH, STATE DEPARTMENT(S), BOARDS AND COMMISSIONS, et al., 1 TO 100.<br>Defendants. | Motion and Order |

COMPLAINT

Municipality of Anchorage, Alaska Public Libraries

The U.S. Congress wrote and passed the Alaska Statehood Act in 1958.

Alaska's first Governor, William A. Eagan (D) who deliberately went against New York Life and became our first "freeboater," and ordered shots fired across the bow of the contracted Japanese fishing boats, that had been seen laying nets completely closing the entrance to rivers to entrap the returning salmon. Before this, adherence to a one million acre land trust was created by congress in 1956, to fund mental health programs in Alaska. Our resources were considered high risk, (although in abundance) of which gave us a credit rating of zero and a "callable note." This instrument used to dismantle our "at liberty" of individuality, by master criminals. This sets up the most difficult challenge for posterity of We the People, in Alaska, or anywhere else for that matter. You see, the root of all key transportation systems 'must" be a common carrier available to all! By this time, we had no common carrier, we had credit with interest applied "before" purchase. Is we were to borrow, to "invent" more posterity or, market the new, the transfer of our posterity of our "at liberty" and likewise "peopleking" would be alienated by raw material cartels!!! So our representative government's commit illegal acts through legislation such as, divorcing our

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Aug 26, 1992

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J. Dubs
AST.F

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AUG 18 1992
Time 4:45
Anchorage Police Dept.
RECORDS

8/21/92 Received materials from Mr. McKee this date.
Tom Howell
Associate Administrator
Providence Hospital
Anchorage, AK 99516

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Clerk of Appellate Courts
Anchorage, Alaska

CLERK, U. S. DISTRICT COURT
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Jim Kalb

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DIRECTOR'S OFFICE
AUG 25 1992

transfer of posterity away from the original Seal of the Treasury of North America where five-pointed stars on the chevron replace the six-pointed star (of David 13 in all) removed the lover's knot and flowers plus blasphemed the United States and its posterity of We the People on, the $100 dollar. United States Note, series of 1966, also note the change in how the scale of justice is supported from below rather than from above?

Questioning apparent facts of design change, combined with the expressed obligation of the government and the two signatures, "it notarizes" the contract (see Chief Justice John Marshall affirmed claim that the national authority is limited from impairing the obligation of contracts). The Treasury Seal, one would say, is the final stamp of approval that ensures the legality of our currency/contract. The use of symbols by the way is, the oldest educational sequence of our posterity known; so why change? The economic symbols of our reason for being. The utmost educational system of symbols representing Christian character from which our government was formed. Quite deceitful, I must say, in the use of proxies to substitute a Nation.

My primary impetus is to eliminate this paradox; that being some in positions of "rank" authority (meaning not obeying) are refusing to recognize my/our historical need for a free expression of one's shield; bearing designs symbolic of a people and their people of posterity manifesting individual, family and nation. Thereby not being taken in, by part or whole to prurient interest. This endeavor to cause inequality through belief and/or act entrapment is clearly intentional.

The use of position public and private, employment and/or appointment of those who will do their biding under duress through mental and/or economic entrapment, such as it is, is embarrassing!! It is challenging to wisely spare for justice and protect the economy at the same time.

It can be done considering, that this is not a negotiable indictment.

Royal Fork Buffet

Shelly Shop

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AUG 27 1992
Department of Revenue
Oil & Gas Audit Division

Received for
Commissioner Revenue
Darrel J. Rekwinkel

ANCHORAGE ECONOMIC DEVELOPMENT CORP.
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Suite 1130
Anchorage, Alaska 99501

Received
8.27.92

AMBBA
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AUG 28 1992
Ans'd.....

APEC
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AUG 28 1992
Ans'd.....

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ALASKA ENERGY AUTHORITY

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Alaskan Village
SC-00330842 6

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ANCHORAGE
L. McLaren

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ANCHORAGE
L. McLaren

The flurry of environmental protest is placing this agenda before you. Think of it as a environmental filibuster if you wish, thereby negating all but Lord God Jehovah's Day! Ironically another hazard of living among employed people paid by paper persons (meaning incorporated businesses) is getting introduced to the systematic efforts to affect morals, loyalty etc. especially by large international banks. They call this psychological warfare. Statistics show because of this heathenish weapon, "unchecked," brings about the loss of sole proprietorship, over time and has attributed to the fastest growing mental illness in America today, "Schizophrenia" (and not unfounded).

That is why our roots as a nation go back to the original Seal of the Treasury of North America. why it was designed before the Articles of Confederation with no record of report, to the committee, on the design or creator of the design.

These people knew beforehand about moneys rule; and political and/or religious ideological powers to "sharply" divide man from "being of kindness!"

The U.S. Treasury tried three different times to get back our common carrier in 1928, 1953 and 1963 which some would say was a grueling battle, that involved

1) Time management (insurance), 2) Interest rate of paper "banking" (hollo), 3) War "civil?" (armed conflict in the streets) and 4) Assassination(s) (of Presidents) to name but a few. Then transfer the common gold reserve of "interchangeability" to the World Bank (carteling) by way of a bill authorizing U.S. participation in the international "paper gold" plan, signed by President Johnson June 19, 1968.

The Original Seal of the Treasury of North America

Thereby trying to justify discontinuing the original seal of the Treasury, why the committee "foreordained" its creation outside the powers of political authority, having prior formal knowledge (exact science) between reinsurance (outside the legal authority) local insurance, banking and the nature of corporate association with council(s) of community's and the dual role, a secretary-treasurer to maintain a reserve in gold certificates against deposit liabilities, the change to eliminate that requirement passed congress March 3, 1965.

MOTION

Which brings me to my educational requisition, I Charles E. McKee by right of posterity and in the act of taking, to amplify The Original Seal of the Treasury of North America. By way of the Bill of Rights among them the ninth amendment and conveyance by way of resolution approving the use of force (see eminent domain) by any American nation to prevent a communist takeover, passed by U.S. House of Representative, September 20, 1965 by vote of 312-52. Oh, by the way, did you know, the preamble to the constitution of the World Health Organization, chartered in 1948, defines health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

The Seal of the Treasury was created through the inspiration of study within a study of liberty hence, the library an instrument of trust conveyance.

The base for this is the foundation, not only for our national government, but the libraries as well, hence our local Z. J. Loussac (Liberty) Library Foundation. What were they constituted to convey? To maintain a reduction of social inequalities perhaps! They gained prominence only in this century, it started in Europe, due to the aftermath of industrialization (warfare) urbanization (banking). Confronted by the contrast of poverty amidst plenty they were pioneered.

Clearly the easiest institution founded to be subject to tarnishment, using the four previously stated, is the educated vote.

Now reflecting for a moment to the point of history where the inspiration is clear, to all who would please read, to is ultima.

We the people of the United States in order to form a more perfect union, establish justice ensure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessing of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America.

Why fragment what is already whole, with "interest" that sounds suspiciously "inflationary!"

As I have written, it is challenging to wisely spare for justice and protect the economy at the same time! It can be done.

Now there is a common word denominator between the Bill of Rights and the Postal System (even though the latter was enacted the former established) "Issue" (to bring forth) our, posterity as freeman.

Concepts that identify the values pursued by government; freedom, order, and equality.

The word omniscient is the common denominator to the Original Seal of the Treasury of North America, a "Republic" Benjamin Franklin "replied" when asked what sort of government the new nation would have "If you can keep it." a Republic! (Not Corporate Cartels under Federalism rule)

for he well knew the implication of the private swearings and other acts that "impeach" the Republic for which it stands that being the omniscient counsel of Lord God Jehovah! The word "freeman" denotes values pursued by every man jack/everyone!

The implication of the private Oligarchy (The federalist few) debasing itself to the point of anarchism (Cartels, a New World Order) lowering down through democracy. The ancient Greeks were afraid of democracy, being evident of the infiltration, by one or more blood oath taking ideologies, who appeals to, and deceives the masses by manipulating their emotions and prejudices.

Having beforehand manipulated the politician(s) to ceremonial swearing (that's why they changed the seal, so when you take the oath of office) you have been deceived!

That fear is evident in the term (from the Greeks) demagoguery!

For what purpose one needs to know is, the objective. Technically speaking, Anarchism. the discontinued use of the organizational separation of powers and checks and balances, over stepping the legitimate police powers given the national government, one of which is In apportioning, representatives in the House, the population of each state was to be determined by adding "the whole number of free persons, so as "not to be caricaturing" us with numbered chattel, through a census (see actuaries) hollo!

It is not the national government that is doing this. The federal reserve system of government, that includes both national and state political maneuvering, shrouded in mythology and sometimes in conflict, part of, psychological warfare. (See Marbury v. Madison 1 Cranch 137

(1803) judicial power to invalidate an act(s) of Congress) So I enter my proof a copy of a State of Alaska Treasury Warrant and with it copies of a U.S. Note a common carrier without the original seal of the treasury/a Federal Reserve Corporate Note credit with interest applied before purchase, and my Alaska Permanent Fund Dividend application for 1991.

Now there are many illegal acts all prejudicial, for instances if, I Charles Edison McKee see the need, which I do, to file a class action law suit, and the need being to, assemble plaintiffs as such, "The whole number of free persons" from the Preamble of We the people do ordain, the continuity of "thesis" (to be maintained against objection) technically speaking wouldn't that be only the members of congress or those people outside of the census! what of the Alaska Mental Health Trust and the needs of the currency/consumers trust.

The Municipality of Anchorage put to a public vote the proposed sale of the municipally owned A.T.U. (Anchorage Telephone Utility). Why; well too much bound debt, with interest. Now on the ballet for the proposed sale of A.T.U. was an alternative, if you want to call it that, not to sale, (the offerings were $450,000,000 and $500,000,000 municipally bond debt, with interest $50,000,000) but to create an "authority," the authority was approved.

The Municipality of Anchorage is a first-class city, because of that "rating" it legally has to provide utilities, schools, land-use planes and the collection of taxes period!

I for one, knowing that the State of Alaska had to deal with the Alaska Supreme Court ruling in 1985, ordering that the Alaska Mental Health Trust be recreated " as nearly as possible" to the original trust, didn't want to add my vote to this, but wanting to vote, the educated way and couldn't.

The ruling went on to say that the 1978 "legislation" dissolving the trust was in fact illegal. It is as if "the private people in "authority" are not in conveyance with their public "oath" of office!

The linkage here with respect to all parties, is the public trust conveyance, closer to home, the State of Alaska conveyed land to the Municipality of Anchorage, "from" this land trust, some of which A.T.U. uses to provide service to the beneficiaries. (Personal commentary), nothing like being led into moral condem "nation!" (time management) This generalization of defrauding the public moral right of authority, has to stop!

What is it that I need, "personal equality" towards me "not" any more, "inequality" defrauding me through the use of Postal Service in the U.S. system of conveyance. In this case pre-sorted first class mail from the State of Alaska, Department of Administration, Division of Finance Box C, Juneau, Alaska 99811, mailed to me November 15, 1991, Juneau, Alaska. This isn't the first time, involving the Postal Service in the service of defrauding me of my rights "but," the first directly relating to "currency conveyance," do you see the linkage between my long dissertation, and the continued need to use all educational sequences to "ensure maintenance" of "legal history" that is, by the way, obligatory on the part of every man jack, and anything else to this end is obstructive to historical truth!

In summary, "The fruitage of the spirit is love, joy, peace, long-suffering, kindness, goodness, faith, mildness, self-control! Against such things there is no law." Galatians 5:22.23. I have been asking, in other ways by man's law, but first and foremost to Jehovah though Christ Jesus but, always I, encounter obstructions to have my need fulfilled. What is even more pathetic is my needs along with the needs of the beneficiaries are judged not by divine and/or human standards but by obstructive means imposed in many ways by the people who have the gold, "oh," my

assembled plaintiffs "ya" right. As the fifth amendment comes to mind and the need to extradite, did I say pathetic!

ORDER

Now there is more than enough gold within the Turnagain Arm to "entrust" the common carrier/currency of this nation. My plan for extraction will be conducted in a confederated manner just previously stated. There is this matter of conveyance, the need of payment for, local municipal bond debt yours as well, but first. The total amount offered for the purchase of A.T.U. out of which the monies need to extinguish the bond indebtedness will be extracted having the full amount being first transferred through the Z.J. Loussac Foundation the accounting of which will also be transferred to A.T.U. and its accounting department.

ORDER

Full and complete title (legal rights) to substratum(s) and all things therein and upon the surface of the Turnagain Arm, Knik Arm, upper and lower Cook Inlet, a parcel that is owned by the U.S. Small Business Administration, and one owned previously by them with the same legal rights as before stated. The "emphatic" need to merge all the legal rights that I have put forth, is only secondhand to the proof that I have submitted which impacted me directly. The monies for the purchase of A.T.U. in the immediate will come from the State of Alaska, being accredit to my educational examination. In speaking to the psychologist, this is, has been, a complex maneuver to profit while harassing people, and as a state(s) is corrupted the bad laws multiply, the legislative government takes all the, shall we say "heat" and the worst sort of tyranny, "our" dismissal of faith of same, by our own act, hence misdiagnosed Schizophrenia, cosmetically affective, and because its just that, quite frankly, shelters tyranny!

Tyranny in the past has sought out sovereignty sanctuaries for the free man, to infiltrate with their forsworn souls, our founding fathers knew this so they fortified the individual with their posterity

by all that is written, my proof of indictment, the foreordained seal, separation of powers, checks and balances and by adding the whole number of free persons (like me) to be fully educated in such matters by the free and convenient accessibility to legal history, hence, public library.

Sincerely,

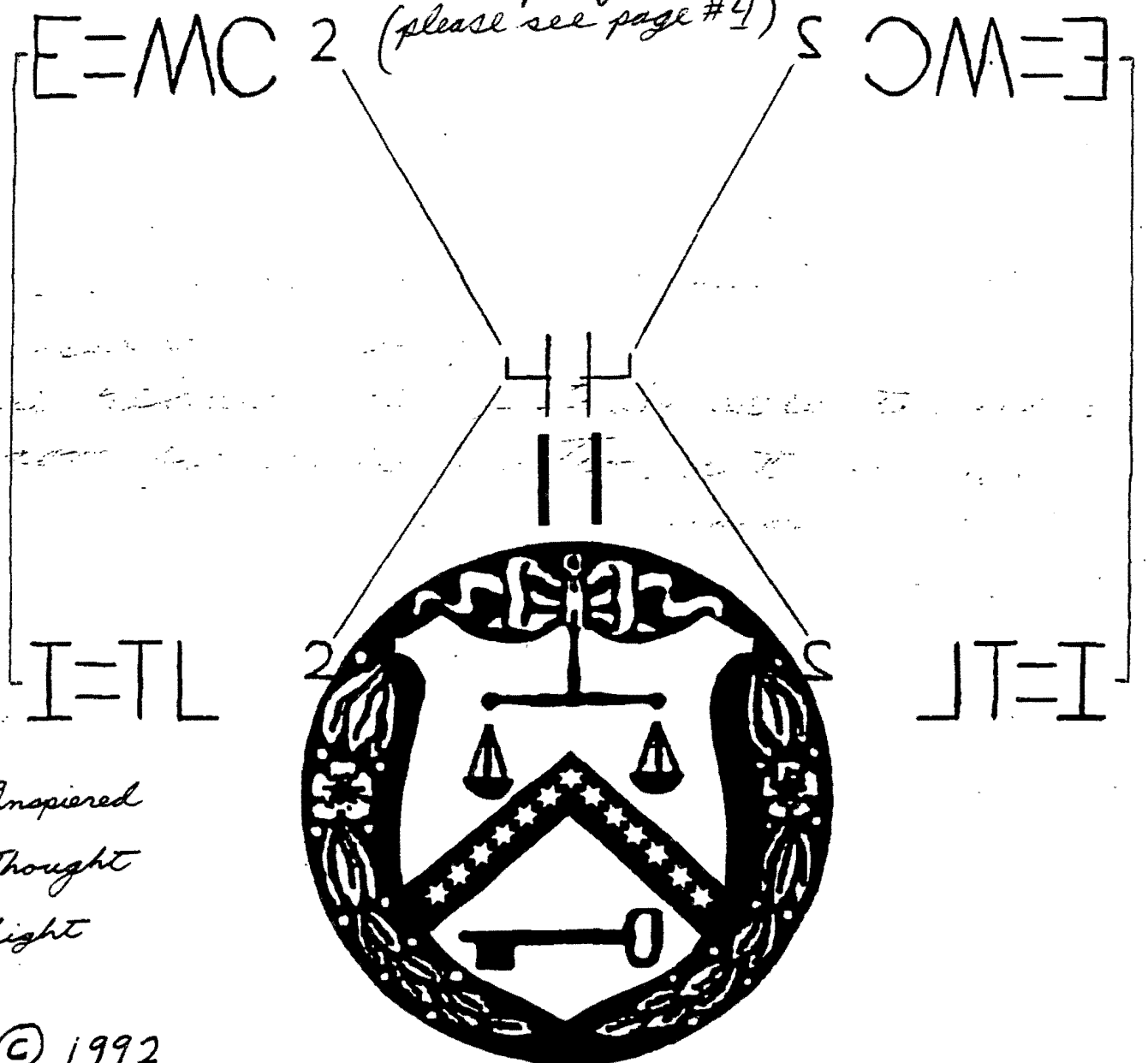
Charles E. McKee

Charles E. McKee

8-10-1992

"amplified"

(please see page #4)




I= Inspiered

T= Thought

L= Light





Title of Origin

Charles E. McKee 5-8-1992

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The Challenge of Democracy Government in America by Jandsa, Berry, Golman

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Holy Bible King James






To best understand the present (November 1981) world crisis, it is necessary to turn history back for almost a century, back to when Edison invented the electric lamp and the direct current generator. J. P. Morgan, Sr., the economic power structure giant, was the first to act upon the realization that: whoever developed, manufactured, installed, and controlled the physical-energy generators and the metered-energy distribution and cut-off system could and would control the national economies into which they were physically introduced. The air we breath was everywhere so plentiful that its availability could not readily be monopolized. There were too many ponds, lakes, rivers, brooks, and wells to make the metered water-supply systems a generally monopolizable business.

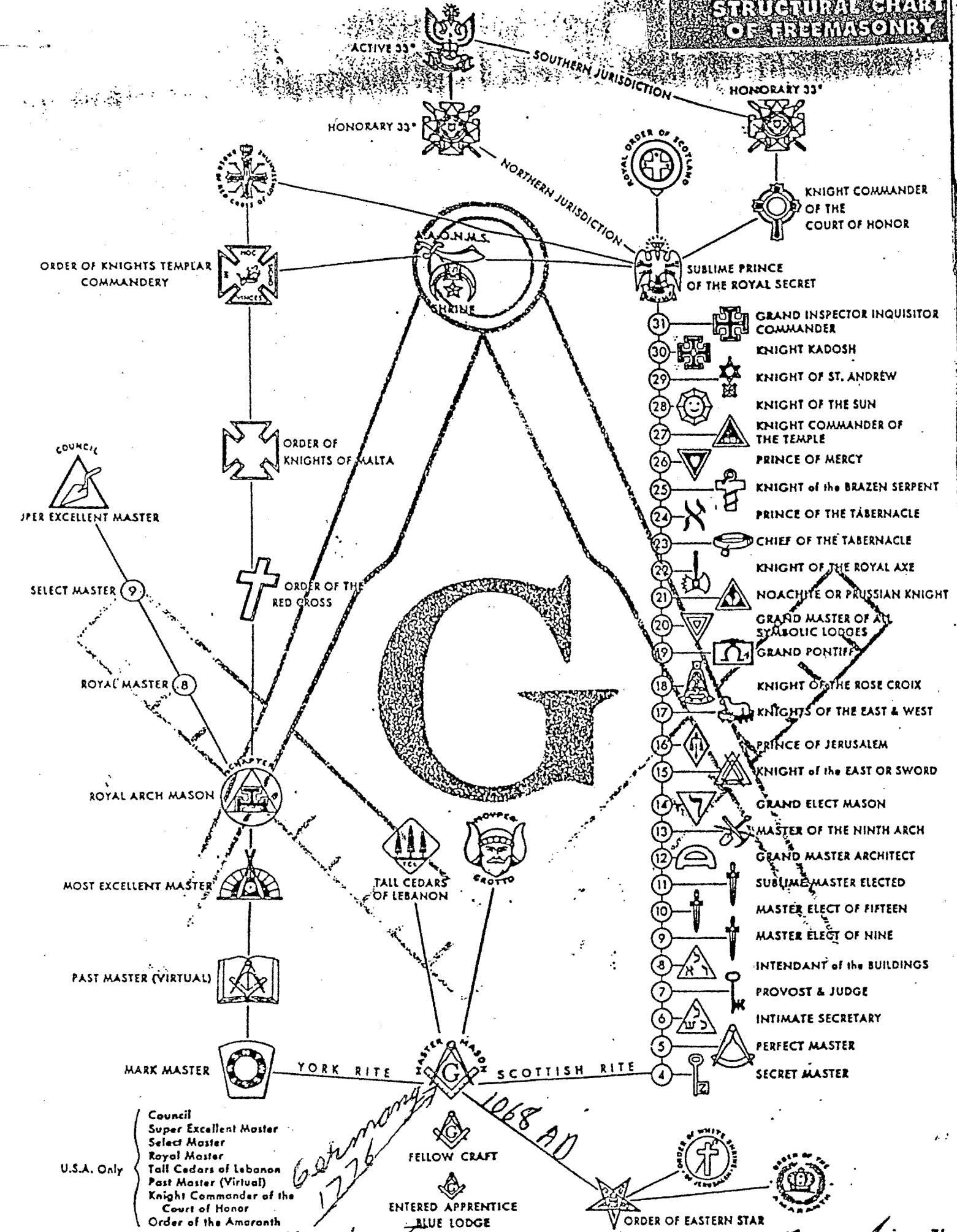
When Alexander Graham Bell invented the telephone, it had to compete with the post-office conducted mail and required far greater numbers of employees. Morgan saw that the copper mines and the electric equipment manufactured from copper as well as all the power-generating companies involved the least labor participation and the then maximally profitable business.

All of the foregoing required the availability and controllability of an utterly unprecedented magnitude of physical apparatus and installation of otherwise unemployed monetary wealth. The patents of Edison's inventions and an army of astute lawyers and brokerage houses became the pivotal legal-precedent-accepted economic properties and work force in amassing the initial procurement capital of Morgan's power monopoly.

*See *Critical Path*, "Triangulation Mapping," pp. 184–188.

based on legal fiction

# STRUCTURAL CHART OF FREEMASONRY



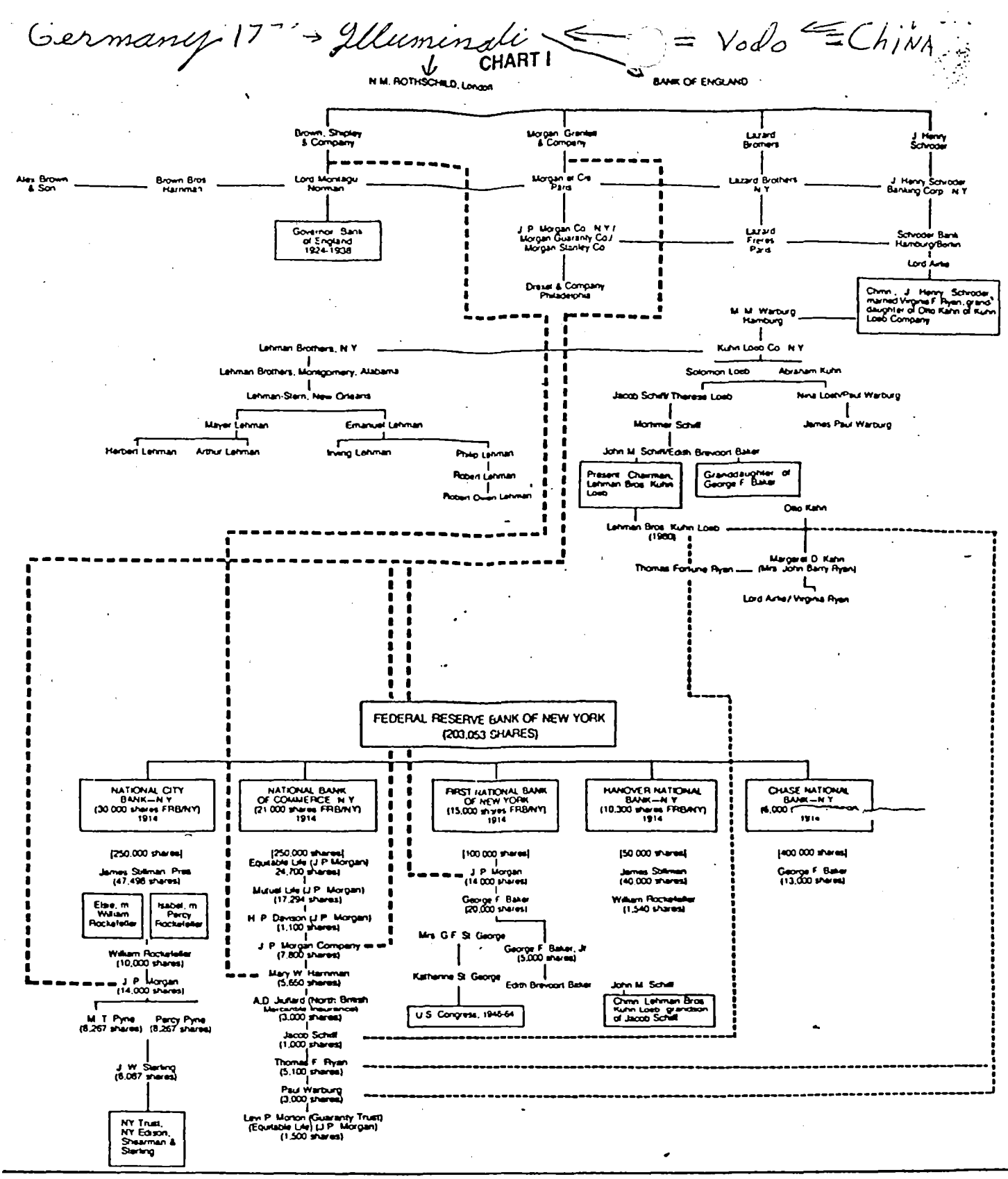



CHART I reveals the linear connection between the Rothschilds and the Bank of England, and the London banking houses which ultimately control the Federal Reserve Banks through their stockholdings of bank stock and their subsidiary firms in New York. The two principal Rothschild representatives in New York, J. P. Morgan Co., and Kuhn, Loeb Co. were the firms which set up the Jekyll Island Conference at which the Federal Reserve Act was drafted, who directed the subsequent successful campaign to have the plan enacted into law by Congress, and who purchased the controlling amounts of stock in the Federal Reserve Bank of New York in 1914. These firms had their principal officers appointed to the Federal Reserve Board of Governors and the Federal Advisory Council in 1914.

In 1914 a few families (blood and business related) owning controlling stock in existing banks (such as in New York City) caused those banks to purchase controlling shares in the Federal Reserve regional banks.

From, "Secrets of the Federal Reserve", by Eustace Mullins. $10.00. softcover, 198 pgs. Bankers Research Institute, P.O. Box 1105, Staunton. VA 24401.