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Draft

Fiscal Year 1996 Work Plan

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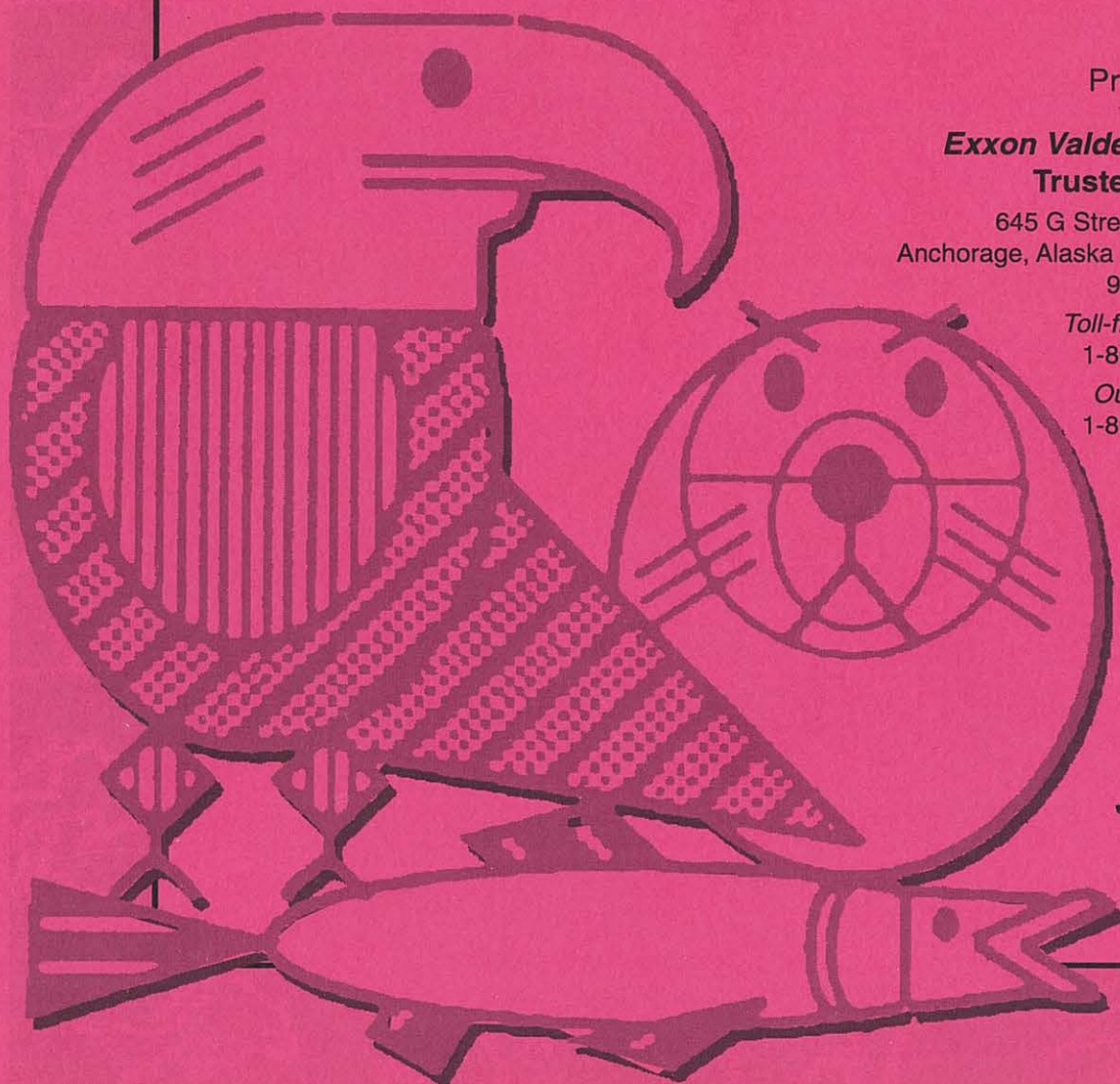
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Trustee Council**

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June 1995



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June 1995

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Prepared for:
Exxon Valdez Oil Spill
Trustee Council

**EXXON VALDEZ OIL SPILL
TRUSTEE COUNCIL
ADMINISTRATIVE RECORD**

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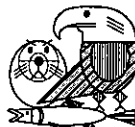
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This draft work plan is presented for public review and comment. It does not reflect a final decision by the Trustee Council. Projects in this draft are also subject to further review by the Trustee Council's Public Advisory Group, Chief Scientist, and legal advisors. The Trustee Council will make funding decisions for most projects in this draft on or about August 25, 1995.



Draft Fiscal Year 1996 Work Plan

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INTRODUCTION

Each year the *Exxon Valdez* Oil Spill Trustee Council funds activities to restore the resources and services injured by the 1989 *Exxon Valdez* oil spill. This draft work plan describes restoration activities being considered for federal Fiscal Year 1996 (October 1, 1995 through September 30, 1996).

The Trustee Council has not decided which projects to fund. They will make their decision on or about August 25, 1995 using comments from the public and the Public Advisory Group, evaluations of independent scientific reviewers, legal advisors, and recommendations from the Executive Director. For some projects action cannot occur until the Council has reviewed results from the 1995 field season. A decision on these projects is expected in December 1995.

How You Can Comment. You can help the Trustee Council by reviewing this draft work plan and letting them know your priorities for Fiscal Year 1996. To be most useful, your comments must be received by the Trustee Council on or before **August 4, 1995**. Comments may be submitted in a variety of ways:

- | | |
|------------------------|--|
| Mail: | <i>Exxon Valdez</i> Oil Spill Trustee Council
645 G Street; Suite 401
Anchorage, AK 99501
Attn: Draft Fiscal Year 1996 Work Plan |
| Phone: | Telephone (907) 278-8012
Toll free in Alaska: 1-800-478-7745
Toll free outside Alaska: 1-800-283-7745
Collect calls will be accepted from fishermen and boaters who call through the marine operator. |
| Fax: | Fax: (907) 276-7178 |
| E-mail: | Attn: Bob Loeffler; 73160.1771@compuserve.com |
| Public hearing: | 7 PM on Thursday, July 20, 1995 (Access Available by Teleconference) |

Access to the public hearing will be available via teleconference to residents of all communities and villages in the oil spill region. Contact your local Alaska Legislative Information Office or L.J. Evans at the telephone numbers above for information about participating in the hearing by teleconference.

Background

In 1991 the U.S. District Court approved a settlement of a lawsuit concerning the 1989 *Exxon Valdez* oil spill. The terms of the civil settlement required Exxon Corporation to pay the United States and the State of Alaska \$900 million over ten years to restore the resources injured by the spill, and the reduced or lost services (human uses) they provide. Under the court-approved terms of the settlement, a Trustee Council of three federal and three state members was designated to administer the restoration fund and to restore the resources and services injured by the spill. According to the settlement:

- Restoration funds must be used "... for the purposes of restoring, replacing, enhancing or acquiring the equivalent of natural resources injured as a result of the Oil Spill or the reduced or lost services provided by such resources..."
- Restoration funds must be spent on restoration of natural resources in Alaska unless the Trustee Council unanimously agrees that spending funds outside the state is necessary for effective restoration.
- All decisions made by the Trustees, such as a decision to spend restoration funds, must be unanimous.

Since the 1991 settlement, the Trustee Council has been working to restore the resources and services injured by the oil spill. In November 1994 the Council adopted the *Exxon Valdez Oil Spill Restoration Plan* to guide the restoration effort. To be eligible for funding, proposals must be consistent with the policies in the *Restoration Plan* and must be designed to achieve the recovery objectives for injured resources and services.

The *Restoration Plan* outlines a comprehensive, balanced approach to the restoration of damaged resources and services. This approach includes the following basic elements:

- Monitoring and Research;
- General Restoration;
- Habitat Acquisition and Protection; and
- Restoration Reserve.

A copy of the *Exxon Valdez Oil Spill Restoration Plan* may be obtained by writing or calling the Trustee Council office.

Resources and Services Injured by the Spill

Table 1 lists the resources and services injured by the spill. For biological resources, the table includes those resources for which scientific research has demonstrated a population-level injury, or a sublethal or chronic effect.

Only restoration proposals that are designed to restore the resources or services identified in Table 1 are being evaluated for FY 96 unless new scientific or local knowledge shows that other resources or services experienced a population-level injury or continuing chronic effect. In addition, restoration actions may address resources not listed in Table 1 if these activities will benefit an injured resource or service. For example, it may be permissible to focus activities on a resource that is not listed in Table 1 if the activities will help subsistence or commercial fishing activities or are a necessary part of a research proposal designed to help understand the injuries to a resource identified in the table.

Table 1. Resources and Services Injured by the Spill

The table includes only population-level and continuing sublethal injuries.

INJURED RESOURCES			Lost or Reduced SERVICES
Biological Resources		Other	
Recovering Bald eagle Black oystercatcher Intertidal organisms (some) Killer whale Mussels Sockeye salmon (Red Lake) Subtidal organisms (some)	Not Recovering Common murre Harbor seal Harlequin duck Intertidal organisms (some) Marbled murrelet Pacific herring Pigeon guillemot Pink salmon Sea otter Sockeye salmon (Kenai & Akalura systems) Subtidal organisms (some)	Archaeological resources Designated wilderness areas Sediment	Commercial fishing Passive uses Recreation and Tourism including sport fishing, sport hunting, and other recreation uses Subsistence
Recovery Unknown Clams Cutthroat trout Dolly Varden River otter Rockfish			

The Chief Scientist and independent peer reviewers are currently evaluating recommendations to add resources to the table. A draft recommendation to add Kittlitz's murrelets, loons (four species), and cormorants (three species) is under review. Trustee Council action on that recommendation is expected in late summer.

The Work Plan Process

This section describes the process being used to develop the FY 96 Work Plan.

Restoration Workshop for Review and Planning. A Restoration Workshop was held in January 1995 to review previous years' work and analyze restoration needs for the future. More than 120 people participated, including individuals conducting restoration projects, independent peer review scientists, and members of the public.

Invitation to Submit Projects. Based in large part on the workshop, the *Invitation to Submit Restoration Proposals* was developed and distributed in March 1995. The *Invitation* asked individuals, private industry, government agencies, and other interested parties to submit ideas and proposals for restoration work in FY 96. The deadline to submit proposals was May 1, 1995.

Review of Proposals. All projects received an independent scientific review coordinated by the Trustee Council's Chief Scientist. They were also reviewed by agency staff and are being reviewed by the Public Advisory Group.

Executive Director's Preliminary Recommendation. On the basis of these reviews, the Executive Director developed a preliminary recommendation for public review and comment which is included in this draft work plan. The recommendation does not reflect a decision by the Council. It may be revised following review by the public and Public Advisory Group, and further legal, scientific, budget, and policy analyses.

Current Step!

Public Review. The public and the Public Advisory Group are encouraged to review this draft work plan. Comments submitted by **August 4, 1995** will be used in revising the Executive Director's preliminary recommendation.

Resolving Issues and Further Review. Many of the Executive Director's recommendations are contingent upon resolving issues identified during the proposal review process. Some projects will undergo further technical review.

Final Executive Director's Recommendation. Based on public comments on this draft, resolution of outstanding issues, and further review, the Executive Director will make a final recommendation to the Trustee Council in mid-August.

Trustee Council Decision. The Trustee Council is expected to take action on most of the FY 96 Work Plan on or about August 25, 1995. For some projects, Trustee Council action is expected in December, after review of the 1995 field work and additional information is provided.

Funds Available for the FY 96 Work Plan

After analyzing restoration needs for FY 96 and those anticipated for the future, and given the Council's commitment to funding habitat protection and the Restoration Reserve, the Executive Director's preliminary recommendation is that approximately \$18 million be used for research, monitoring, and general restoration projects in FY 96, and \$3.4 million for Public Information, Science Management, and Administration. This funding level is being used for planning purposes.

TABLE 2. PAST AND ESTIMATED FUTURE USES OF CIVIL SETTLEMENT FUNDS AS OF JUNE 1995
FIGURES IN MILLIONS OF DOLLARS

Research, Monitoring & General Restoration	\$118 – \$248 million
Past Authorizations: \$110.3 million	Future Authorizations: \$108 – \$138 million
\$19.2 million for the 1992 Work Plan	
\$15.5 million for the 1993 Work Plan	
\$25.8 million for the 1994 Work Plan	
\$24.8 million for the 1995 Work Plan	
\$25.0 million for Alaska Sealife Center	
Estimated future work plan authorizations are calculated as the residual of \$900 million less past and estimated future authorizations for other restoration purposes.	
Restoration Reserve	\$108 million plus interest
Past Authorizations: \$24.0 million	Future Authorizations: Anticipated at a total of \$84 million (\$12 million/year through FY 2002)
Habitat Protection	\$342 – \$372 million
Past Actions: \$98.1 million	Future Authorizations: \$244 – \$274
\$7.5 million for inholdings in Kachemak Bay State Park	
\$39.6 million for Seal Bay on Afognak Island (\$38.7 for purchase and \$0.9 in estimated interest)	
\$3.65 million for timber rights at Orca Narrows	
\$36.0 million for AKI lands within the Kodiak National Wildlife Refuge	
\$11.3 million for Old Harbor lands within the Kodiak National Wildlife Refuge	
Reimbursements	\$177 million
Past Reimbursements: \$150.4	Estimated Future Reimbursements: \$26.3 million
For reimbursements to the federal and state governments for past damage assessment, cleanup, response, restoration, and litigation expenses.	
Adjustments	\$23 million
Includes \$39.9 million deducted by Exxon from the 1992 payment for the costs of cleanup completed after January 1, 1991; plus court fees and minus credits for interest earned and funds not expended by agencies.	
Total Past and Future Estimated Expenditures	\$900 million

Table 2 shows past and estimated future commitments for elements of the Trustee Council's restoration program. The table's figures are estimates made for planning purposes. The Council will base actual funding decisions on their examination of what is necessary for restoration at a particular time. Nevertheless, the table gives an idea of the amount likely to be available for work plan funding in future years.

The Executive Director's preliminary recommendation to spend approximately \$18 million for research, monitoring, and general restoration is derived by considering the following:

- The Trustee Council has either signed purchase agreements, made preliminary offers to landowners, or initiated preliminary negotiations for more than 600,000 acres of habitat within the spill area. Some of these transactions are final, but most are still in negotiation and will likely be completed during the next year. In addition, the Trustee Council is considering protection of a number of small parcels (less than 1,000 acres) throughout the spill area. These activities will commit almost \$375 million from restoration funds.
- In FY 95 the Trustee Council established the Restoration Reserve with the anticipation that \$12 million will be allocated to the reserve each year to provide \$108 million plus interest by the year 2002. Thus far, the Council has set aside \$24 million and expects to set aside another \$12 million in FY 96. The Restoration Reserve will be used to fund restoration activities after the final payment is received from Exxon in 2001.
- Table 2 shows that, given the Trustee Council's commitment to the Restoration Reserve and habitat protection, approximately \$108 to \$138 million remain to fund work plan expenses for the next seven years (FY 96 through FY 2002), including the cost of Administration, Public Information, and Science Management.
- Funding needs for research, monitoring, and general restoration will decline over the next seven years as recovery progresses. The preliminary recommendation of \$18 million for work plan expenditures in FY 96 is consistent with this concept. Near-term commitments to other parts of the restoration program, such as the Restoration Reserve, habitat protection, and the Alaska SeaLife Center also constrain the funds available for research, monitoring, and general restoration projects. That is, somewhat higher FY 96 expenditures are only possible at the expense of other restoration priorities in FY 96 or at the expense of significantly decreased work in future years.
- The proposed \$18 million expenditure for research, monitoring, and general restoration in FY 96 reflects a reasonable level of effort relative to the other major elements of the restoration program (habitat protection, and Restoration Reserve). In order to maintain a sustainable restoration work plan effort over the next several years, it is anticipated that annual work plan expenditures will significantly decline over time.

Like other recommendations in this draft work plan, the preliminary recommendation to use \$18 million in funds for research, monitoring, and general restoration is being offered for public review. The Trustee Council has made no commitment to this or any other level of funding for the FY 96 work plan. They will make their decision after considering restoration needs, a final Executive Director's recommendation made in August, and comments made by the public and the Public Advisory Group.

Where to go for More Information

Information about Individual Proposals. This document contains only summary information about each proposal. If you would like a copy of the individual proposals, please call the Restoration Office and one or more proposals will be sent or faxed to you.

Information about Long-term Work Plan Needs. If you would like a more detailed overview of the individual clusters of work plan projects, please call the Restoration Office and ask for a copy of the *Draft Restoration Program: FY 96 and Beyond* (March 1995).

Information about the Restoration Program in General: requirements, policies, and objectives. Please call and ask for a copy of the *Exxon Valdez Oil Spill Restoration Plan* (November 1995).

FY 96 PROJECTS

Summary of the Preliminary Recommendation

This section summarizes the Executive Director's preliminary recommendations for the FY 96 work plan. These recommendations are made for public review and may be revised in mid-August. At this time, the Trustee Council has made no decision on projects in this draft Work Plan. The Trustee Council will make its decision after considering restoration needs, the final Executive Director's recommendation, and comments made during public review of this draft.

In May 1995 the Trustee Council received 121 proposals requesting funding for FY 96. After scientific, budget, and policy review, the Executive Director made a preliminary recommendation. While the recommendations are specific to each proposal, they are grouped into the following categories.

**Table 3. Summary of the Preliminary Recommendation for FY 96:
Research, Monitoring, and General Restoration Projects**

Category	Explanation	No. Proj.	Recommended FY 96 Cost
Fund	Project has high technical merit with significant contribution toward achieving restoration objectives. Project recommended for Trustee Council approval.	14	\$1,919,600
Fund Contingent	Same as above except that certain issues need to be resolved before funding is approved. Project recommended for Trustee Council if these issues can be resolved.	32	\$11,658,500
Lower Priority	Project may have high technical merit, but is a lower priority for funding considering its contribution toward achieving restoration objectives for a resource or in light of the overall restoration program. Fund as budget allows.	4	\$456,300
Defer Decision	A decision on whether or not to fund these projects cannot be made without more information. In some cases, that information will not be available until after this summer's field season. A decision about these projects will occur in December 1995.	22	\$7,244,400
Total:		72	\$21,278,800
Do Not Fund in FY 96 or Not Appropriate for Funding.	Do not fund at this time. In some cases, it is recommended that a project be postponed or re-evaluated in the future. In other cases, the project is not legally permissible, has technical problems, is incomplete, or does not significantly contribute to restoration objectives.	49	\$9,691,300
Total, All Projects:		121	\$30,970,100

Table 3 shows that if all of the recommended projects in the *fund*, *fund contingent*, *defer decision*, and *lower priority* categories are approved, the cost would be \$21 million. This amount is well above the preliminary \$18-million target. Further review of proposed budgets may reduce the cost of some projects. Some projects in the *fund contingent* category may not have their issues resolved. In addition, further review may result in some projects currently recommended for funding not being recommended in August, or not being approved by the Trustee Council.

Table 3 does not include the \$3.4 million recommended for Administration, Public Information, and Science Management. It also does not include the funding recommended to support habitat protection and acquisition activities or the Restoration Reserve.

Table 4 shows the preliminary funding recommendations by restoration cluster. The table shows the total cost of projects given a preliminary recommendation of *fund*, *fund contingent*, *defer decision*, and *lower priority*.

**Table 4. Preliminary Recommendation by Resource and Service:
Research, Monitoring, and General Restoration Projects**

<u>Restoration Cluster</u>	<u>FY 96 Recommendation</u>
Pink Salmon	\$3,275,900
Herring	\$1,434,100
Sound Ecosystem Assessment & Related Projects	\$4,712,700
Sockeye Salmon	\$1,803,200
Cutthroat & Dolly Varden Trout	\$240,400
Marine Mammal	\$765,100
Nearshore Ecosystem	\$3,387,100
Seabird/Forage Fish & Related Projects	\$2813,700
Subsistence	\$1,399,800
Archaeological Resources	\$424,300
Reducing Marine Pollution	\$29,600
Habitat Improvements	<u>\$992,900</u>
TOTAL:	\$20,952,100

Table 5 shows FY 96 and future years' cost of research, monitoring, and general restoration projects recommended as *fund*, *fund contingent*, *defer decision*, or *lower priority*. It does not include Administration, Science Management, and Public Information. Nor does it include the Restoration Reserve or projects to support the Habitat Protection and Acquisition program. Information about these components of the restoration program are explained beginning on page 28.

Table 5 shows that \$8,252,000, or almost 40% of the cost of the recommended projects, is slated to fund three multi-project ecosystem studies: The Sound Ecosystem Assessment (Project 96320), the Nearshore Vertebrate Predators Study (Project 96025 in the Nearshore

Ecosystem cluster), and the Apex Predator Ecosystem Experiment (also called the Seabird/Forage Fish Study, Project 96163 in the Seabird/Forage Fish and Related Projects cluster).

Table 5 also shows that finishing the projects recommended for funding in FY 96 will require a significant financial commitment for future years. The annual totals on the last page of the table show the FY 96 and estimated future-year cost of all research, monitoring, and general restoration projects included in the Executive Director's preliminary recommendation. These include all projects within the *fund*, *fund contingent*, *defer decision*, and *lower priority* recommendation categories. The total cost of these projects is significantly above \$18 million for FY 96 and would drop to approximately \$17 million in FY 97, even if no new projects are submitted.

There are a number of projects currently in the planning phase that, if approved in future years, will require significant funds. Many of these have generated a significant amount of community interest. They include archaeological repositories (planning funds are included in Project 96154), pollution reduction strategies (being planned as part of the Sound Waste Management Plan, Project 96115), and possible means to remove shoreline oil (a workshop on the subject will occur in September 1995 as part of Project 95266).

Note for the Table. There is a difference in the meaning between "\$0" and a blank in the columns of Table 5. A "\$0" means that *no funding is recommended or expected*. Thus, any project not recommended for funding next year includes "\$0" for the FY 96 recommendation. In addition, projects scheduled to be completed in, say, FY 97 receive a "\$0" for the following years. However, a blank means that the estimated *funding level is not known*. Thus, projects not recommended for funding in FY 96 are blank for following years, meaning that they may be reevaluated at that time.

Table 5. Summary of the Preliminary Recommendation by Project: Research, Monitoring, and General Restoration

Project Number	Project Title	Request FY 96	Preliminary Recommendation					
		FY 96	FY 96	FY 97	FY 98	FY 99 +	Total 96+	Recommendation
Pink Salmon		\$3,597.4	\$3,275.9	\$3,368.3	\$2,558.8	\$2,056.8	\$11,259.8	
96076	Effects of Oil on Straying and Survival	\$393.8	\$393.8	\$715.0	\$525.0	\$260.0	\$1,893.8	Defer decision
96093A	Quantitative Genetic Assessment of Early-Returning Broodstock	\$111.9	\$111.9	\$198.4	\$211.7	\$171.9	\$693.9	Defer decision
96093B	Population Genetic Assessment of Gene Flow from Early Return Stock	\$121.0	\$121.0	\$238.0	\$228.1	\$134.2	\$721.3	Defer decision
96093C	Restoration by Diversion of Harvest Effort	\$647.0	\$727.4	\$933.9	\$860.8	\$1,271.9	\$3,794.0	Defer decision
96139A1	Little Waterfall Barrier Bypass Improvement	\$55.0	\$55.0	\$35.0	\$15.0	\$55.0	\$160.0	Fund contingent
96139A2	Port Dick Spawning Channel	\$223.1	\$223.1	\$37.0	\$23.2	\$30.0	\$313.3	Fund contingent
96139C1	Montague Riparian Rehabilitation Monitoring	\$43.1	\$43.1	\$43.0	\$0.0	\$0.0	\$86.1	Fund contingent
96139C2	Salmon Instream Habitat and Stock Restoration - Lowe River and Valdez Arm	\$174.6	\$0.0				\$0.0	Do not fund
96139D	Supplemental Monitoring for Port Dick Spawning Channel	\$9.2	\$0.0				\$0.0	Do not fund
96179	Stream Habitat and Stream Classification	\$218.1	\$0.0				\$0.0	Do not fund
96186	Coded Wire Tag Recoveries	\$260.5	\$260.5	\$260.5	\$260.5	\$85.0	\$866.5	Fund
96188	Otolith Thermal Mass Marking	\$95.2	\$95.2	\$100.5	\$100.5	\$48.8	\$345.0	Fund
96190	A Linkage Map for the Pink Salmon Genome	\$240.0	\$240.0	\$250.0			\$490.0	Defer decision
96191A	Oil-Related Embryo Mortalities	\$474.6	\$474.6	\$407.0	\$246.0	\$0.0	\$1,127.6	Fund contingent/Defer
96191B	Injury to Salmon Eggs	\$169.3	\$169.3	\$75.0	\$88.0	\$0.0	\$332.3	Defer decision
96194	Pink Salmon Spawning Habitat	\$182.5	\$182.5	\$75.0	\$0.0	\$0.0	\$257.5	Lower priority
96196	Genetic Structure of Pink Salmon	\$178.5	\$178.5	\$0.0	\$0.0	\$0.0	\$178.5	Fund contingent
Herring		\$1,581.8	\$1,434.1	\$1,265.4	\$1,013.5	\$1,169.2	\$4,882.2	
96074	Herring Reproductive Impairment	\$347.7	\$200.0	\$180.0	\$0.0	\$0.0	\$380.0	Fund contingent
96162	Disease Affecting Declines of Herring Populations	\$635.0	\$635.0	\$510.6	\$461.7	\$0.0	\$1,607.3	Defer decision
96164	Pacific Herring Projects Coordination	\$49.2	\$49.2	\$49.2	\$49.2	\$49.2	\$196.8	Fund contingent
96165	Genetic Discrimination of PWS Populations	\$105.8	\$105.8	\$120.0	\$97.0	\$0.0	\$322.8	Fund
96166	Herring Natal Habitats	\$444.1	\$444.1	\$405.6	\$405.6	\$1,120.0	\$2,375.3	Defer decision
SEA Plan and Related Projects		\$5,158.8	\$4,712.7	\$3,685.0	\$2,685.0	\$170.0	\$11,252.7	
96054	Mass-Balance Model of Trophic Fluxes in PWS	\$105.9	\$0.0				\$0.0	Do not fund
96193-BAA	Flux and Nutritional Quality of Particulate Organic Carbon: Relationship to Survival of Juvenile Pelagic Fish	\$156.6	\$0.0				\$0.0	Do not fund
96195	Pristane Monitoring	\$112.7	\$112.7	\$85.0	\$85.0	\$170.0	\$452.7	Defer decision
96320	Sound Ecosystem Assessment (SEA)	\$4,783.6	\$4,600.0	\$3,600.0	\$2,600.0		\$10,800.0	Fund contingent
96320R	SEA Trophodynamic Modeling and Validation Through Remote Sensing		See Project	96320				Fund

Table 5. Summary of the Preliminary Recommendation by Project: Research, Monitoring, and General Restoration

Project		Request	Preliminary Recommendation					
Number	Project Title	FY 96	FY 96	FY 97	FY 98	FY 99 +	Total 96+	Recommendation
SEA Plan and Related Projects (continued)								
96320Z1	Synthesis and Integration		See Project	96320				Fund
96320Z2-BAA	SEA: Coordination & Communications		See Project	96320				Do not fund
Sockeye Salmon		\$2,201.5	\$1,803.2	\$427.0	\$75.0	\$150.0	\$2,455.2	
96048-BAA	Historical Analysis of Affected Sockeye	\$86.7	\$101.7	\$0.0	\$0.0	\$0.0	\$101.7	Fund contingent
96255	Kenai River Sockeye Salmon	\$447.9	\$447.9				\$447.9	Fund contingent
96256	Columbia Lake Sockeye Stocking	\$40.6	\$60.0	\$0.0	\$0.0	\$0.0	\$60.0	Fund contingent
96257	Solf Lake Sockeye Stocking	\$34.3	\$0.0				\$0.0	Do not fund
96258A	Sockeye Salmon Overescapement	\$907.8	\$907.8	\$150.0	\$75.0	\$150.0	\$1,282.8	Fund contingent
96258B	Sockeye Skilak Lake Enclosure	\$341.1	\$0.0				\$0.0	Do not fund
96258C	Kenai River Starvation-Temperature Study	\$57.3	\$0.0				\$0.0	Do not fund
96259	Coghill Lake Sockeye Salmon	\$285.8	\$285.8	\$277.0	\$0.0	\$0.0	\$562.8	Defer decision
Cutthroat and Dolly Varden		\$565.1	\$240.4	\$227.7	\$127.7	\$26.4	\$622.2	
96043A	Cutthroat and Dolly Varden Monitoring	\$29.6	\$0.0				\$0.0	Do not fund
96043B	Monitoring Habitat Improvements Structures	\$40.4	\$40.4	\$27.7	\$27.7	\$26.4	\$122.2	Defer decision
96043C	Cutthroat Habitat Improvement Structures	\$100.2	\$0.0				\$0.0	Do not fund
96145	Cut & Dolly: Anadromous & Resident Forms	\$336.7	\$200.0	\$200.0	\$100.0	\$0.0	\$500.0	Fund contingent
96177A	Cutthroat, Dolly Habitat Rest., Lake Elsner	\$26.6	\$0.0				\$0.0	Do not fund
96177B	Cut, Dolly Habitat Restoration, Port Fidalgo & Port Gravina	\$31.6	\$0.0				\$0.0	Do not fund
Marine Mammals		\$1,163.1	\$765.1	\$661.6	\$256.2	\$25.0	\$1,707.9	
96001	Condition and Health Status of Harbor Seals	\$187.4	\$187.4	\$184.6	\$46.2	\$0.0	\$418.2	Fund
96012A-BAA	Comprehensive Killer Whale Investigation	\$167.5	\$50.0				\$50.0	Fund contingent
96012B	Impact of Killer Whale Predation	\$229.5	\$0.0				\$0.0	Do not fund
96064	Monitoring, Habitat Use, & Trophic Interactions of Harbor Seals	\$381.1	\$381.1	\$347.0	\$100.0	\$25.0	\$853.1	Fund
96121-BAA	Stable Isotope Ratios and Fatty Acid Signatures of Selected Forage Fish	\$51.0	\$0.0				\$0.0	Do not fund
96170	Isotope Ratio Studies of Marine Mammals	\$146.6	\$146.6	\$130.0	\$110.0	\$0.0	\$386.6	Fund
Nearshore Ecosystem Projects		\$6,515.9	\$3,387.1	\$2,495.4	\$2,459.4	\$980.0	\$9,321.9	
96025	Nearshore Vertebrate Predators	\$1,669.4	\$1,669.4	\$1,669.4	\$1,669.4	\$450.0	\$5,458.2	Fund contingent
96027	Kodiak Archipelago Shoreline Assessment	\$35.1	\$10.0	\$0.0	\$0.0	\$0.0	\$10.0	Fund contingent
96037	Coastal Habitat Intertidal Monitoring	\$609.2	\$550.0	\$550.0	\$550.0	\$0.0	\$1,650.0	Fund contingent
96056	Sea Otter Transplantation/Clam Restoration		\$0.0				\$0.0	Do not fund
96067-BAA	Juvenile Fish Habitat Id and Assessment	\$467.4	\$0.0				\$0.0	Do not fund
96072	Status and Recovery of Black Oystercatcher	\$157.7	\$0.0				\$0.0	Do not fund

Table 5. Summary of the Preliminary Recommendation by Project: Research, Monitoring, and General Restoration

Project		Request	Preliminary Recommendation						
Number	Project Title	FY 96	FY 96	FY 97	FY 98	FY 99 +	Total 96+	Recommendation	
Nearshore Ecosystem Projects (continued)									
96086	Herring Bay Monitoring and Restoration	\$185.3	\$185.3	\$0.0	\$0.0	\$0.0	\$185.3	Fund contingent	
96088	Fucus as Structure for Other Organisms	\$302.5	\$0.0				\$0.0	Do not fund	
96090	Mussel Bed Restoration and Monitoring	\$209.7	\$150.0				\$150.0	Fund contingent	
96094	Improving Recovery Rates on Shorelines Using Enhanced Bioremediation	\$965.6	\$0.0				\$0.0	Do not fund	
96103-BAA	Whale Fore stomach Anaerobic Microbes to Detoxify Oil Spills	\$170.7	\$0.0				\$0.0	Do not fund	
96104	Avian Predation on Blue Mussels	\$127.1	\$127.1	\$130.0	\$120.0	\$60.0	\$437.1	Lower priority	
96106	Subtidal Monitoring: Eelgrass	\$239.4	\$239.4	\$0.0	\$0.0	\$0.0	\$239.4	Fund contingent	
96108-BAA	Stable Isotopes to Assess Effects on Mussels and Fish	\$84.0	\$0.0				\$0.0	Do not fund	
96109-BAA	Restoration for Oil-Impacted Mussel Beds	\$551.8	\$0.0				\$0.0	Do not fund	
96160	Recovery from Oiling on Gulf of Alaska Shorelines	\$129.7	\$0.0				\$0.0	Do not fund	
96161	Harlequin Duck - Indicator Species for Monitoring and Recovery	\$230.4	\$75.0	\$25.0	\$0.0	\$0.0	\$100.0	Fund contingent	
96290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	\$119.8	\$119.8	\$121.0	\$120.0	\$470.0	\$830.8	Fund contingent	
96427	Harlequin Duck Recovery Monitoring	\$261.1	\$261.1	\$0.0	\$0.0	\$0.0	\$261.1	Fund contingent	
Seabird/Forage Fish and Related		\$3,667.6	\$2,813.7	\$2,344.0	\$2,067.9	\$2,658.5	\$9,884.1		
96021	Seasonal Movements and Pelagic Habitat Use by Common Murres and Tufted Puffins	\$166.3	\$121.3	\$121.3	\$20.0	\$0.0	\$262.6	Defer decision	
96031	Productivity Index to Monitor Murrelets	\$254.6	\$110.0	\$50.0	\$39.9	\$0.0	\$199.9	Fund contingent	
96038	Publication of Seabird Restoration Workshop	\$31.0	\$15.0	\$0.0	\$0.0	\$0.0	\$15.0	Defer decision	
96101	Removal of Introduced Foxes From Islands	\$88.9	\$10.0	\$0.0	\$0.0	\$0.0	\$10.0	Fund contingent	
96120-BAA	Proximate Composition and Energetic Content of Selected Forage Fish Species	\$40.9	\$0.0				\$0.0	Do not fund	
96122	Mapping Potential Murrelet Nesting Habitat	\$168.8	\$100.0	\$20.0	\$0.0	\$0.0	\$120.0	Defer decision	
96142-BAA	Status and Ecology of Kittlitz's Murrelet	\$110.2	\$110.2	\$38.4	\$0.0	\$0.0	\$148.6	Fund	
96143-BAA	Recovery of Bird and Mammal Populations	\$321.2	\$0.0				\$0.0	Do not fund	
96144	Common Murre Population Monitoring	\$101.7	\$101.7	\$125.3	\$44.0	\$458.5	\$729.5	Lower priority	
96148	Kittlitz's Murrelet: Biology, Abundance, and Population Genetics	\$99.8	\$0.0				\$0.0	Do not fund	
96159	Surveys to Monitor Marine Bird Abundance	\$262.9	\$262.9	\$25.0	\$0.0	\$0.0	\$287.9	Fund	
96163	APEX: Apex Predator Ecosystem Experiment	\$1,982.6	\$1,982.6	\$1,964.0	\$1,964.0	\$2,200.0	\$8,110.6	Defer decision	
96175	Remote Video System Seabird Monitoring	\$38.7	\$0.0				\$0.0	Do not fund	

Table 5. Summary of the Preliminary Recommendation by Project: Research, Monitoring, and General Restoration

Project Number	Project Title	Request	Preliminary Recommendation					Recommendation
		FY 96	FY 96	FY 97	FY 98	FY 99 +	Total 96+	
Subsistence		\$2,602.6	\$1,399.8	\$1,292.9	\$968.2	\$1,619.2	\$5,280.1	
96009D-BAA	Survey of Octopuses in Intertidal Habitats	\$134.0	\$134.0	\$40.9	\$0.0	\$0.0	\$174.9	Defer decision
96052A	Community Involvement/Traditional Knowledge	\$210.0	\$250.0	\$250.0	\$250.0	\$1,000.0	\$1,750.0	Fund contingent
96052B	Community Interaction/Traditional Knowledge	\$298.3	\$0.0				\$0.0	Do not fund
96127	Tatitlek Coho Salmon Release	\$52.7	\$52.7	\$42.8	\$40.3	\$40.3	\$176.1	Fund contingent
96131	Chugach Native Region Clam Restoration	\$405.6	\$405.6	\$413.6	\$417.4	\$417.4	\$1,654.0	Defer
96202	Port Lions Community Hall	\$150.0	\$0.0				\$0.0	Do not fund
96204	Kodiak Subsistence Resource Planning	\$39.4	\$0.0				\$0.0	Do not fund
96205	Eyak Subsistence Recovery Camp Planning	\$40.8	\$0.0				\$0.0	Do not fund
96206	Old Harbor Lagoon Salmon Enhancement Feasibility	\$28.8	\$0.0				\$0.0	Do not fund
96207	Ocean Beach Sockeye Enhancement Feasibility	\$92.7	\$0.0				\$0.0	Do not fund
96208	Kempff Bay Sockeye Enhancement Feasibility	\$70.7	\$0.0				\$0.0	Do not fund
96210-BAA	PWS Youth Area Watch	\$233.4	\$0.0				\$0.0	Do not fund
96211	Community-Based Harbor Seal Biological Sampling Program	\$44.0	\$0.0				\$0.0	Do not fund
96212	PSP Screening Program	\$167.7	\$167.7	\$178.3	\$151.3	\$0.0	\$497.3	Defer decision
96213-BAA	Alaska Native Harbor Seal Commission	\$99.2	\$0.0				\$0.0	Do not fund
96214	Documentary, Subsistence Seal Hunting	\$74.5	\$74.5	\$0.0	\$0.0	\$0.0	\$74.5	Fund
96218	Ouzinkie Clam Restoration Project	\$0.0	\$0.0				\$0.0	Do not fund
96220-BAA	Eastern PWS Wildstock Salmon Habitat Rest.	\$77.2	\$77.2	\$115.0	\$12.0	\$0.0	\$204.2	Fund
96222	Chenega Bay Salmon Restoration	\$17.1	\$17.1	\$56.4	\$0.0	\$0.0	\$73.5	Fund contingent
96225	Port Graham Pink Salmon Subsistence	\$88.9	\$88.9	\$83.1	\$77.2	\$161.5	\$410.7	Defer decision
96226	Resurrection Bay Salmon Stock Enhancement	\$45.0	\$0.0				\$0.0	Do not fund
96244	Harbor Seal Cooperative Assistance	\$70.0	\$90.0	\$65.0	\$20.0	\$0.0	\$175.0	Fund contingent
96272	Chenega Chinook Release Program	\$42.1	\$42.1	\$47.8	\$0.0	\$0.0	\$89.9	Fund
96279	Resource Abnormalities Study	\$71.7	\$0.0				\$0.0	Do not fund
96428	Subsistence Restoration Planning	\$48.8	\$0.0				\$0.0	Do not fund

Table 5. Summary of the Preliminary Recommendation by Project: Research, Monitoring, and General Restoration

Project		Request	Preliminary Recommendation					
Number	Project Title	FY 96	FY 96	FY 97	FY 98	FY 99 +	Total 96+	Recommendation
Archaeology		\$3,737.9	\$424.3	\$195.0	\$195.0	\$135.0	\$949.3	
96007A	Archaeological Index Site Monitoring	\$146.5	\$146.5	\$135.0	\$145.0	\$135.0	\$561.5	Fund
96007B	Site Specific Archaeological Restoration	\$78.4	\$78.4	\$0.0	\$0.0	\$0.0	\$78.4	Fund contingent
96149	Archaeological Site Stewardship	\$74.4	\$74.4	\$60.0	\$50.0	\$0.0	\$184.4	Fund contingent
96150	Expansion of Alutiiq Archaeological Repository	\$535.0	\$0.0				\$0.0	Do not fund
96152	Community Museum, Repository, Archaeological, Site Stewardship, Training & Human Resource Development	\$190.3	\$0.0				\$0.0	Do not fund
96153	Community Cultural Centers, Repositories and Subsistence Restoration Facilities - Design, Engineering, Financing, and Construction Dvpt.	\$2,588.3	\$0.0				\$0.0	Do not fund
96154	Chugach OSIR Community Repositories, Cultural Centers, Subsistence Restoration Facilities Comprehensive Services Development Planning	\$125.0	\$125.0				\$125.0	Fund contingent
96219	Ouzinkie Archeological Culture Center		\$0.0				\$0.0	Do not fund
Reducing Marine Pollution		\$164.6	\$29.6	\$0.0	\$0.0	\$0.0	\$29.6	
96091	Monitoring Environmental Impacts of Oil Industry Activities in Cook Inlet	\$135.0	\$0.0				\$0.0	Do not fund
96115	Sound Waste Management Plan	\$29.6	\$29.6	\$0.0	\$0.0	\$0.0	\$29.6	Fund
Habitat Improvement		\$1,077.1	\$992.9	\$890.5	\$660.0	\$180.0	\$2,723.4	
96058	Landowner Assistance Project	\$205.9	\$206.0	\$0.0	\$0.0	\$0.0	\$206.0	Defer decision
96141	Afognak Island State Park - Habitat Survey	\$45.0	\$45.0	\$0.0	\$0.0	\$0.0	\$45.0	Lower Priority
96176	Restoration of Wetlands on Montague Island	\$67.5	\$67.5	\$90.5	\$60.0	\$180.0	\$398.0	Defer decision
96178	Second Growth Forest Habitat Enhancement	\$84.3	\$0.0				\$0.0	Do not fund
96180	Kenai Habitat Restoration & Recreation Enh.	\$674.4	\$674.4	\$800.0	\$600.0	\$0.0	\$2,074.4	Defer decision
Total, All Projects		\$32,033.4	\$21,278.8	\$16,852.8	\$13,066.7	\$9,170.1	\$60,368.4	

Research, Monitoring, and General Restoration Projects

The next pages provide an overview of the Executive Director's preliminary recommendation by resource cluster. The discussion includes all of the projects included in the *fund*, *fund contingent*, *defer decision*, and *lower priority* categories. It **does not** include projects in the *do not fund* category. For a list and description of those projects, see Table 5 or Appendix A.

Pink Salmon

COMPONENTS OF THE PINK SALMON RESTORATION PROGRAM. The proposed Pink Salmon restoration program is under extensive review. It includes a number of projects with significant restoration potential but which also raise important technical questions. Collectively, the program is expensive. In addition, there is a wide spectrum of opinion on what approach to take to answer pink salmon genetics, straying, and stock-separation questions. For that reason, the Executive Director recommends deferring a decision on a number of these projects at this time.

- ***The Sound Ecosystem Assessment (SEA):*** a multi-year ecological investigation of the factors controlling populations of Prince William Sound pink salmon and herring is described separately.
- ***Toxic Effect of Oil on Pink Salmon.*** After the oil spill, research documented that pink salmon eggs in oiled streams were dying at higher than normal rates. The research and monitoring is recommended to continue in FY 96.
 - Monitor egg mortality of wild pink salmon (96191A).
 - Determine whether mortality is the result of genetic injury; that is, whether the original injury caused genetic damage that is passed to subsequent generations (96191B, 96194).
 - Determine whether the oil also caused pink salmon to increase their natural rates of straying or decreased marine survival (96076).
- ***Stock Separation and Management.*** Provide better information for use by fishery managers to protect injured pink salmon runs that might otherwise be overharvested. Fishery managers use the information to set harvest limits, locations, and timing to concentrate commercial harvest on hatchery or uninjured wild runs in order to protect injured wild stocks.
 - Marking Salmon — Coded Wire Tag & Otolith Thermal Marking (96186, 96188).
 - Genetics and Stock Structure Investigations (96093A, 96093B, 96190, 96196).
 - Determine whether alternative hatchery release sites can be used to protect wild pink salmon by separating hatchery and wild stocks (96093C).
- ***Supplementation.***
 - Construct and monitor structures to enhance wild pink salmon production (96139A1, 96139A2, 96139C1).

COST (Pink Salmon)

	Recommended for <u>FY 96</u>	Recommended <u>Total Thru 2002</u>
Toxic Effect of Oil	\$1,220,200	\$3,611,200
Stock Separation and Management	\$1,734,500	\$7,089,200
Supplementation	<u>\$321,200</u>	<u>\$559,400</u>
<i>Total:</i>	\$2,755,900	\$11,259,800

Three projects were recommended as *do not fund*. See Table 5 or Appendix A.

Pacific Herring

The herring biomass in Prince William Sound declined by more than 75 percent from the record level in 1992 of over 100,000 tons. This precipitous decline was first observed in the spring of 1993 and continued during 1994. The herring program focuses on investigating the causes of the crash and prospects for recovery, and on providing management information to help fishery managers protect injured stocks.

THE SOUND ECOSYSTEM ASSESSMENT (SEA): a multi-year ecological investigation of the factors controlling populations of Prince William Sound pink salmon and herring is described separately.

REPRODUCTIVE IMPAIRMENT. Closes out research to determine if exposure to oil caused decreased reproduction or genetic damage (96074).

GENETIC STOCK IDENTIFICATION. Provide information about the number and distribution of stocks of herring to fishery managers to help them focus the fishery on uninjured populations (96165).

HERRING DISEASE. Study the causes and impact of a virus and a fungus that have become common in PWS herring populations (96162).

HERRING NATAL HABITATS. Estimate the biomass of all spawning herring in Prince William Sound. Develop a management tool to be taken over by ADFG (96166).

PROJECT COORDINATION. The Chief Scientist recommended that a lead scientist with herring expertise be identified to help provide program direction and leadership in order to make herring projects more effective (99164).

COST (Pacific Herring)

	Recommended for <u>FY 96</u>	Recommended <u>Total Thru 2002</u>
Close out: Herring Reproductive Impairment	\$200,000	\$380,000
Close out: Herring Genetic Stock Identification	\$105,800	\$322,800
Herring Natal Habitat	\$444,100	\$2,375,300
Herring Disease	\$635,000	\$1,607,300
Herring Coordination	<u>\$49,200</u>	<u>\$196,800</u>
<i>Total:</i>	\$1,434,100	\$4,882,200

Sound Ecosystem Assessment (SEA Program)

The SEA Program is a multi-year ecological investigation of the factors controlling populations of Prince William Sound pink salmon and herring. It began in FY 94 and will likely continue through FY 98.

SEA PROGRAM. The SEA Program is designed to obtain an understanding of the mechanisms that influence levels of adult production for pink salmon and herring in PWS by investigation of the early life stages of these species. The research goals for the program are:

- *Acquire an ecosystem-level understanding of processes* that interact to maintain the production of pink salmon and herring within natural limits of variability.
- *Use this new information to develop improved predictors* of annual levels of pink salmon and herring production. That is, to be able to forecast pink salmon and herring responses to both natural and human disturbances, including fisheries management, enhancement, and restoration.
- *Establish a database* describing the status of the ecosystem relative to pink salmon and herring as an information source for improving the effectiveness of management, enhancement, and restoration of these and other resources.

RELATED PROJECT. One related project is recommended for funding. Project 96195, Pristine Monitoring in Mussels and Predators of Juvenile Pink Salmon and Herring, provides an innovative measure of marine productivity, thus allowing predictions about fisheries productions and harvest levels. The project will complement SEA Program goals.

COST

	Recommended for <u>FY 96</u>	Recommended <u>Total Thru FY 98</u>
SEA Program	\$4,600,000	\$10,800,000
Related Project	<u>\$112,700</u>	<u>\$452,700</u>
<i>Total:</i>	\$4,712,700	\$11,252,700

One project was recommended as *do not fund*. See Table 5 or Appendix A.

Sockeye Salmon

KENAI/SKILAK SOCKEYE. Commercial fishing for sockeye salmon in 1989 was curtailed in Upper Cook Inlet. As a result, there were higher than usual returns (overescapement) of spawning fish to the Kenai/Skilak lake systems. However, there is an imperfect understanding of the mechanism and amount of injury caused by the 1989 overescapement. The five-year-old component of the fish spawned in 1989 will return in 1995 and may provide confirmation of the injury or lack of injury.

The program for the Kenai/Skilak sockeye run is scheduled to be closed out in FY 96, although management tools developed by the restoration program will become part of ADFG's normal agency management. The decision to close out the program, however, is dependent upon the expectation that the return of five-year-old salmon reaches normal levels this year. If the returns show a major collapse, the Trustee Council may continue to support the research program and management tools.

- **Stock Separation and Management.** Shift responsibility to ADFG to continue the genetic stock identification and hydroacoustic techniques used to identify the portion of the Upper Cook Inlet commercial catch that comes from different sockeye runs. This information allows fishery managers to concentrate the fishery on uninjured sockeye runs (96255).
- **Research.** Close out Kenai/Skilak portion of Project 96258A, but fund Project 96048 which tracks overescapement and recovery through scale measurements.

KODIAK SOCKEYE SALMON. Overescapement also affected the productivity of the Red, Frazer, Akalura, and Afognak lake systems in the Kodiak Archipelago. The Chief Scientist recommends continuing to monitor smolt counts and other limnological parameters in the Kodiak lakes until smolt counts and other parameters appear normal for two consecutive years. This is currently estimated to occur in Red Lake in 1997, with close out funding in FY 98 (continue Kodiak portion of Project 96258A).

SUPPLEMENTATION. Supplementation is proposed to enhance production of sockeye runs. These runs would provide replacement fish for sockeye fisheries.

- **Coghill Lake Fertilization and Monitoring** (96259)
- **Solf and Columbia Lakes Feasibility Study** (96256)

COST

	Recommended for FY 96	Recommended Total thru 2002
Kenai/Skilak Sockeye Run	\$1,457,400	\$1,457,400
Kodiak Sockeye Salmon	included in above	\$375,000
Supplementation	<u>\$345,800</u>	<u>\$622,800</u>
Total:	\$1,803,200	\$2,455,200

Three projects were recommended as *do not fund*. See Table 5 or Appendix A.

Cutthroat and Dolly Varden Trout

Prince William Sound is the northern and western limit of the cutthroat trout's range, and the resource does not exist elsewhere in the spill area. The cutthroat stocks known to exist within the Sound are few, rarely more than 1,000 individuals and are geographically isolated from each other. Studies conducted in 1989, 1990, and 1991 indicated that cutthroat and Dolly Varden trout growth rates and adult sizes were less in oiled than in unoiled areas.

Current restoration projects have emphasized supplementation of wild stocks to augment their small populations and thus their safety in the face of spill-related or natural stresses. In FY 96, the program should focus on the completion and evaluation of habitat improvements and on research on life history forms to enhance management of injured populations.

SUPPLEMENTATION. Finish construction of in-stream habitat improvements begun in 1994, and monitor then to determine their physical and biological success (96043B).

RESEARCH AND MONITORING. Implement a research project (96145) to provide basic information about the relationship between resident and anadromous forms of cutthroat and Dolly Varden Trout. The research may clarify the nature of previously documented injuries.

COST

	Recommended <u>FY 96 Cost</u>	Recommended <u>Total thru 2002</u>
Supplementation	\$40,400	\$122,200
Research and Monitoring	<u>\$200,000</u>	<u>\$500,000</u>
<i>Total:</i>	\$240,400	\$622,200

Four projects were recommended as *do not fund*. See Table 5 or Appendix A.

Marine Mammals

Understanding long-term declines in marine mammals, as well as factors presently limiting recovery, is fundamental to restoration of oil spill injuries. Although there are early indications that numbers of harbor seals have stabilized, their population in Prince William Sound remains low. Killer whales are considered to be a recovering species, but there continues to be interest in the status of their population in the Sound.

FACTORS LIMITING RECOVERY OF HARBOR SEALS. Conduct research into probable factors limiting recovery of harbor seals, particularly as these factors affect the survival of juvenile harbor seals. Possible factors include food limitations, predation by killer whales, and mortality caused by humans, including incidental take and subsistence harvest. This research is accomplished by a group of projects that will be completed in FY 98 (96001, 96064, and 96121).

CLOSE OUT THIS EPISODE OF MONITORING KILLER WHALES. Killer whales in Prince William Sound have been monitored every year since the spill. The draft monitoring schedule calls for every other year. Thus, FY 96 closes out the 1995 monitoring project. Future monitoring will be evaluated when submitted (96012A).

OTHER HARBOR SEAL PROJECTS. Other projects concerning harbor seals are discussed in the section describing subsistence.

COST (Marine Mammals)

	<u>Recommended FY 96 Cost</u>	<u>Recommended Total thru 2002</u>
Factors Limiting Recovery of Harbor Seals	\$715,100	\$1,657,900
Close out FY 95 Monitoring	<u>\$50,000</u>	<u>\$50,000</u>
<i>Total:</i>	\$765,100	\$1,707,900

Two projects were recommended as *do not fund*. See Table 5 or Appendix A.

Nearshore Ecosystem Projects

This cluster of projects address sea otters, river otters, harlequin ducks, pigeon guillemots, black oystercatchers, mussels, clams, and other intertidal/subtidal organisms. Also included in this section are projects that monitor the fate and persistence of oil.

RECOVERY OF NEARSHORE VERTEBRATE PREDATORS. Project 96025 is one of the restoration program's three ecosystem studies. The multi-project study is designed to determine whether or not populations are recovering, isolate processes constraining recovery, and identify potential activities to facilitate recovery. Four nearshore vertebrate predator species and their primary prey are proposed for study. The predators are sea otter, river otter, harlequin duck, and pigeon guillemot. The prey species are mussels, clams, sea urchins, and crabs for sea otters and harlequin ducks, and nearshore benthic fishes for river otters and pigeon guillemots. One additional study, addressing avian predation on mussels, was proposed to complement this project (96104).

MONITOR RECOVERY OF INTERTIDAL AREAS. The intertidal studies monitor contamination and recovery of this portion of the ecosystem.

- **Monitor Recovery of Intertidal Plants and Animals** (96037)
- **Close out Previous Monitoring** of Invertebrates (96086), mussels (96090), and eelgrass communities (96106).

FATE AND PERSISTENCE OF OIL. The major issue involving the fate and persistence of oil is whether additional work is effective or would likely inflict additional harm to the recovering intertidal areas. These issues are important and have attracted significant interest from the public, especially subsistence users around Chenega, who use beaches on which surface oil remains visible. A workshop is scheduled for September 1995 to address these questions. Pending the outcome of the workshop, other projects may be recommended for FY 96 or future years. In addition, closeout of a FY 95 assessment of shoreline oil in the Kodiak area is recommended (96027).

ADDITIONAL MONITORING

- **Harlequin Duck Monitoring.** Project 96161 is a pilot study using satellite transmitters to track movements of harlequin ducks with the spill area. Project 96427 monitors reproductive success in oiled and unoled areas within Prince William Sound.
- **Hydrocarbon Database.** Continue analysis of hydrocarbon samples to support many other Trustee Council projects, and maintain the database of information about those samples (96290).

COST

	Recommended for FY 96	Recommended Total thru 2002
Nearshore Vertebrate Predators	\$1,796,500	\$5,895,300
Monitor Recover of Intertidal Areas	\$1,124,700	\$2,224,700
Fate and Persistence of Oil	\$10,000	\$10,000
Additional Monitoring	<u>\$455,900</u>	<u>\$1,191,900</u>
<i>Total:</i>	\$3,387,100	\$9,321,900

Six projects were recommended as *Do not fund*. See Table 5 or Appendix A.

Seabird Forage Fish and Related Projects

This cluster of projects address bald eagles, common murres, marbled murrelets, and pigeon guillemots.

SEABIRD/FORAGE FISH PROJECT (APEX). The Seabird/Forage Fish Project (96163) is one of the three major multi-project ecological studies being undertaken by the Trustee Council. Populations of several injured fish-eating birds and mammals, including harbor seals, common murres, marbled murrelets, and pigeon guillemots, are not recovering in Prince William Sound. This group of projects examines whether the abundance, composition, and distribution of forage fish are limiting seabird recovery in Prince William Sound. The project envisions intensive study for five years (FY 95-99). However, a comprehensive review of the project will be undertaken during fall of 1995 after preliminary results of the 1995 field season are available.

RELATED BIRD MONITORING AND RESEARCH PROJECTS. Although the Seabird/Forage Fish Project is likely to be the primary restoration effort addressing seabirds, other restoration projects gather basic life history information and monitor recovery of populations.

- **Murrelets:** Close out previous work to develop a productivity index to monitor murrelet reproductive success (96031). Use vegetation maps and other information, in concert with habitat models, to map potential nesting habitat (96122). Develop basic biological information about the Kittlitz's murrelet, a species about which very little is known (96142).
- **Common Murres:** Use transmitters to track seasonal movement and pelagic habitat use (96021) and monitor the major spill-area population (96144).
- **Other:** Repeat a marine bird survey that monitors populations of a variety of marine birds (96159), publish results of an upcoming seabird workshop funded in FY 95 (96031), and close out a project to remove introduced foxes from islands with seabird colonies (96101).

COST

	Recommended for FY 96	Recommended Total thru 2002
Seabird/Forage Fish (APEX) Project	\$1,982,600	\$8,110,600
Other	<u>\$831,100</u>	<u>\$1,773,500</u>
<i>Total:</i>	\$2,813,700	\$9,884,100

Four projects were recommended as *do not fund*. See Table 5 or Appendix A.

Subsistence

The most important subsistence restoration activities are the restoration of resources important to subsistence. These include clams, harbor seals, Pacific herring, pink salmon, sea otters, and sockeye salmon. Most projects in the draft work plan aid this objective.

RESTORE INJURED RESOURCES USED FOR SUBSISTENCE. One project to restore subsistence resources that is not catalogued elsewhere is a survey to determine the extent, severity, and cause of an observed decline of octopus (96009D).

REPLACE OR ENHANCE SUBSISTENCE RESOURCES. Six projects focus specifically on enhancing or replacing harvestable resources near subsistence communities.

- **Replacement Salmon Runs.** Provide enhanced or replacement salmon runs near subsistence communities (96127, 96220, 96222, 96225, 96272).
- **Clam Restoration.** Develop hatchery techniques to produce clam seed and provide replacement clam beds for subsistence use. (96131).

FACILITATE PARTICIPATION OF AND COMMUNICATION WITH SUBSISTENCE USERS. These projects inform subsistence users about restoration efforts directed at the resources they use for food. In addition, subsistence users have knowledge about resources that may assist researchers in achieving restoration objectives. Finally, these projects help users participate in the restoration planning process. Aiding participation of and communication with subsistence users is expected to occur throughout the restoration process.

- **Community Involvement/Traditional Knowledge** (96052).
- **Harbor Seal Cooperative Management Projects:** Harbor Seal Cooperative Assistance combined with elements of Community-based Sampling (96244). Also, Documentary on Subsistence Seal Hunting (96214).

FOOD SAFETY TESTING. Testing subsistence foods for safety began in 1989 under the auspices of the Oil Spill Health Task Force. This and similar work was continued by the Trustee Council in FY 93, 94, and 95. Communication of food safety information will continue under the Community Involvement/Traditional Knowledge project. A workshop on the continued presence of shoreline oil will be held with spill-area communities in the fall of 1995. In addition, although a number of technical questions remain, a PSP Screening Program (96212) would provide food safety information to aid subsistence use of replacement shellfish resources.

COST

	Recommended for <u>FY 96</u>	Recommended <u>Total thru 2002</u>
Restore Injured Subsistence Resources*	\$134,000*	\$174,900*
Replace/Enhance Subsistence Resources	\$683,600	\$2,608,400
Facilitate Participation & Communication	\$414,500	\$1,999,500
Food Safety Testing	<u>\$167,700</u>	<u>\$497,300</u>
<i>Total:</i>	\$1,399,800	\$5,280,100

* Most projects described elsewhere in this draft work plan restore resources used for subsistence. Fourteen projects were recommended as *do not fund*. See Table 5 or Appendix A.

Archaeological Resources

Archaeologic resources are non-renewable. They cannot recover in the same sense as biological resources. Thus, the restoration effort has focused on monitoring, site-stabilization and data recovery, and protecting artifacts and sites from further degradation.

MONITORING. Periodically monitor a small number of "index sites" to gauge whether there is a resurgence in looting and vandalism, and continue hydrocarbon testing (96007A).

SITE-STABILIZATION AND DATA RECOVERY. Finish curation of artifacts from two vandalized sites (96007B).

PROTECTING ARTIFACTS AND SITES. Two strategies seek to protect artifacts and sites from further degradation and vandalism.

- **Site-stewardship Program:** A program to provide training and coordination for volunteers to monitor vandalized archaeological sites in the spill area. A pilot program for Kachemak Bay, Uganik Bay, Uyak Bay, and the Chignik Areas (96149).
- **Planning for Repositories.** The possibility of providing facilities to conserve and display artifacts within communities of the spill area has attracted significant community interest. One project, 96154, would work with communities of the spill area, museums in the spill area, and the University of Alaska to evaluate the need for additional repositories and develop a regional approach. If one or more repositories is needed and approved, it could require significant funding in future years.

COST

	Recommended for <u>FY 96</u>	Recommended <u>Total thru 2002</u>
Monitoring	\$146,500	\$561,500
Complete Artifact Curation	\$78,400	\$78,400
Protecting Artifacts and Sites	<u>\$199,400</u>	<u>\$309,400</u>
<i>Total:</i>	\$424,300	\$949,300

Four projects were recommended as *do not fund*. See Table 5 or Appendix A.

Habitat Improvements

Four projects are recommended primarily for the purpose of improving damaged habitat. Injured resources aided by these projects include marbled murrelets, bald eagles, harlequin ducks, and anadromous fish. Restoration strategies addressed by these projects include protecting these resources and their habitats through such means as maintaining adequate nesting habitat, water quality, and riparian habitat.

Each of these projects would approach habitat improvement in a different way. Project 96058 would provide technical assistance to private landowners; Project 96141 would produce recommendations for improving habitat on logged areas within a state park; Project 96176 would investigate the feasibility of creating wetlands on an area uplifted during the 1964 earthquake; and Project 96180 would restore trampled habitat along the Kenai River through revegetation and installation of boardwalks and signs to divert use away from sensitive areas.

COST

<u>Proj.</u>	<u>Description</u>	<u>Recommended for FY 96</u>	<u>Recommended Total thru 2002</u>
96058	Landowner Assistance Program	\$206,000	\$206,000
96141	Afognak Island State Park - Habitat Survey	\$45,000	\$45,000
96176	Restoration of Wetlands on Montague Island	\$67,500	\$398,000
96180	Kenai Habitat Restoration & Recreation Enh.	<u>\$674,400</u>	<u>\$2,074,400</u>
<i>Total:</i>		\$992,900	\$2,723,400

Four projects were recommended as *do not fund*. See Table 5 or Appendix A.

Reduction of Marine Pollution

According to the *Restoration Plan*: "Restoration projects whose primary emphasis is to reduce marine pollution may be considered: where the marine pollution is likely to affect the recovery of a part of the injured marine ecosystem, or of injured resources or services; and where the project will not duplicate existing agency activities."

Sound Waste Management Plan. This project (96115) completes the second and final year of development of a comprehensive plan to identify and remove the major sources of marine pollution and solid waste in Prince William Sound that may be affecting recovery of resources and services injured by the spill. Implementation of the solutions to remove the waste will be funded mainly from sources other than Trustee Council funds. However, some solutions may be appropriate for funding by the Trustee Council in future years. The plan is expected to be finished during FY 96, and it is not yet possible to estimate further Trustee Council funding, if any.

COST

	<u>Recommended for FY 96</u>	<u>Recommended Total thru 2002</u>
Sound Waste Management Plan	\$29,600	\$29,600

One project was recommended as *do not fund*. See Table 5 or Appendix A.

Public Information, Science Management, and Administration

These expenses fund management and administrative functions necessary to efficiently implement the restoration program.

PUBLIC INFORMATION AND INVOLVEMENT

- **Public Advisory Group.** A 17-member advisory group provides input to the Trustee Council on the annual work plan and other aspects of the restoration program.
- **Public Meetings.** These meetings provide information and solicit comment on restoration activities.
- **Publications.** The Trustee Council publishes a newsletter, an annual status report, and a variety of other publications to provide information to scientists and the public.
- **Oil Spill Public Information Center.** Established in 1990, OSPIC serves as the central access point for information and materials generated through the restoration process. In the past four years, staff librarians have responded to over 11,000 information requests, processed over 1,500 interlibrary loans, and distributed over 20,000 documents.
- **Information Management System.** Beginning in FY 95, the Trustee Council provided funding to develop a plan and the necessary tools to more efficiently synthesize and disseminate information generated through the restoration process. This program is likely to continue in FY 96.

SCIENTIFIC MANAGEMENT AND SUPPORT

- **Independent Scientific Review.** Since the oil spill, independent scientific review and support at the direction of the Chief Scientist have been a major part of the damage assessment and restoration process to ensure that studies are based on sound scientific principles. This process includes peer review of project proposals and draft reports.
- **Scientific Workshops:** Technical workshops in 1995 focused scientific discussion on seabird restoration, intertidal/subtidal communities, wild salmon stock supplementation, and ecosystem factors affecting pink salmon and herring in Prince William Sound. Similar workshops will be conducted as needed in FY 96. In addition, an annual workshop is held to provide a forum for principal investigators and project leaders to meet, report on the results of the most recent field season, and discuss efforts to integrate and synthesize information generated by the overall program.

ADMINISTRATION. The Trustee Council is staffed by an executive director who oversees a staff that performs the planning, coordination, project oversight, fiscal accountability, and communications functions of the Trustee Council. In addition, each Trustee Council agency has a liaison who assists with work plan development and other Council efforts.

BUDGET. The budget for this component of the restoration program is targeted to be reduced by almost 20% in FY 96 — from \$4.2 million in FY 95 to \$3.4 million for FY 96. Further reductions are expected through FY 2002.

FY 96	\$3,400,000
FY 97	\$3,200,000
FY 98	\$2,800,000
FY 99	\$2,500,000
FY 2000	\$1,700,000
FY 2001	\$1,500,000
<u>FY 2002</u>	<u>\$1,500,000</u>
Total:	\$16,600,000

One project was recommended as *do not fund*. See Table 5 or Appendix A.

Restoration Reserve

Complete recovery from the *Exxon Valdez* oil spill may not occur for decades. For example, some salmon return in cycles of four to six years, and other resources have lives that are much longer. To be effective, restoration activities may have to span more than one generation. Sometimes long-term research is necessary to understand why a resource is not recovering. In many cases, research must precede effective restoration or improved management decisions that will protect a resource or service. For these reasons, some restoration activities may continue for a long time.

Annual payments by the Exxon Corporation to the Restoration Fund end September 2001. The *Exxon Valdez* Restoration Reserve provides an account to hold funds to be used for restoration activities after the last annual payment. Allocation of the Reserve to specific activities will be made by the Trustee Council at a later date.

The \$12 million recommended in this draft work plan would be the third payment toward the *Exxon Valdez* Restoration Reserve. One payment of \$12 million was authorized by the Trustee Council in each of FY 94 and FY 95. Additional deposits of \$12 million made in each of the remaining six years would provide a reserve of \$108 million plus interest. These funds could be used to carry out long-term restoration activities after the final payment by Exxon in 2001. However, the Trustee Council may use these funds at any time they determine they are necessary for restoration.

Research Facilities

Alaska SeaLife Center. In November 1994, the Trustee Council conditionally authorized funding of up to \$24,956,000 to support construction in Seward of a basic marine research infrastructure important to the long-term restoration effort. The research facility will be affiliated with the existing University of Alaska School of Fisheries and Ocean Science in Seward. It will provide presently unavailable laboratory capabilities for research and monitoring of marine mammals — primarily harbor seals and sea otters — and marine birds injured by the oil spill. Wet and dry labs will also be available for fish genetics research to examine possible spill-caused heritable genetic damage in salmon and herring, and for live studies of bioenergetics, disease, reproduction, and neurobiology associated with fish and invertebrates in the spill area.

The Trustee Council funds will be combined with an additional \$12,500,000 appropriated by the Alaska State Legislature from the criminal settlement with Exxon for other development at the site, which will be known as the Alaska SeaLife Center. Final authorization by the Executive Director for these expenditures is expected in August 1995, assuming all conditions of project funding have been met.

The research portion of this facility is expected to open in late 1997.

No additional funds for research facilities are recommended for FY 96. One project was recommended as *do not fund* at this time. See Table 5 or Appendix A.

Habitat Protection and Acquisition

PAST ACTIVITIES. Over the last three years, the Trustee Council located and evaluated lands with the goal of protecting habitat essential to recovery of injured resources and services. Protection of this habitat is designed to prevent additional injury to resources and services while recovery is taking place, as well as provide a long-term safety net for these resources.

The Trustee Council has committed about \$97 million to protect the following five areas:

Kachemak Bay. In 1993, the Trustee Council contributed \$7.5 million to the purchase of 23,800 acres of private inholdings within Kachemak Bay State Park on the Kenai Peninsula.

Seal Bay and Tonki Cape (Afognak Island). Also in 1993, the state purchased 41,549 acres on northern Afognak Island (17,166 acres on Seal Bay and 24,383 acres on Tonki Cape), which were dedicated in 1994 as the Afognak Island State Park.

Orca Narrows Subparcel. In January 1995, the federal government purchased from the Eyak Corporation timber rights on 2,052 acres of land in Orca Narrows near Cordova in Prince William Sound.

Akhiok-Kaguyak. In May 1995, the federal government purchased from Akhiok-Kaguyak, Inc. interest in 119,885 acres of land in Kodiak National Wildlife Refuge.

Old Harbor. Also in May 1995, the federal government purchased from the Old Harbor Native Corporation surface title to about 29,000 acres and conservation easements on 3,000 acres. These lands are also within the Kodiak National Wildlife Refuge. In addition, the Old Harbor Native Corporation agreed to preserve 65,000 acres of land on nearby Sitkalidak Island as a private wildlife refuge.

CURRENT ACTIVITIES. The Trustee Council is in various stages of negotiation with landowners to protect additional habitat. Negotiations are occurring with Eyak, Tatitlek, Chenega, Port Graham, English Bay, and Koniag corporations, and with Afognak Joint Venture and the Kodiak Island Borough. The Council anticipates that agreements will be completed with most landowners during the next year.

In 1995, the Trustee Council will also consider protection of a suite of smaller parcels of habitat (under 1,000 acres each). 267 parcels were nominated; the Trustee Council has authorized preliminary negotiations for 29.

SUPPORT COST. Project 96126, Habitat Protection and Acquisition Support, funds the cost of negotiations, title searches, appraisals, surveys, and other work necessary to complete a purchase. The estimated cost for these activities for FY 96 is \$841,800. However, this estimate will be further reviewed and refined based on work being done this summer.

HABITAT IMPROVEMENTS. Four general restoration projects have been recommended to improve habitat. These projects are discussed under the "Habitat Improvement" cluster, see page 26.

Appendix A

FY 96 DESCRIPTION OF PROJECTS AND RECOMMENDATIONS

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Acronyms

ABR	ABR, Inc., Environmental Research & Services	PES	Petroleum Environmental Services, Inc.
ANHSC	Alaska Native Harbor Seal Commission	PWS Econ DC	Prince William Sound Economic Develop't. Corp.
Alutiiq HF	Alutiiq Heritage Foundation	PWSSC	Prince William Sound Science Center
Chugach OSIR	Chugach Oil Spill Impacted Region Communities Consortium	RCAC	Regional Citizens' Advisory Council
Chugach RRC	Chugach Regional Resource Commission	TXAM	Texas A & M University
Ck Inl Fish DC	Cook Inlet Fisheries Development Corp.	UBC	University of British Columbia
MBC	MBC Applied Environmental Sciences	UM	University of Montana
NRC	Natural Resources Consultants, Inc.	UW/UCD/SFU	Univ. of Washington/Univ. of California, Davis/Simon Fraser University
OSU	Oregon State University		

HOW TO READ THE SPREADSHEET

Lead Agency	The trustee agency (USFS, NOAA, DOI, ADF&G, ADEC, or ADNR) to which the project has been assigned for program management purposes.
Proposer	The individual, organization, or trustee agency that submitted the project proposal.
FY 96 Request	The amount of funding requested by the project proposer for federal fiscal year 1996 (October 1, 1995 - September 30, 1996).
FY 96 Recommended	The Executive Director's preliminary recommendation to the Trustee Council of the amount of funding that should be approved for the project for FY 96.
FY 97 Estimate	For multi-year projects, the estimated project cost for FY 97, based on the Executive Director's preliminary recommendation for FY 96.
FY 98 Estimate	Estimated project cost for FY 98.
FY 99 to End Estimate	Sum of the estimated project cost from FY 99 to completion of the project (no projects continue beyond FY 2002).
Total FY 96 to End Estimate	Sum of the estimated project cost for all years, beginning in FY 96 and ending with FY 02 -- or the project's completion, whichever is sooner.
Project Duration	What year FY 96 is in the Trustee Council's funding of the project, followed by the total number of years Council funding is expected to be sought (e.g., 3rd year of a 5-year project).
Abstract	A brief summary of the project, prepared by the project proposer.
Chief Scientist	The Chief Scientist's preliminary recommendation on the project's technical merit.
Executive Director	An explanation of the Executive Director's preliminary recommendation on project funding for FY 96.

APPENDIX A: DESCRIPTION OF PROJECTS AND RECOMMENDATIONS

DRAFT FY 96 WORK PLAN/PAGE A-1

Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Pink Salmon Projects				\$3,597.4	\$3,275.9	\$3,368.3	\$2,558.8	\$2,056.8	\$11,259.8	
96076	Effects of Oiled Incubation Substrate on Straying and Survival of Wild Pink Salmon	NOAA	NOAA	\$393.8	\$393.8	\$715.0	\$525.0	\$260.0	\$1,893.8	2nd. yr. 5yr. project
<u>Abstract</u> This project examines the effects of oil exposure during embryonic development on straying, marine survival, and gamete viability of pink salmon. Contolled experiments relating oil exposure to pink salmon straying will determine the role of oil and other factors on straying so that field studies of straying in PWS after the spill can be interpreted, and so that the significance of straying on management and restoration strategies can be evaluated.		<u>Chief Scientist's Draft Recommendation</u> This is a technically excellent proposal that will document the extent of straying of pink salmon in Southeastern Alaska due to exposure to oil. This study could be a crucial part of the overall pink salmon damage if 95191B establishes heritable genetic damage from oil exposure. However, genetic damage has not been established, and there are more appropriate methods for considering straying with respect to management strategies. Since this project is being initiated in FY 95, it should be evaluated following the return of the adults in 1996 to see if there is sufficient reason to continue.			<u>Executive Director's Draft Recommendation</u> Defer pending further review of all pink salmon proposals addressing genetics/straying/stock idenfication questions. Tentatively considered as lower priority in relation to overall pink salmon program. If funded, evaluate degree of straying after FY 96 returns to decide whether the project should close-out or continue. This project could establish that increased straying is an effect of oil exposure, which will greatly aid interpretation of EVOS damage assessment results. Potential for future management applications not as high as for other pink salmon projects.					
96093A	Restoration of PWS Pink Salmon by Diversion of Harvest Effort: Quantitative Genetic Assessment of Early-Returning Pink Salmon Broodstock	ADFG	Smoker/UAF	\$111.9	\$111.9	\$198.4	\$211.7	\$171.9	\$693.9	1st yr. 5yr. project
<u>Abstract</u> Development of early-returning broodstock at hatcheries might beneficially reduce fishing on injured stocks. However, a risk is that early stocks might interbreed with local salmon and hurt their fitness. Risk might be reduced by stock selection or broodstock management. This research uses quantitative genetics to assess 1) genetics of run timing in donors (predicts effectiveness of stock selection and broodstock management) and 2) fitness loss from interbreeding (exposes loss by laboratory breeding experiment).		<u>Chief Scientist's Draft Recommendation</u> Rated more highly than 96076, as the latter does not answer questions fully. This is a technically excellent and feasible proposal that will measure the strength of the genetic basis for straying in discrete pink salmon populations and whether out-breeding depression could result from hybridization of early and late run pink salmon. Investigators are among the best in the world. The project will eventually contribute greatly to management of pink salmon stocks.			<u>Executive Director's Draft Recommendation</u> Defer pending further review of all pink salmon proposals addressing genetics/straying/stock idenfication questions. Tentatively consider funding for two pink salmon life-cycles (4 years). Determine future funding then. This project will estimate the genetic variability of run timing in pink salmon. In combination with 96093B-BAA, the two projects will determine mechanisms by which pink salmon at different spawning localities interact genetically. This information is essential to determine whether management strategies should address a single or multiple stocks and whether it is possible to develop early-run hatchery stock, the harvest of which will not compete with depressed wild stocks.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96093B	Restoration of PWS Pink Salmon by Diversion of Harvest Effort: Population Genetic Assessment of Gene Flow from Early Return Stock	ADFG	Smoker/UAF	\$121.0	\$121.0	\$238.0	\$228.1	\$134.2	\$721.3	1st yr. 5 yr. project
	<u>Abstract</u> Development of early-returning broodstock at hatcheries might beneficially reduce fishing on injured stocks. However, a risk is that early stock fish might stray and interbreed with local salmon and reduce their fitness. The risk can be estimated by measuring gene flow experimentally. Potential early run pink salmon will be tagged with a natural gene marker and planted in a local stream, simulating straying. The effect will then be directly estimated over generations by measuring the genetic tag in the test stream and its gene flow to others.		<u>Chief Scientist's Draft Recommendation</u> This is a technically superior proposal that will answer basic questions about gene flow among separate streams in Prince William Sound. This will establish whether there are only a few or many stocks in Prince William Sound. These are very significant and basic questions that will influence the nature and cost of future pink salmon management.				<u>Executive Director's Draft Recommendation</u> Defer pending further review of all pink salmon proposals addressing genetics/straying/stock identification questions. Tentatively consider funding for two life-cycles (4 years). Determine future funding then. This project will estimate the genetic effects of "straying" in pink salmon. In combination with 96093A-BAA, will determine mechanisms by which pink salmon at different spawning localities interact genetically. This information is essential to determine whether management strategies should address a single or multiple stocks and whether it is possible to develop early-run hatchery stock, the harvest of which will not compete with depressed wild stocks.			
96093C	Restoration of Prince William Sound Pink Salmon by Diversion of Harvest Effort	ADFG	PWSAC	\$647.0	\$727.4	\$933.9	\$860.8	\$1,271.9	\$3,794.0	1st yr. 7 yr. project
	<u>Abstract</u> Pink salmon egg mortality attributed to oiling of anadromous streams has contributed to a reduction in adult pink salmon returns. Natural populations of pink salmon are harvested with large numbers of hatchery pink salmon in mixed stock fisheries, which may limit escapement to damaged streams and thereby delay recovery. This project will evaluate the feasibility of changes in hatchery production to reduce exploitation of injured wild stocks. Specific projects will focus on changing the location and timing of hatchery returns in western PWS.		<u>Chief Scientist's Draft Recommendation</u> Not yet reviewed. (Detailed Project Description received 6/5/95).				<u>Executive Director's Draft Recommendation</u> Defer decision. Information not available in time for review.			

APPENDIX A: DESCRIPTION OF PROJECTS AND RECOMMENDATIONS

DRAFT FY 96 WORK PLAN/PAGE A-3

Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96139A1	Salmon Instream Habitat and Stock Restoration - Little Waterfall Barrier Bypass Improvement	ADFG	ADFG	\$55.0	\$55.0	\$35.0	\$15.0	\$55.0	\$160.0	2nd yr. 4 yr. project
<u>Abstract</u> This proposal will provide for continuation of Project 95139A1 to complete the barrier bypass improvement at Little Waterfall Creek. It will evaluate whether the improvements are successful once construction is complete. The project will increase spawning habitat use by pink and coho salmon and thus will increase salmon production in ensuing years.		<u>Chief Scientist's Draft Recommendation</u> Implementation of this proposal will likely enhance pink salmon production. Funding for FY 95 has been approved, although the agency has not yet responded to a number of questions about the project. Before committing additional funds for FY 96, these questions must be addressed and the benefit to be gained from additional work must be reviewed.		<u>Executive Director's Draft Recommendation</u> Fund contingent on resolution of questions raised in FY 95 DPD. Project is intended to increase available spawning habitat and thus provide additional pink and coho salmon for harvest as a replacement for salmon lost in EVOS.						
96139A2	Spawning Channel Construction Project Port Dick Creek, Lower Cook Inlet	ADFG	ADFG	\$223.1	\$223.1	\$37.0	\$23.2	\$30.0	\$313.3	1st yr. 5 yr. project
<u>Abstract</u> The proposed Port Dick Pink Salmon Spawning Channel would restore wild pink and chum salmon stocks. The proposed project would increase the spawning habitat available in Port Dick Creek by restoring formerly used tributaries by excavating down to stable water sources.		<u>Chief Scientist's Draft Recommendation</u> Implementation of this proposal will likely enhance pink salmon production, and contains plans to monitor performance of the modified channel. It has been previously approved in 1995.		<u>Executive Director's Draft Recommendation</u> Fund contingent on successful completion of environmental analysis as required under federal law and incorporation of objectives of 96139D into this proposal. Project is intended to increase available spawning habitat and thus provide additional pink and chum salmon for harvest as a replacement for salmon lost in EVOS.						
96139C1	Montague Riparian Rehabilitation Monitoring Program	USFS	USFS	\$43.1	\$43.1	\$43.0	\$0.0	\$0.0	\$86.1	3rd yr. 4 yr. project
<u>Abstract</u> This project is a continuation of 94139 and 95139C. In FY 94, funding was granted to construct 25 to 30 structures in streams flowing through clearcut areas on Montague Island. These structures were designed to improve fish spawning and rearing habitat, prevent erosion, and help restore the natural flows and stream features that existed prior to logging. The 1994 work also included the improvement of 20 acres of riparian vegetation. This project is to continue evaluation of structures, repair any damage that may have occurred and assess changes in the aquatic habitat, stream channels, and substrates. The riparian vegetation work will also be evaluated.		<u>Chief Scientist's Draft Recommendation</u> This proposal is for the 3rd year of a project that improves riparian habitat on Montague Island. The proposal is for monitoring and evaluation of actions taken in 1994 and 1995, which is appropriate.		<u>Executive Director's Draft Recommendation</u> Fund contingent upon submittal and approval of FY 95 DPD, and upon resolving methodological and budget questions. This project is designed to monitor results of a previous EVOS project.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96139C2	Salmon Instream Habitat and Stock Restoration - Lowe River and Valdez Arm Drainages	ADFG	ADFG	\$174.6	\$0.0				\$0.0	
	<u>Abstract</u> This project would provide an in-depth evaluation of in-stream habitat restoration possibilities in the Lowe River and Valdez Arm drainages. It continues a project halted when concerns were raised during review of an environmental assessment to construct habitat improvements in the Lowe River for chum and pink salmon.		<u>Chief Scientist's Draft Recommendation</u> There are no clearly identified methods in the proposal for estimating the enhanced production of fish in the Lowe River. Therefore, it was not possible to evaluate the risks and benefits of the project.				<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Too many questions about this project remain unresolved.			
96139D	Supplemental Monitoring for the Proposed Spawning Channel Construction Project, Port Dick Creek, Lower Cook Inlet	ADFG	Coble Geotech.	\$9.2	\$0.0				\$0.0	
	<u>Abstract</u> A separate project (96139A2) to construct the proposed Port Dick Pink and Chum Salmon Spawning Channel would restore the wild pink and chum salmon stocks to pre-spill levels. This project would provide hydrologic monitoring for that project.		<u>Chief Scientist's Draft Recommendation</u> Reviewed jointly with 96139A2. Same recommendation.				<u>Executive Director's Draft Recommendation</u> Do not fund separate from 96139A2. Incorporate objectives into 96139A2 without increasing the cost of that project.			
96179	Relationships Between Stream Habitat and Stream Classification Within Prince William Sound	USFS	USFS	\$218.1	\$0.0				\$0.0	
	<u>Abstract</u> Channel types represent similar hydrological and geological reaches of stream. They should also be relatively good descriptions of what is present for in-stream fish habitat. Channel type interpretations should provide a quantitatively replicable measure for presence of in-stream spawning and rearing habitat. This project will further the understanding of the relationships between habitat and production of juvenile salmonids within PWS.		<u>Chief Scientist's Draft Recommendation</u> Although this is a solid proposal to continue developing a stream classification system, the proposal is not justified in the context of the oil spill program.				<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal not sufficiently related to EVOS restoration program.			

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96186	Coded Wire Tag Recoveries From Pink Salmon in Prince William Sound	ADFG	ADFG	\$260.5	\$260.5	\$260.5	\$260.5	\$85.0	\$866.5	7th yr. 10yr. project
	<u>Abstract</u> This project funds recovery of coded-wire tags in PWS pink salmon. The recovered tags are used to help ADFG manage the commercial fishery to protect injured stocks. The project is part of a program to transition to a more precise in-season tool, otolith marking, with a permanent funding source other than the Trustee Council. (This project was formerly numbered 95320B.)		<u>Chief Scientist's Draft Recommendation</u> This project is necessary to support the transition to the otolith thermal mass marking. This project should be discontinued only after feasibility of TMM is demonstrated.					<u>Executive Director's Draft Recommendation</u> Fund. Include future funding to allow 2 years of overlap between coded wire tag and otolith marking. The project provides information that allows managers to vary the timing and location of commercial harvest to protect injured wild stocks. This is especially important for stocks in the hard-hit Southwest District in PWS and would enable continued fishing in this area.		
96188	Otolith Thermal Mass Marking of Hatchery Reared Pink Salmon in Prince William Sound	ADFG	ADFG	\$95.2	\$95.2	\$100.5	\$100.5	\$48.8	\$345.0	2nd yr. 6 yr. project
	<u>Abstract</u> This project will develop otolith mass marking as an in-season stock separation tool for pink salmon in PWS. In-season stock composition data is used by fishery managers to protect damaged wild pink salmon stocks from overharvest in mixed-stock fisheries. Coded-wire tags are presently used for this purpose in the Sound. Transitioning to otolith marking will reduce costs and increase precision. (This project was formerly numbered 95320C.)		<u>Chief Scientist's Draft Recommendation</u> This is the continuation of a previously approved program. It is innovative, cost effective, and probably one of the best things that can be done to improve pink salmon management.					<u>Executive Director's Draft Recommendation</u> Fund. Otolith marking is a more accurate and less expensive technology for providing the information now obtained through coded wire tags. Funding for application of this technique will make a transition to non-Trustee sources by FY 99 (only closeout funds proposed in '99).		
96190	Construction of a Linkage Map for the Pink Salmon Genome	ADFG	Allendorf/UM	\$240.0	\$240.0	\$250.0			\$490.0	1st yr. 5yr. project
	<u>Abstract</u> Proposal would construct a detailed genetic linkage map for pink salmon by analyzing the genetic transmission of several hundred DNA polymorphisms. The ability to genetically map the location of oil-induced lesions will allow the thorough identification, description, and understanding of oil induced genetic damage. This research will also aid other pink salmon studies including estimation of straying rates, description of stock structure, and testing if marine survival has a genetic basis.		<u>Chief Scientist's Draft Recommendation</u> This project is very challenging and potentially worthwhile for pink salmon management. However, the implementation of this project should await for the outcome of the laboratory oil exposure experiments (95191A & B).					<u>Executive Director's Draft Recommendation</u> Defer pending further review of all pink salmon proposals addressing genetics/straying/stock identification questions. Tentatively consider not funding at this time, pending results of 95191A & B.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96191A	Oil-Related Embryo Mortalities in PWS Pink Salmon Populations	ADFG	ADFG	\$474.6	\$474.6	\$407.0	\$246.0	\$0.0	\$1,127.6	5th yr. 7 yr. project
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>			<u>Executive Director's Draft Recommendation</u>					
Elevated embryo mortalities were detected in populations of pink salmon inhabiting oiled streams following the oil spill. The purpose of this project is to continue to monitor the recovery of pink salmon embryos in the field, provide laboratory verification of the field results, and verify and identify the occurrence of genetic damages. Results of these studies may provide the first evidence of heritable injury in fish exposed to chronic or acute sources of oil pollution.		The assessment of embryo survival in the field is worthwhile to verify the 1994 result that no survival difference exists between oiled and unoled streams for even-year pink salmon. However, the search for microlesions in the genome of injured pink salmon, through employing a variety of the latest genetic techniques, may not be able to detect these very rare events in the many possible locations for such mutations. The molecular genetics should not go forward in FY 96 until the results from FY 95 have been reviewed. If the adults from the 1994 brood year that were exposed as eggs do not produce a f2 generation, then only closeout funding should be provided.			Fund ongoing component of project, contingent on submittal and approval of a FY 95 Detailed Project Description. Defer decision on funding molecular genetics component of project pending further review of all pink salmon proposals addressing genetics/straying/stock identification questions. This project monitors potential on-going injury to and recovery of pink salmon and explores the hypothesis that oil spill injury is being passed on genetically.					
96191B	Injury to Salmon Eggs and Pre-emergent Fry Incubated in Oiled Gravel (Laboratory Study)	NOAA	NOAA	\$169.3	\$169.3	\$75.0	\$88.0	\$0.0	\$332.3	5th yr. 7 yr. project
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>			<u>Executive Director's Draft Recommendation</u>					
This project will determine if oil can cause heritable damage to pink salmon reproductive capacity. This requires culturing three generations of pink salmon which provides opportunities to examine other immediate and long-term effects of incubating in oiled gravel. The project already is underway and oil exposures were completed in 1994. This FY 96 proposal focuses on incubating eggs from maturing adults in 1995 and coded-wire tagging the second generation for release in Spring 1996.		This work is absolutely essential to continue in order to resolve any remaining questions about the nature of the injury to pink salmon, the course of recovery and the persistence of injury. However, if the net-pen raised adults from the 1994 brood year that were exposed as eggs do not produce a f2 generation, then funding should be reduced appropriately.			Defer pending further review of all pink salmon proposals addressing genetics/straying/stock identification questions. Tentatively consider funding contingent on review of results of FY 95 field season. Budget will be reduced if insufficient numbers of net-pen raised salmon from FY 95 survive. This is a laboratory companion project to 96191A.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96194	Pink Salmon Spawning Habitat Recovery	NOAA	NOAA	\$182.5	\$182.5	\$75.0	\$0.0	\$0.0	\$257.5	1st yr. 2 yr. project
<u>Abstract</u> This project would examine the level of oil contamination in pink salmon streams in 1989-90 and in 1995. Analyses would allow a better assessment of the oil exposure in 1989 and 1995 and would complement the elevated salmon egg mortalities measured since 1989. This study would also synthesize information from other Trustee studies to determine the likelihood of damage from oiled stream gravels. If restoration of contaminated stream gravels were contemplated, knowing the contamination levels in 1989 and 1995 would be valuable, as would the synthesis effort of prior studies.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent study that will likely tie actual concentrations of oil in gravel in pink salmon streams to embryo mortalities and finally illuminate the role of direct exposure in potentially causing the observed multi-year effects in pink salmon embryos.		<u>Executive Director's Draft Recommendation</u> Lower priority in FY '96. Consider delaying project one year. Samples are in freezer and stable. Project will be more meaningful once results of 96191 are available. This project ties actual concentrations of oil as obtained from field samples in 1989 and 1990 in pink salmon streams to embryo mortalities and illuminates the role of direct exposure in potentially causing the observed multi-year effects in pink salmon embryos.						
96196	Genetic Structure of Prince William Sound Pink Salmon	ADFG	ADFG	\$178.5	\$178.5	\$0.0	\$0.0	\$0.0	\$178.5	3rd yr. 3 yr. project
<u>Abstract</u> Previous work found that wild-stock pink salmon suffered both direct lethal and sublethal injuries as a result of the oil spill. An understanding of the population structure of pink salmon in PWS is essential to assess the impact of these injuries on a population basis and to devise and implement management strategies for restoration. This project is designed to delineate the genetic structure of populations of wild pink salmon inhabiting PWS. (This project was formerly numbered 95320D.)		<u>Chief Scientist's Draft Recommendation</u> This is the second year of this work on the genetic stock structure of pink salmon in Prince William Sound. This is a good proposal being conducted by well-qualified geneticists. The proposed breeding experiments are justified in order to interpret the heterozygosity of certain genes used as markers.		<u>Executive Director's Draft Recommendation</u> Fund close-out of current work contingent on a revised Detailed Project Description and budget reflecting this change in scope of work. Defer new data gathering pending further review of all pink salmon proposals addressing genetics/straying/stock identification questions. This project is designed to determine geographic extent of genetic differences in PWS pink salmon. In combination with 96093A and B, this information will guide development of management strategies for single vs. multiple stocks.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Herring Projects				\$1,581.8	\$1,434.1	\$1,265.4	\$1,013.5	\$1,169.2	\$4,882.2	
96074	Herring Reproductive Impairment	NOAA	NOAA	\$347.7	\$200.0	\$180.0	\$0.0	\$0.0	\$380.0	3rd yr. 4 yr. project
<u>Abstract</u> This study will examine long-term oil impacts on herring due to the oil spill using field and laboratory measurements. The field component will search for reproductive impacts in PWS stocks and the laboratory portion will determine if exposure of various life stages to oil causes genetic damage. This project began following the crash of populations in PWS and represents one of several projects focused on causes of the crash and prospects for recovery.		<u>Chief Scientist's Draft Recommendation</u> Most of the major objectives of the work have been accomplished in 1994 and 1995. The remaining work in 1996 is costly relative to what it will add to our knowledge of toxicity of oil to herring reproduction. I therefore recommend close-out funding for this project with no support for additional field or laboratory work.		<u>Executive Director's Draft Recommendation</u> Fund close-out of the oil-exposure laboratory portion and continuation of field portion. Funding contingent on revised DPD and budget reflecting this change in scope of work. Purpose of study is to understand possible injury to herring reproduction from oil exposure.						
96162	Investigations of Disease Factors Affecting Declines of Pacific Herring Populations in Prince William Sound, AK	ADFG	UW/UCD/SFU	\$635.0	\$635.0	\$510.6	\$461.7	\$0.0	\$1,607.3	3rd yr. 4 yr. project
<u>Abstract</u> Field and laboratory studies will focus on Viral Hemorrhagic Septicemia (VHS) and <i>Ichthyophonus hoferi</i> , a pathogenic fungus, to determine their role in the disease and mortality observed in PWS herring since 1993. Herring in PWS will be monitored three times per year for signs of disease and immune status. Specific pathogen-free herring will be used to determine the degree of mortality, blood chemical changes and pathogenicity produced by these organisms alone and in combination with exposure to stressors such as petroleum hydrocarbons, temperature and crowding. (This project was formerly numbered 95320S.)		<u>Chief Scientist's Draft Recommendation</u> This proposal is quite innovative, but the feasibility of developing disease-free herring is a substantial risk. The underlying rationale that links oil to compromised immuno competence and then to disease is weakly developed. The proposal also seems to be a significant expansion of the '95 project (95320S). I need to have a clearer sense of what funds are requested to address the original ('95) objectives. I would also need to see the results from the natal habitats and prey-switching components of SEA, before considering an expanded project. This project and its role in the overall herring program will benefit from the enhanced leadership and coordination proposed in project 96164.		<u>Executive Director's Draft Recommendation</u> Defer pending review of FY 95 results. Interim funding may be warranted. Many questions must be resolved before a recommendation can be made. Project is designed to investigate potential link between oil exposure and disease and between disease and the population decline in PWS. Understanding the lack of recovery is important for restoration and resumption of a herring fishery.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96164	Pacific Herring Projects Coordination	ADFG	ADFG	\$49.2	\$49.2	\$49.2	\$49.2	\$49.2	\$196.8	1st yr. 4yr. project
	<u>Abstract</u> The purpose of this project is to enhance coordination, integration and critical review of projects that are designed to study different aspects of Pacific herring in the PWS ecosystem; to better understand the interactions of the components of the ecosystem; and to aid in the recovery of the injured resource and lost services.		<u>Chief Scientist's Draft Recommendation</u> As proposed, this project does not fully address the need for program direction/intellectual leadership. A revised proposal which fulfills that objective would be appropriate and more favorably received.					<u>Executive Director's Draft Recommendation</u> Fund contingent upon revision of DPD and budget to provide scientific leadership, not just project coordination for herring research. Increased leadership should increase the effectiveness of the EVOS herring program.		
96165	Genetic Discrimination of Prince William Sound Herring Populations	ADFG	ADFG	\$105.8	\$105.8	\$120.0	\$97.0	\$0.0	\$322.8	3rd yr. 5 yr. project
	<u>Abstract</u> The PWS herring fishery has been in catastrophic decline since 1992. The Alaska Department of Fish and Game recovery effort includes incorporating a knowledge of genetically derived population structure into harvest management. This continuing project will delineate the structure of PWS population(s) and related North Pacific populations using both nuclear and mitochondrial DNA analyses. Tests for temporal and spatial diversity within years and temporal stability across years will be done.		<u>Chief Scientist's Draft Recommendation</u> This is a continuing project that will directly affect issues of importance for managing Prince William Sound herring. The investigators have performed admirably on past projects, and I recommend further support for the project in 1996.					<u>Executive Director's Draft Recommendation</u> Fund. This project addresses basic questions about the genetic composition of PWS herring in relation to other North Pacific populations. This information is important to management. When setting harvest limits, it is important to know whether there exists one or more genetically distinct populations.		
96166	Herring Natal Habitats	ADFG	ADFG	\$444.1	\$444.1	\$405.6	\$405.6	\$1,120.0	\$2,375.3	3rd yr. 9 yr. project
	<u>Abstract</u> Past studies have documented damage from oil exposure in adult herring, hatching success of embryos, and levels of physical and genetic abnormalities in larvae. The PWS herring spawning population has drastically declined since 1993, and pathology studies implicated Viral Hemorrhagic Septicemia (VHS) and <i>Ichthyophonus</i> as potential sources of mortality as well as indicators of stress. The project will continue to provide estimates of spawning herring abundance and investigate the lethality of suspected pathogens and the role of environmental contaminants in disease transmission through laboratory and field studies.		<u>Chief Scientist's Draft Recommendation</u> Relates to SEA hypothesis and causes of decline in herring, which are fundamental to the EVOS restoration program. However, there are concerns about scientific leadership and the extent to which some activities can be considered on-going agency management. The budget is too high.					<u>Executive Director's Draft Recommendation</u> Defer decision pending: 1) successful resolution of leadership issue (Project 96164); 2) budget review; 3) review of FY 95 results in fall; 4) receipt of report on 93024 by June 30, 1995; and 5) agreement on plan for transition to normal agency management. In addition, there is a question whether herring spawn deposition surveys are a cost-effective management tool (juvenile herring survey may be more effective). Recovery objective for herring needs to be reviewed based on FY 95 results. The goal of the project is to improve estimation of spawning biomass, in order to establish harvest levels and guidelines that allow natural restoration to occur and that will sustain a healthy fishery.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Sound Ecosystem Assessment (SEA)				\$5,158.8	\$4,712.7	\$3,685.0	\$2,685.0	\$170.0	\$11,252.7	
96054	Mass-Balance Model of Trophic Fluxes in Prince William Sound	ADFG	Pauly/UBC	\$105.9	\$0.0				\$0.0	
<u>Abstract</u> A workshop is proposed where experts would assemble the materials for a mass-balance model of trophic fluxes in PWS. Model construction would be prepared using the widely-used ECOPATH II approach. A graduate student would collate the results and prepare material for an evaluation meeting where the use of the ECOPATH II model will be considered. An educational video and interactive software for display in the Alaska Sealife Center will also be prepared.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent proposal to construct a trophic flux model of Prince William Sound that has the potential to integrate the SEA (96320) and APEX (96163) programs. The initiation of this project would be most appropriate in FY 97. However, I recommend that the Principal Investigator for this project be invited to participate in both the 1995 SEA review workshop and the annual science meeting in January 1996.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. However, project proposer will be invited to participate in the 1995 SEA review workshop and the annual restoration workshop in January 1996.						
96193-BAA	Flux and Nutritional Quality of Particulate Organic Carbon: Relationship to Survival of Juvenile Pelagic Fish	ADFG	Naidu/UAF	\$156.6	\$0.0				\$0.0	
<u>Abstract</u> Particulate organic carbon is the ultimate source of food and energy for marine organisms. Propose to test the SEA Program's (96320) river-lake hypothesis for PWS by correlating the seasonal fluxes and nutritional quality of particulate organic carbon to the time-series variations in primary production and hydrodynamic conditions, with implication on the growth and survival of juvenile pink salmon and Pacific herring. This testing will help to clarify whether the yearly fluctuation in the two fish stocks is related to natural causes, and provide a basis in decision making for either restoration or optimizing the two fish stocks.		<u>Chief Scientist's Draft Recommendation</u> Organic carbon undoubtedly plays an important role in the Prince William Sound ecosystem, but the results of this project would probably not measurably contribute to achieving the objectives of the present ecosystem study (i.e., SEA project 96320). More active integration with that program would strengthen this proposal.		<u>Executive Director's Draft Recommendation</u> Do not fund. Project would not contribute sufficiently to restoration objectives to justify starting anew project.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96195	Pristane Monitoring in Mussels and Predators of Juvenile Pink Salmon & Herring	NOAA	NOAA	\$112.7	\$112.7	\$85.0	\$85.0	\$170.0	\$452.7	1st yr. 5 yr. project
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
This project will measure pristane in predators of juvenile pink salmon and larval herring to determine the dietary dependence of these predators on alternative prey, <i>Neocalanus</i> spp. copepods. This project will also monitor pristane in mussels as an indirect index of potential year-class strength for pink salmon and herring. These results will be used to evaluate the prey-switching hypothesis of the SEA plan and identify critical marine nursery habitat in PWS.		An extremely valuable and elegant proposal with tremendous potential as an integrative tool for future monitoring of the Prince William Sound ecosystem. Among the highest-rated proposals.		Defer decision pending receipt of PI's late reports from previous years. This project is important to restoration, since collecting and measuring pristane in mussels may provide a simple measure of marine productivity, thus allowing predictions about future fisheries production and harvest levels.						
96320	Sound Ecosystem Assessment (SEA)	ADFG	Cooney, et al	\$4,783.6	\$4,600.0	\$3,600.0	\$2,600.0		\$10,800.0	3rd yr. 5 yr. project
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
SEA is a multi-component, interdisciplinary study of factors controlling the production of pink salmon and Pacific herring in PWS. The study investigates the early life stages of these species. Hypotheses about how the physical environment (temperature, salinity and circulation) interacts with fish and plankton populations in the region are used to focus and guide the field sampling and modelling studies.		Project helps provide the larger context of ecosystem structure under which restoration must be considered to be effective, and is likely to contribute valuable information for the management of salmon and herring in PWS. A review workshop should be held after the first of the year, at which we would expect a substantial review of the first 2 years' work.		Fund contingent on budget being reduced to maintenance level of \$4.6 million, including program management and overhead costs. This project tests hypotheses about how the PWS ecosystem works, emphasizing factors that drive salmon and herring production. The goal is to develop an ecosystem model that will allow better predictions about fisheries production. This information, in turn, will be used to improve management and harvest strategies, which will aid restoration of wild pink salmon and herring stocks.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96320R	SEA Trophodynamic Modeling and Validation Through Remote Sensing	ADFG	Eslinger/UAF							
	<u>Abstract</u> This is a new SEA project in FY 96 as a result of an internal reorganization. Some of the work performed under 95320-G and J is to be done under this project in FY 96 and beyond. This project would continue the trophodynamic modeling of phytoplankton and zooplankton begun in FY 95 and add modeling of ichthyoplankton, herring larvae in particular. Will evaluate and verify the model against field data to be collected using a variety of remote sensing and in situ sampling platforms. (Funds for this project are included in 96320.)				<u>Chief Scientist's Draft Recommendation</u> This reorganization of the SEA program seems logical and effective. This work is central to development of an understanding of controls of year-to-year variation in recruitment success of fish in Prince William Sound.				<u>Executive Director's Draft Recommendation</u> Fund. Funds for this project are included in 96320.	
96320Z1	Synthesis and Integration	ADFG	Cooney/UAF							
	<u>Abstract</u> This is a new SEA subproject in FY 96. This project provides support for synthesis and integration activities associated with the application of SEA field and modelling studies to the restoration of pink salmon and Pacific herring populations in PWS. (Funds for this project are included in 96320.)				<u>Chief Scientist's Draft Recommendation</u> Necessary for effective project management, although cost for administrative support seems high.				<u>Executive Director's Draft Recommendation</u> Fund. Funds for this project are included in 96320.	
96320Z2-BAA	Sound Ecosystem Assessment (SEA): Coordination & Communications	NOAA	PWSSC							
	<u>Abstract</u> This is a new SEA sub-project in FY 96. The project is intended to provide coordination, logistical support, and personnel to assist the SEA scientists with coordination and incorporation of local knowledge; and to assist the Restoration Office with communication of project activities and results to communities in PWS. (Funds for this project are included in 96320.)				<u>Chief Scientist's Draft Recommendation</u> The project seems less focused upon incorporating native knowledge and more of a public relations effort for the SEA program and the Prince William Sound Science Center. The Principal Investigator is well qualified and dedicated, but the need to be addressed is best done by the Restoration Office for the entire Restoration Program.				<u>Executive Director's Draft Recommendation</u> Do not fund. Communications are ongoing effort under other projects (96100 and 96052) and also are responsibilities of sponsoring institutions and agencies.	

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Sockeye Salmon Program				\$2,201.5	\$1,803.2	\$427.0	\$75.0	\$150.0	\$2,455.2	
96048-BAA	Historical Analysis of Sockeye Salmon Growth Among Populations Affected by Overescapement in 1989	NOAA	NRC, Inc.	\$86.7	\$101.7	\$0.0	\$0.0	\$0.0	\$101.7	1st yr. 1 yr. project
<u>Abstract</u> Overescapement of sockeye salmon in several areas of Alaska occurred in 1989 as a result of the oil spill. Overescapement appears to have reduced salmon growth, leading to reduced survival. However, few records of sockeye growth in these systems occurred before 1989. This project will use adult sockeye scales to reconstruct the growth of sockeye salmon before, during, and after the oil spill event. These data will be used to document the effects of the spill and the subsequent recovery of the sockeye stocks.		<u>Chief Scientist's Draft Recommendation</u> Excellent proposal. Will help synthesize existing information on sockeye salmon overescapement using an approach not used before in the program. Will supply information that won't be available from Kenai overescapement program. Will help resolve disagreements over data collected in NRDA and restoration program.		<u>Executive Director's Draft Recommendation</u> Fund contingent upon successful resolution of budget issues (project management and overhead costs need to be added; also include projected FY 97 report writing cost in the FY 96 budget). The project synthesizes existing information on sockeye overescapement to resolve questions about the geographic extent and mechanisms of EVOS-related injury due to overescapement, and will provide information needed to design management strategies to overcome EVOS injury.						
96255	Kenai River Sockeye Salmon Restoration	ADFG	ADFG	\$447.9	\$447.9				\$447.9	6th yr. 6 yr. project
<u>Abstract</u> Greatly reduced fishing time in upper Cook Inlet in 1989 due to the presence of oil caused sockeye salmon spawning escapements in the Kenai River to exceed the desired amount by three times. The overescapement may have reduced survival of juvenile sockeye salmon. Careful monitoring and possible reduction of Kenai River sockeye salmon harvests may be necessary to ensure adequate escapements. The goal of this project is to restore Kenai River sockeye salmon through improved stock assessment capabilities and more accurate regulation of spawning levels.		<u>Chief Scientist's Draft Recommendation</u> This has been an excellent program, producing landmark results in '94 and '95. It has achieved its objectives by providing management tools for the upper Cook Inlet fishery. Closeout funds are requested for '96, but the amount seems high. This budget needs additional justification.		<u>Executive Director's Draft Recommendation</u> Fund close-out (\$244,700) contingent upon successful resolution of budget issues. Defer until fall a decision on continuing field work (\$203,200) and timing for transition to a non-Trustee Council funding source, pending review of 1995 Kenai/Skilak sockeye return. The project provides in-season identification of actual runs that Cook Inlet fishermen are harvesting which is used by fisheries managers to modify fishing areas and openings to protect Kenai-Skilak stocks.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96256	Columbia Lake Sockeye Salmon Stocking	USFS	USFS	\$40.6	\$60.0	\$0.0	\$0.0	\$0.0	\$60.0	1st yr. 1 yr. project
	<u>Abstract</u> Columbia Lake is a 2.8 km ² surface area lake located in Heather Bay near the southeast terminus of the Columbia Glacier. With recession of the glacier, the lake level dropped and the outlet now flows across a moraine, restricting access to salmon. Comparative data suggest that this lake could produce return of 10,000 to 29,000 adult sockeye salmon annually. This project would gather limnological data, transplant fry and monitor the outmigration of smolt and return of adult salmon.		<u>Chief Scientist's Draft Recommendation</u> Uncertain if this glacial lake can sustain a sockeye run without much more extensive program than proposed.					<u>Executive Director's Draft Recommendation</u> Fund contingent on review of a new Detailed Project Description that reflects modification to a feasibility study only. Must be combined with 96257 and address concerns raised by Chief Scientist, including consistency with supplementation criteria. If feasible, these projects could provide significant sockeye salmon to aid PWS subsistence, sport, and commercial fisheries. Total funding should not exceed \$60,000.		
96257	Solf Lake Sockeye Salmon Stocking	USFS	USFS	\$34.3	\$0.0				\$0.0	
	<u>Abstract</u> Solf Lake is a 0.61 km ² surface area lake located in Herring Bay on Knight Island. This lake had a run of sockeye salmon until an earthquake in the 1930s blocked the outlet. Limnological data suggest that this lake could produce returns of 19,000 to 22,000 adult sockeye salmon, annually. This project would open the lake to migrating salmon, monitor plankton abundance, transplant fry and monitor the outmigration of smolt and return of adult salmon.		<u>Chief Scientist's Draft Recommendation</u> This project proposes to develop a replacement fishery in Solf Lake, which is probably a feasible undertaking. However, the proposal does not address the question of mixed stock fisheries in western Prince William Sound. This enhancement action would probably impact the mixed fishery, and therefore does not meet the criteria developed in the supplementation workshop.					<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. Fund as feasibility study in combination with 96256, with one budget not to exceed \$60,000. Must address questions about impacts on mixed stock fishery in western Prince William Sound.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96258A	Sockeye Salmon Overescapement Project	ADFG	ADFG	\$907.8	\$907.8	\$150.0	\$75.0	\$150.0	\$1,282.8	3rd yr. 6 yr. project
<u>Abstract</u> This proposal provides for a close-out budget for the Kenai lakes sockeye research program with a limited continued sockeye monitoring program for the Kodiak Island lakes. If depressed adult returns from 1989 brood are observed in the Kenai River in 1995, continuation of the evaluation is proposed for the 1996 field season, which would bring the FY 96 cost to \$907,800. In addition, a separate proposal to experimentally evaluate the proposed mechanism leading to reduced production of smolt from the Kenai systems by mean of an <i>in situ</i> enclosure study is integrated into these investigations.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent program for glacial sockeye salmon lakes conducted by outstanding scientists. However, the link to damage is increasingly unclear due to the problems with smolt enumeration. The fry weight data and observations on vertical migration of zooplankton might reflect the overescapement in 1987-89. Return-per-spawner data have not been put forward and analyzed comprehensively in the context of a stock assessment model, so the arguments in support of an oil spill impact are weak and the application of the limnological work to management is not clear. Of the amount requested, \$527.4 is for close-out expenses in 1996. This amount seems high and needs additional justification, as well as further description of the analyses to be conducted on 1995 data. I cannot recommend gathering new data in 1996 (\$380.4), except possibly at Red and Akalura lakes.		<u>Executive Director's Draft Recommendation</u> Fund close-out for Kenai/Skilak portion; continue limited Kodiak monitoring. Recommendation is contingent upon successful resolution of budget issues. Defer decision on continued Kenai/Skilak field work until fall, pending review of 1995 sockeye return. This project investigates multiple mechanisms for injuries to sockeye caused by overescapement, and also will determine the effects on smolt escapement and ultimate production of returning adults. It also monitors recovery of Kodiak runs and provides information to help restore these runs.						
96258B	Sockeye Salmon Skilak Lake Enclosure Project	ADFG	ADFG	\$341.1	\$0.0				\$0.0	
<u>Abstract</u> This proposal will be initiated if the 5-year component of the 1995 Kenai sockeye return is very low. The proposed study examines experimentally 2 major questions about limits to sockeye salmon production. First, can reduced growth rates and subsequent reduced recruitment to fall fry and overwinter survival be explained by decreased availability of zooplankton? Second, are nutrient additions effective at improving zooplankton production and associated decreases in sockeye salmon? This study is a companion to 96258A.		<u>Chief Scientist's Draft Recommendation</u> This is a unique case where it could be argued that the resource has recovered-- i.e., the 1989 brood year had a good return, but the remaining part of the return is not yet known. Should the 1995-97 returns (from 1989-91 runs) be very poor, the project may be appropriate to pursue in future years.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Consistent with Chief Scientist's recommendation, decision on funding should await return of 1995-97 returns.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96258C	Kenai River Ecosystem Restoration: Starvation-Temperature Study	DOI	DOI	\$57.3	\$0.0				\$0.0	
<u>Abstract</u> This proposal is a companion to 96258A. It will only be initiated if the 5-year component of Kenai sockeye returns at a low level. It examines two questions: First, "Can the variability in overwintering survival of poorly conditioned fall fry be replicated in a laboratory simulation of the naturally observed conditions in Skilak and Kenai Lakes?"... Second, "Can the variability in overwintering survival be modeled with field data on length of winter and seasonal food availability?" The answers will be useful in developing restoration plans and evaluating escapement goals for Kenai sockeye.		<u>Chief Scientist's Draft Recommendation</u> This is a unique case where it could be argued that the resource has recovered--- i.e., the 1989 brood year had a good return, but the remaining part of the return is not yet known. Should the 1995-97 returns (from 1989-91 runs) be very poor, the project may be appropriate to pursue in future years.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time based on Chief Scientist's recommendation.						
96259	Restoration of Coghill Lake Sockeye Salmon	ADFG	ADFG	\$285.8	\$285.8	\$277.0	\$0.0	\$0.0	\$562.8	4th yr. 5 yr. project
<u>Abstract</u> Coghill Lake has historically been a major sockeye producer for PWS. The current production is very low and could jeopardize the sustainability of this sockeye stock without restoration efforts. This project continues a program begun in 1993 to fertilize Coghill Lake to restore the run. A restored sockeye salmon run would provide an important replacement resource for sport and commercial fisheries in PWS.		<u>Chief Scientist's Draft Recommendation</u> This project is a replacement action for oil spill injury using lake fertilization to increase sockeye salmon production in Coghill Lake. Reviews have identified risks in the approach taken. If the fertilization program does not work, we are not likely to know why. In spite of my reservations about the project I recommend continued funding.		<u>Executive Director's Draft Recommendation</u> Defer decision on funding until FY 95 results are reviewed. If funded, should be consistent with recommendation in FY 95 work plan that there be a transition to a non-Trustee funding source after FY 97. This project is designed to restore Coghill Lake to its former position as a mainstay of the commercial/sport sockeye fishery in PWS. Although the injury to this fishery was not caused by the oil spill, this project has been conducted on a replacement basis for losses of other fishery resources.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Cutthroat and Dolly Varden Trout Projects				\$565.1	\$240.4	\$227.7	\$127.7	\$26.4	\$622.2	
96043A	Cutthroat Trout and Dolly Varden Char Population and Habitat Monitoring	USFS	USFS	\$29.6	\$0.0				\$0.0	
<u>Abstract</u> Since 1993 a weir has been operated at Mile 18 Creek near Cordova to monitor the populations of anadromous cutthroat trout and Dolly Varden char, determine population variability, estimate survival rates, and learn more about migration patterns and habitat requirements. Continued study at the weir in 1996 and 1997 will complete the data needed for determining survival rates for several year classes and will give a good indication of the population variability.		<u>Chief Scientist's Draft Recommendation</u> This is a new project for Trustee Council funding that proposes to support the operation of a weir on Mile 18 Creek. While this may improve some aspects of sport fishery management at Mile 18, it is not certain how this project will aid the restoration of this species on a regional basis.		<u>Executive Director's Draft Recommendation</u> Do not fund. Project is part of on-going agency effort.						
96043B	Monitoring of Cutthroat Trout and Dolly Varden Habitat Improvement Structures	USFS	USFS	\$40.4	\$40.4	\$27.7	\$27.7	\$26.4	\$122.2	3rd yr. 5 yr. project
<u>Abstract</u> This project provides for monitoring of habitat improvement structures and their effects on cutthroat trout and Dolly Varden populations. These structures were installed in 1995 under EVOS Restoration Project number 95043B. Additionally this proposal would provide for a project completion report of project number 95043B.		<u>Chief Scientist's Draft Recommendation</u> This project may have merit, but I recommend deferring a decision on continuation until the 1995 Detailed Project Description has been submitted, reviewed, and a determination made by the Chief Scientist and Executive Director. There is also concern about interspecific interactions between cutthroat trout and coho as mentioned in the Detailed Project Description. This problem needs attention, as we may have competing restoration objectives (e.g., if enhancements intended to benefit cutthroats actually help coho, the result could be harm to cutthroats).		<u>Executive Director's Draft Recommendation</u> Defer decision until FY 95 project description is submitted and approved. If funded, questions concerning monitoring level and budget need to be resolved. This project monitors the success of a previous EVOS project.						
96043C	Cutthroat Trout Habitat Improvement Structures	USFS	USFS	\$100.2	\$0.0				\$0.0	
<u>Abstract</u> This project has the same focus as Project 94043/95043B. Its objective is to improve cutthroat trout rearing habitat in western PWS. In FY 95, the USFS will identify up to four streams with habitat enhancement opportunities. A detailed evaluation and environmental analysis would be conducted and finalized prior to the 1996 field season when implementation of the stream enhancements would take place.		<u>Chief Scientist's Draft Recommendation</u> Performance evaluations of previous in-stream manipulations need to be completed prior to commencing new manipulations. In addition, future proposals need to consider species interactions to ensure that manipulations do not provide unintended enhancement of other species.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Reconsider after similar improvements funded under 94043/95043B have been fully evaluated.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96145	Cutthroat Trout and Dolly Varden: the Relation Among and Within Populations of Anadromous and Resident Forms	USFS	USFS	\$336.7	\$200.0	\$200.0	\$100.0	\$0.0	\$500.0	1st yr. 3 yr. project
<u>Abstract</u> Recovery of cutthroat trout is unknown. Restoration efforts have taken the form of instream habitat modification and stock supplementation. The usefulness of this approach in the long term is unknown. This project would determine the relation between resident and anadromous forms of these fish within the same watershed and between watersheds by examining genetic, meristic, and life-history features of each group. Results from this study will allow a long-term, comprehensive and ecologically sound restoration strategy for these fish to be developed.		<u>Chief Scientist's Draft Recommendation</u> This is a fundamentally excellent proposal that will determine the relationships between resident and anadromous forms of Dolly Varden and cutthroat trout. Our lack of knowledge of life history strategies is constraining our ability to identify the most effective restoration strategies for the species. This project will also help clarify damage assessment results obtained previously. Since the findings of this study have national implications, I suggest substantial cost sharing by the USFS.		<u>Executive Director's Draft Recommendation</u> Fund contingent upon successful resolution of cost-sharing with agency. The project defines relationships among stocks and life history forms (e.g., anadromous vs. resident), refines understanding of the nature and extent of EVOS injury and may confirm whether recovery has occurred. This same information has direct implications for management of sport fisheries in Prince William Sound and nationwide.						
96177A	Cutthroat Trout, Dolly Varden Char Habitat Restoration, Lake Elsner Area	USFS	USFS	\$26.6	\$0.0				\$0.0	
<u>Abstract</u> Timber harvests in the Lake Elsner watershed, 13 miles east of Cordova, may have affected cutthroat trout and Dolly Varden char habitat. The Cordova Ranger District proposes to work with the Eyak Corporation to survey the area and determine if there are any existing or potential impacts. If problems are identified, plans for restoration projects will be developed.		<u>Chief Scientist's Draft Recommendation</u> I cannot recommend that the Trustee Council fund the USFS and the Eyak Corporation for restoration of damage apparently caused by the logging practices on private land.		<u>Executive Director's Draft Recommendation</u> Do not fund as separate project. Consultation services can be provided through agencies in FY 95 under Project 95058.						
96177B	Cutthroat Trout, Dolly Varden Char Habitat Restoration, Port Fidalgo and Port Gravina Area	USFS	USFS	\$31.6	\$0.0				\$0.0	
<u>Abstract</u> Timber harvests in the Port Fidalgo and Port Gravina area, 20 miles northwest of Cordova, may have affected cutthroat trout and Dolly Varden char habitat. The Cordova Ranger District proposes to work with the Tatitlek Corporation to survey the area and determine if there are any existing or potential impacts. If problems are identified, plans for restoration projects will be developed.		<u>Chief Scientist's Draft Recommendation</u> I cannot recommend that the Trustees fund the Tatitlek Corporation and USFS to restore damages caused by logging practices on private land. Perhaps this kind of assistance can be sought through Project 95058 (Assistance to Private landowners).		<u>Executive Director's Draft Recommendation</u> Do not fund. Desired restoration should be addressed in the ongoing negotiations for purchase of habitat protection in the Tatitlek area.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Marine Mammal Program				\$1,163.1	\$765.1	\$661.6	\$256.2	\$25.0	\$1,707.9	
96001	Recovery of Harbor Seals from EVOS: Condition and Health Status	ADFG	Castellini/UAF	\$187.4	\$187.4	\$184.6	\$46.2	\$0.0	\$418.2	2nd yr. 4 yr. project
<u>Abstract</u> This project focuses on the health of harbor seals, a marine mammal species that is not recovering in Prince William Sound. Personnel from the University of Alaska in cooperation with the Alaska Department of Fish and Game will work with harbor seals to assess their health, blood and blubber chemistry and size in relation to their ecological and nutritional requirements. The project addresses potential health and nutritional problems that may be impeding harbor seal recovery.		<u>Chief Scientist's Draft Recommendation</u> This is a solid technical proposal that addresses a basic question about recovery of harbor seals in the oil spill area. The investigator is well qualified, and he is helping to evaluate the most generally accepted hypothesis for the seals' decline.		<u>Executive Director's Draft Recommendation</u> Fund. This project will document the body condition and nutritional status of harbor seals, thus helping to test the "is it food?" hypothesis for declines in the PWS harbor seal population. This information is necessary to eliminate alternative hypotheses (e.g., predation, disease). This project complements 96064 and will enable managers, subsistence hunters, and others to focus their concerns and efforts on the most probable sources of population decline.						
96012A-BAA	Comprehensive Killer Whale Investigation in Prince William Sound, Alaska	NOAA	N Gulf Oceanic	\$167.5	\$50.0				\$50.0	2nd yr. 2 yr. project
<u>Abstract</u> This project continues the monitoring of the damaged AB pod and other Prince William Sound killer whales that has occurred on a yearly basis since 1984. It develops a GIS database on killer whales that when coupled with genetic and acoustic data will help evaluate recovery, recognize changes in behavior, and estimate killer whale impact on harbor seals.		<u>Chief Scientist's Draft Recommendation</u> This is a very good proposal that will monitor killer whales in PWS to track their recovery. The project will collect biopsy samples that will be used for genetic and trophic analysis (free fatty acids and stable isotopes). The inclusion of remote hydrophones is innovative and should result in a longer-term and greater year-round coverage of killer whale use of PWS. More consideration of possible winter-time observations is suggested. The proposal is generally very cost-effective. If killer whales are to be effectively monitored the absolute minimum frequency is once every two years.		<u>Executive Director's Draft Recommendation</u> Fund close-out of project contingent on revised DPD and budget reflecting the change in scope of work. The draft monitoring schedule indicates that monitoring every other year may be appropriate. Given that monitoring has occurred annually since 1984, perhaps 1996 is a year that can be skipped. In addition, recovery objective for this species needs to be reviewed.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96012B	Impact of Killer Whale Predation on the Recovery of Injured Resources in Prince William Sound	NOAA	NOAA	\$229.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
	<u>Abstract</u> The objective of the proposed project is to investigate the potential impact of killer whale predation on the recovery of PWS injured populations. We will collect biopsy samples from killer whales from each of two putative populations (suspected resident and transient whale populations) from PWS. Killer whale skin and blubber samples will be examined through stable isotope and fatty acid analyses to determine the fraction of the PWS killer whale population that predate on marine mammals versus fish.		<u>Chief Scientist's Draft Recommendation</u> This proposal would determine the trophic linkages between killer whales and their prey using two tracer methods: stable isotope analysis and free fatty acid ratios. Unpublished results from British Columbia indicate that resident and transitory types of whales can be discriminated easily on the basis of differences in the ratios of two fatty acids. The rate of killer whale predation on various species will not be able to be determined from this approach, as the project title implies. This proposal does not display a familiarity with the methods that convinces the reviewer that the Principal Investigator can interpret the results. The samples would be collected by the other killer whale project and analyzed by a contracting laboratory. Further, the project is very expensive for the remaining work. There are also discrepancies in sample numbers proposed for '95 and '96 efforts. On these bases, the project is not recommended for funding in 1996.		<u>Executive Director's Draft Recommendation</u> Do not fund. The Chief Scientist has significant technical concerns about this project as proposed, and if a killer whale proposal is funded, it should be 96012A.					
96064	Monitoring, Habitat Use, and Trophic Interactions of Harbor Seals in Prince William Sound	ADFG	ADFG	\$381.1	\$381.1	\$347.0	\$100.0	\$25.0	\$853.1	2nd yr. 5 yr. project
	<u>Abstract</u> This project will monitor the status of harbor seals in PWS and investigate the possible causes for the ongoing decline. Aerial surveys will be conducted to determine whether the population continues to decline, stabilizes, or increases. Seals will be satellite-tagged to describe their movements, use of haulouts, and hauling out and diving behavior. Samples of blood, blubber, whiskers, and skin will be collected to study diet, health and condition, and genetic relationships to other harbor seal populations.		<u>Chief Scientist's Draft Recommendation</u> This is a very good proposal that deserves support. The proposal could be improved, however, by more clearly elaborated and prioritized hypotheses.		<u>Executive Director's Draft Recommendation</u> Fund. This basic study explores reasons for the long-term decline in harbor seals. Focus is on "is it food?" hypothesis, but also addresses alternatives, such as predation and disease. This work will enable resource managers, subsistence users, and others to focus their efforts and concern on the most probable causes of population decline.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96121-BAA	Stable Isotope Ratios and Fatty Acid Signatures of Selected Forage Fish Species in Prince William Sound, AK	NOAA	Worthy/TXAM	\$51.0	\$0.0				\$0.0	
<u>Abstract</u> This study will examine the feeding ecology of killer whales and their possible impact on harbor seals within PWS. Evidence suggests that the non-recovering status of harbor seals may be due to predation by killer whales. Traditional methods of food web analysis cannot determine whether this is true, but the combination of stable isotope tracer techniques and fatty acid signature analysis will allow us to estimate the degree of interaction between these two injured species.		<u>Chief Scientist's Draft Recommendation</u> This is a technically innovative program that will analyze fatty acid composition in forage fish, including analysis of the stable isotope composition of the fatty acid molecules. The stated purpose of the project is to use these findings to decipher the diet of fish-eating killer whales, although it is not certain that these "cutting edge" techniques can discriminate prey species effectively. The project is cost-effective. Coordination with Project 96170 should prevent duplication of effort.				<u>Executive Director's Draft Recommendation</u> Do not fund. Project would document fatty acid/stable isotope composition of forage fishes, which are prey to killer whales and other marine mammals. This project would be appropriate only if 96012A and B were recommended for funding, but they are not.				
96170	Isotope Ratio Studies of Marine Mammals in Prince William Sound	ADFG	Schell/UAF	\$146.6	\$146.6	\$130.0	\$110.0	\$0.0	\$386.6	2nd yr. 4 yr. project
<u>Abstract</u> Stable isotope ratios are natural tracers of carbon and nitrogen transfers through food webs. Through a mix of captive animal studies, comparison of isotope ratios in archived and current marine mammal tissues and their potential prey species in the PWS, insight into environmental changes causing the decline of harbor seals may be possible. This project will supply the isotope ratio determinations for other projects using this technique in the PWS ecosystem. Over the 12 months of FY 96 funding about 10,000 samples in these related projects will be analyzed. (This project was formerly numbered 9532012.)		<u>Chief Scientist's Draft Recommendation</u> Excellent in all respects. This project will doubtlessly provide insights into the functioning of the Prince William Sound ecosystem that cannot be obtained in other ways. It may well provide valuable information for modeling the entire ecosystem at a very reasonable cost. Coordination with Project 96121 should prevent duplication of effort.				<u>Executive Director's Draft Recommendation</u> Fund. This project provides technical support for 96064, and will assist the SEA program (96320) by describing the food chains that support important commercial fisheries in PWS.				

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Nearshore Ecosystem Projects				\$6,515.9	\$3,387.1	\$2,495.4	\$2,459.4	\$980.0	\$9,321.9	
96025	Mechanism of Impact and Potential Recovery of Nearshore Vertebrate Predators	DOI	DOI	\$1,669.4	\$1,669.4	\$1,669.4	\$1,669.4	\$450.0	\$5,458.2	2nd yr. 4 yr. project
<u>Abstract</u> The project assesses trophic, health, and demographic factors across a suite of "apex" predators injured by the spill to determine mechanisms constraining recovery and improve knowledge of the status of recovery. Primary hypotheses: 1) recovery of nearshore resources is limited by recruitment processes; 2) initial and/or residual oil in benthic habitats and in or on benthic prey has had a limiting effect on the recovery of predators; and 3) EVOS-induced changes in populations of benthic prey species have influenced the recovery of predators.		<u>Chief Scientist's Draft Recommendation</u> This program was peer reviewed in detail in March 1995, and an 18-month workplan was approved by the Trustee Council. A detailed review of the first full field season of this program will be conducted in the fall of 1996.		<u>Executive Director's Draft Recommendation</u> Fund contingent on receipt of late reports from previous years. If funded, will review in fall of 1995 to see if modifications in 1996 Detailed Project Description are necessary based on 1995 field season. In general, the nearshore ecosystem, including intertidal habitat and organisms, was hardest hit by the spill. This project monitors recovery of intertidal organisms and closely linked vertebrate predators and addresses question of whether continuing contamination is slowing recovery of vertebrate predators.						
96027	Kodiak Archipelago Shoreline Assessment: Monitoring Surface and Subsurface Oil	ADEC	ADEC	\$35.1	\$10.0	\$0.0	\$0.0	\$0.0	\$10.0	2nd yr. 2 yr. project
<u>Abstract</u> This project completes work begun in FY 95 to determine the areal extent, toxicity and origin of oil on selected Kodiak Archipelago shorelines. Most of these shorelines were last surveyed in 1990. The information about the remaining oil is necessary to determine whether recovery is proceeding at an acceptable rate; to help local people assess whether the presence of remaining oil is still affecting shoreline activities; to determine the origin and toxicity of any remaining oil; and to determine if any beaches need additional treatment.		<u>Chief Scientist's Draft Recommendation</u> This is close-out funding to hold community meetings and complete the final report. This effort is necessary, but 4 months of staff time and \$8,500 in contractual/commodities seem excessive.		<u>Executive Director's Draft Recommendation</u> Fund contingent on reducing budget. This project closes out work funded in 1995.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96037	Coastal Habitat Intertidal Monitoring	ADFG	Highsmith/UAF	\$609.2	\$550.0	\$550.0	\$550.0	\$0.0	\$1,650.0	1st-yr. 3 yr. project
<u>Abstract</u> The Coastal Habitat Injury Assessment study showed continued injury to intertidal algal and invertebrate populations when last sampled in 1991. A limited number of sites was monitored in PWS and Kenai through 1994 and showed continued damage. This study proposes to revisit the original sites to determine their recovery status. Intertidal communities are integral to the nearshore ecosystem and monitoring is critical for understanding long-term effects of the spill.		<u>Chief Scientist's Draft Recommendation</u> This is a solid program that revisits the spill-wide sites that have not been surveyed since 1991. Damage was extensive in sheltered rocky shores, coarse-textured beaches, and estuarine habitats at that time. This work should be done again. However, I am concerned with the price of the work. If total costs can be reduced below \$550,000 per year, I recommend favorable consideration.				<u>Executive Director's Draft Recommendation</u> Fund contingent on successful resolution of budget questions; recommend maximum Trustee Council funding of \$550,000 per year. Provides core information on recovery of intertidal plants and animals, which are fundamental to the entire nearshore ecosystem. Monitoring was last done in 1991.				
96056	Sea Otter Transplantation/Clam Restoration	DOI	D. Warner		\$0.0				\$0.0	
<u>Abstract</u> This project seeks to restore clam populations in the Cordova area by transplanting roughly 300 sea otters from Cordova to the central and southern portions of PWS, followed by restocking razor clam beds with clams from other areas. Restocking dungeness crab is also proposed.		<u>Chief Scientist's Draft Recommendation</u> This was a project idea rather than a complete proposal. However, the mobility of sea otters makes the technical approach infeasible. Efforts by the California Department of Fish & Game found that some transplanted sea otters would travel 100 miles in a week to return to their original location.				<u>Executive Director's Draft Recommendation</u> Do not fund. This project idea is not technically feasible.				
96067-BAA	Juvenile Fish Habitat Identification and Assessment	DOI	Mitchell/MBC	\$467.4	\$0.0				\$0.0	
<u>Abstract</u> This study will sample nearshore habitats for juvenile fish. Embayments with eelgrass beds and shallow soft-bottomed coastal areas in PWS will be sampled in oiled and unoiled areas. The study will help define important nursery grounds as well as demonstrate the amount to which these areas have been degraded by oiling.		<u>Chief Scientist's Draft Recommendation</u> Link to damaged resources has not been made and this proposal is somewhat duplicative of work in progress. Future proposals should be integrated with ecosystem studies now underway.				<u>Executive Director's Draft Recommendation</u> Do not fund. This proposal has a weak link to restoration, and would be strengthened by integration with ecosystem studies.				

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96072	Status and Potential Recovery of the Black Oystercatcher: An Apex Predator in the Nearshore Environment	DOI	DOI	\$157.7	\$0.0				\$0.0	
	<u>Abstract</u> This proposal questions the current status of the black oystercatcher as a recovering species, and presents a plan of action for improved monitoring of the species and evaluation of factors (e.g., demography, oil toxicity, food, genetic variability) that may be limiting recovery of the population.		<u>Chief Scientist's Draft Recommendation</u> Although the authors question the classification of the oystercatcher as "recovering," the point remains arguable. I recommend deferring until results of 1996 boat surveys are complete and preliminary results of the NVP project are available, which may indicate continuing contamination in the nearshore food chain/ecosystem. If there is indication of lack of recovery of oystercatchers, a proposal emphasizing use of artificial incubation as a restoration technique might be appropriate.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Reconsider for FY 97 based on Chief Scientist's recommendation.					
96086	Herring Bay Monitoring and Restoration Studies	ADFG	Highsmith/UAF	\$185.3	\$185.3	\$0.0	\$0.0	\$0.0	\$185.3	7th yr. 7 yr. project
	<u>Abstract</u> In 1990, intertidal restoration studies were established in Herring Bay in response to the T/V <i>Exxon Valdez</i> oil spill. These studies have continued through the 1994 field season and show continued injury to <i>Fucus gardneri</i> and the associated invertebrate population, especially in the upper intertidal. Data collected during the 1995 field season will be incorporated into the existing Herring Bay database and the rates and extents of recovery determined for injured resources.		<u>Chief Scientist's Draft Recommendation</u> This is a project that was funded from 1990 through 1995, with close-out scheduled for FY 96. The budget appears to be high for a close-out project, and should be reviewed.		<u>Executive Director's Draft Recommendation</u> Fund contingent on review of budget, which seems high for a close-out. Project is close-out (data analysis and report writing only) for studies previously funded by the Trustee Council.					
96088	Fucus as Structure for Other Organisms	ADFG	Stekoll/UAF	\$302.5	\$0.0				\$0.0	
	<u>Abstract</u> The brown alga, <i>Fucus gardneri</i> , is the dominant organism in the upper intertidal community where it provides food, foraging areas, and shelter for a variety of other plants and animals. The goals of this project are to 1) define the factors which have limited the recovery of <i>Fucus</i> populations, 2) test various techniques to accelerate the recovery of <i>Fucus</i> populations in the upper intertidal, 3) determine the consequences for other organisms due to this slow recovery of <i>Fucus</i> and 4) define the geographical extent of upper intertidal habitat throughout PWS that has not recovered.		<u>Chief Scientist's Draft Recommendation</u> This project poses many of the same questions that have been asked in the Herring Bay intertidal studies for the previous five years. This upper intertidal system might be appropriate for work in the future with new questions, possibly in response to an RFP.		<u>Executive Director's Draft Recommendation</u> Do not fund. Lower priority than other coastal habitat work at this time.					

APPENDIX A: DESCRIPTION OF PROJECTS AND RECOMMENDATIONS

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96090	Mussel Bed Restoration and Monitoring	NOAA	NOAA	\$209.7	\$150.0				\$150.0	5th yr. 5 yr. project
<u>Abstract</u> In FY 96 a comprehensive report will be produced synthesizing and summarizing four years of studies on the persistence of oiling in mussel beds in PWS and the Gulf of Alaska and restoration of 12 of these beds. Chemical analyses of mussel and sediment samples collected in 1995 will be completed early in 1996. No new sample collection or site visits are proposed for FY 96.		<u>Chief Scientist's Draft Recommendation</u> It is essential to complete this close-out project but the budget appears to be high. The labor for the report writing is very high, given the donation of time by NOAA (which is recognized and appreciated). There also needs to be a better accounting of the numbers of samples for chemical analysis.		<u>Executive Director's Draft Recommendation</u> Fund contingent on successful resolution of budget issues. Project would close-out previous study on contamination of mussel beds by oil. Oiled mussel beds may be a pathway for on-going contamination of nearshore vertebrate predators. Information gathered could lead to further cleaning and restoration of mussel beds.						
96094	Improving Recovery Rates on Shorelines in PWS Using Enhanced Bioremediation	ADEC	ADEC	\$965.6	\$0.0				\$0.0	
<u>Abstract</u> This 3-year project will identify reasons why remaining subsurface oil on PWS shorelines has not biodegraded and assess the impact this is having on shoreline recovery. Based on site characterization and risk, the project will recommend and test, if appropriate, use of selected non-intrusive, non-commercial bioremediation enhancement methods to accelerate stalled biodegradation.		<u>Chief Scientist's Draft Recommendation</u> There are serious questions as to whether nutrient supply is a limiting factor in the removal of oil from Prince William Sound beaches. Also, I doubt that the remaining oil is seriously affecting the ecosystem. (The main problem is that oil residue is offensive to local residents, who want something done about it.) This study is expensive and time consuming, and may not satisfy local concerns.		<u>Executive Director's Draft Recommendation</u> Do not fund. However, a workshop will be held this fall with the Chief Scientist, community leaders, agency representatives, and other interested parties to review the status of persisting oil and the objectives of any future shoreline monitoring and cleanup. This summer EPA will analyze samples measuring presence of biodegradable oil and the results may shed new light on this issue.						
96103-BAA	Whale Fore stomach Anaerobic Microbes to Detoxify Oil Spills	NOAA	Craig/OSU	\$170.7	\$0.0				\$0.0	
<u>Abstract</u> Complete microbial bioremediation of oil spills in the environment is currently limited by oxygen availability. We have preliminary evidence that anaerobic bacteria from the forestomach of bowhead whales have the unique ability to metabolize a range of fuel oil components anaerobically. This project: isolates anaerobic bacteria or bacterial consortia responsible for this activity from this habitat, assesses their ability to detoxify fuel oil components, and optimizes their growth for use in environmental bioremediation.		<u>Chief Scientist's Draft Recommendation</u> This is an imaginative proposal that could lead to the development of microbial cultures or other sorts of biotechnological approaches that might be applied to the clean-up of oil spills. Unfortunately, it does not specifically address restoration of damages from the Exxon Valdez oil spill, but rather is an oil spill remediation research and development project.		<u>Executive Director's Draft Recommendation</u> Do not fund. Proposed work falls outside scope of civil settlement.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96104	Avian Predation on Blue Mussels in Prince William Sound	USFS	USFS	\$127.1	\$127.1	\$130.0	\$120.0	\$60.0	\$437.1	1st yr. 3 yr. project
<u>Abstract</u> The nearshore vertebrate predator project (96025) hypothesizes that prey availability and competition for prey, such as blue mussels, could be constraining recovery of sea otters and harlequin ducks. This project will document the impact of avian predators, including surf scoters, glaucous-winged gulls, black oystercatchers, and surfbirds on mussel populations at northwest Montague Island. This project will gather information on the numbers and distribution of avian predators, and variability in their use of mussels.		<u>Chief Scientist's Draft Recommendation</u> Very responsive to discussion in January workshop. This is a study that would help us interpret the results of the NVP (96025) project. The project needs to add a study site on Knight Island. I recommend one year of funding and integration with the NVP program.		<u>Executive Director's Draft Recommendation</u> Lower priority when evaluated in context of the limited funds available for new projects at this time. Project should be evaluated relative to other components of NVP (96025) and possibilities for integration explored.						
96106	Subtidal Monitoring: Eelgrass Communities	ADFG	Jewett/UAF	\$239.4	\$239.4	\$0.0	\$0.0	\$0.0	\$239.4	6th yr. 6 yr. project
<u>Abstract</u> This project would provide funds to write the final report for Project 95106. The budget reflects projected costs of sample analysis, data analysis, and report preparation. The final report will incorporate and compare all data collected since 1991.		<u>Chief Scientist's Draft Recommendation</u> This is a close-out project for work previously funded by the Trustees. The investigator is doing a very good job on subtidal studies. I recommend funding this, but encourage greater cost effectiveness.		<u>Executive Director's Draft Recommendation</u> Fund contingent on successful resolution of budget issues. Budget seems high for sample analysis/report writing. Would close out work funded in previous years.						
96108-BAA	Assessing the Effects of EVOS on Mussels and Fish: Using High Resolution Stable Isotope Records	ADFG	Carpenter/UT	\$84.0	\$0.0				\$0.0	
<u>Abstract</u> Small portions of otoliths and mussel and barnacle shells will be sampled to provide a chemical record of the effects of EVOS on the mussel and fish populations of PWS. Findings will be used to assess the degree of initial and ongoing contamination of these resources. These new techniques will provide a detailed indicator of natural and anthropogenic stressors on these organisms and increase our knowledge of their physiological activity (e.g., growth rate, spawning, food-source variations and disease).		<u>Chief Scientist's Draft Recommendation</u> This proposal appears to have technical shortcomings and would contribute little to the restoration program.		<u>Executive Director's Draft Recommendation</u> Do not fund. Project has concerns and weak link to restoration objectives.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96109-BAA	Decontamination and Restoration Process for Oil-Impacted Mussel Beds	NOAA	Alter/PES	\$551.8	\$0.0				\$0.0	
	<u>Abstract</u> This project's goal is to develop and validate for implementation a treatment process to decontaminate and restore oil-impacted mussel beds. The project includes toxicity tests of oil-removing agents and field evaluations of treatment processes.		<u>Chief Scientist's Draft Recommendation</u> Clean-up of oiled mussel beds may or may not be a high priority following completion of 96090. Once the Trustees have a final report on this project, we can assess the need for further work or alternative approaches.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Project should be considered after review of current work.					
96160	Assessment of Recovery from Surface Oiling, Subsurface Oiling, and Subsurface Invertebrate Contamination by Oil on Gulf of Alaska Shorelines	DOI	DOI	\$129.7	\$0.0				\$0.0	
	<u>Abstract</u> This project would assess and monitor surface and subsurface oil at 12 and 10 sites, respectively. It will document subsurface oil through excavations and monitor its weathering using an innovative system of collection wells. Amphipods, widespread invertebrates living within the beach substrate, will be monitored for tissue contamination by buried hydrocarbons.		<u>Chief Scientist's Draft Recommendation</u> It is not clear that continued contamination of the coastal areas of the Alaska Peninsula is very widespread. Amphipods are not very appropriate organisms for monitoring hydrocarbon accumulation; <i>Mytilus</i> would probably be better. The utility of wells is questionable. I recommend deferring any additional work on this subject until a comprehensive review of the problem of continued oil on beaches in the spill area can be done.		<u>Executive Director's Draft Recommendation</u> Do not fund. However, a workshop will be held this fall with the Chief Scientist, community leaders, agency representatives, and other interested parties to review the status of persisting oil and the objectives of any future shoreline monitoring and cleanup. This summer EPA will analyze samples measuring presence of biodegradable oil, and the results may shed new light on this issue.					
96161	Harlequin Duck - Indicator Species for Ecological Monitoring and Recovery	DOI	DOI	\$230.4	\$75.0	\$25.0	\$0.0	\$0.0	\$100.0	1st yr. 2 yr. project
	<u>Abstract</u> The harlequin duck is an important ecological indicator in intertidal systems affected by the oil spill. This proposal will address the hypotheses that harlequin duck population distribution and abundance, productivity and physiological condition have been impacted in oiled areas of the Gulf of Alaska.		<u>Chief Scientist's Draft Recommendation</u> Understanding harlequin duck populations along the Alaska Peninsula is desirable. This proposal was well documented, with extensive evidence of cost sharing. However, use of banding as an alternative to transmitters was not accepted and the rationale related to contaminant exposure is highly speculative. The chances of finding P-450 induction along the Alaska Peninsula seem remote. The proposal should be recast as a pilot study with use of satellite transmitters and more focused on population interchange.		<u>Executive Director's Draft Recommendation</u> Fund contingent on recasting as a pilot project using satellite transmitters at a reduced cost. Information on interchange among harlequin duck populations in PWS, Kenai coast, etc. will help evaluate the apparent continuing injury to harlequins in western PWS. The results also will help develop a harvest management strategy that is based on a solid understanding of the biogeography of harlequins in the north gulf coast region.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96290	Hydrocarbon Data Analysis, Interpretation, and Database Maintenance	NOAA	NOAA	\$119.8	\$119.8	\$121.0	\$120.0	\$470.0	\$830.8	5th yr. 11 yr. project
	<u>Abstract</u> This project is a continuation of the NRDA and Restoration database management, hydrocarbon interpretation and sample storage service. Subsistence response and restoration data will continue to be incorporated into the Trustee hydrocarbon database. A summary report for investigators and managers will be produced with an electronic copy of the database, that will allow easier access to this information. New user groups of the database will be identified, and tailored user interfaces will be generated.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent proposal. The work is necessary to support the many projects, both past and present, that continue to face the task of obtaining and correctly interpreting environmental hydrocarbon data.					<u>Executive Director's Draft Recommendation</u> Fund contingent on receiving status report on how the current hydrocarbon analysis backlog is being addressed. Project is on-going analysis of hydrocarbon data for other Trustee Council funded studies. This project will make these data available to the scientific community and the public, including "on-line" via the computer Internet.		
96427	Harlequin Duck Recovery Monitoring	ADFG	ADFG	\$261.1	\$261.1	\$0.0	\$0.0	\$0.0	\$261.1	3rd yr. 4 yr. project
	<u>Abstract</u> This project will compare population parameters between oiled and unoled areas based on population structure, behavior, production, and growth rates. Shoreline boat surveys will be conducted simultaneously. Changes in population size, structure, and production in oiled and unoled areas and between years will be compared. Continued population monitoring and brood surveys will allow us to assess trends and suggest factors limiting recovery.		<u>Chief Scientist's Draft Recommendation</u> Surveys of harlequin ducks are a high restoration priority. However, without statistical justification, a decision on work for 1997 and beyond should be made later. Three more years of effort on this project seem excessive and should be reduced significantly.					<u>Executive Director's Draft Recommendation</u> Fund contingent on completion of late report from prior harlequin work. Reconsider funding for future years after review of FY 96 work. This project continues a series of studies focusing on injury to and recovery of harlequin ducks in PWS. This information will help determine when current harvest restrictions can be lifted and whether additional actions, such as more cleanup of oiled mussel beds, are necessary.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Seabird/Forage Fish and Related Projects				\$3,667.6	\$2,813.7	\$2,344.0	\$2,067.9	\$2,658.5	\$9,884.1	
96021	Seasonal Movements and Pelagic Habitat Use by Common Murres and Tufted Puffins	DOI	DOI	\$166.3	\$121.3	\$121.3	\$20.0	\$0.0	\$262.6	2nd yr. 4 yr. project
<u>Abstract</u> Common murres were the bird species most heavily impacted by the <i>Exxon Valdez</i> oil spill. The failure to recover documented in this species 5 years after the oil spill may be related to a long-term decline in the availability of suitable forage. Tests of hypotheses concerning food limitation on murre population recovery and the application of puffins as fish samplers require information on the foraging ranges and feeding areas of birds from specific colonies.		<u>Chief Scientist's Draft Recommendation</u> This is a meritorious scientific study that promises to provide significant new information on diving behavior and foraging range of murres and tufted puffins. The winter location of murres will be identified by this project. The results of the 1995 pilot study and the first year of the APEX program should be evaluated prior to committing funds for FY 96.			<u>Executive Director's Draft Recommendation</u> Defer decision until the results of the 1995 pilot study can be evaluated. If funded, recommend funding only common murre component. Project could help interpret hydroacoustic data on the distribution and abundance of forage fish in terms of whether those fish are actually available to foraging seabirds. Will also establish wintering areas of common murres, which could lead to the identification of restoration measures to maintain and protect this injured species.					
96031	Development of a Productivity Index to Monitor the Reproductive Success of Marbled and Kittlitz's Murrelets in Prince William Sound, Alaska	DOI	DOI	\$254.6	\$110.0	\$50.0	\$39.9	\$0.0	\$199.9	2nd yr. 4 yr. project
<u>Abstract</u> This project will develop a means to monitor the productivity of marbled and Kittlitz's murrelets. The reproductive success of these two non-colonial seabirds can not be monitored using standard techniques. To develop a productivity survey protocol, murrelets will be surveyed at sea to determine the timing and abundance of juveniles; the ratio of juveniles to adults and the coastal and marine features that best predict juvenile abundance. By monitoring murrelet productivity in relation to population trends, this index can eventually be used to determine what factors influence murrelet recovery.		<u>Chief Scientist's Draft Recommendation</u> An index of marbled murrelet productivity is a desirable product for the restoration program. However, there are serious questions as to the sampling design, untested sources of variability and the precision of the index. The results from the 1995 program are essential to address these questions, and a 3-year program does not appear to be justified. Consider for funding in FY '97 after review of 1995 data.			<u>Executive Director's Draft Recommendation</u> Fund close-out of FY '95 work and synthesis of prior murrelet studies (\$60,000) contingent on revision of DPD and budget to reflect this reduced scope of work. Defer decision on new murrelet surveys (\$50,000) in FY 96 pending the APEX (96163) review in November.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96038	Publication of Seabird Restoration Workshop	DOI	Pac Seabird Gr	\$31.0	\$15.0	\$0.0	\$0.0	\$0.0	\$15.0	2nd yr. 2 yr. project
<u>Abstract</u> The Trustee Council has funded the Pacific Seabird Group (PSG) to hold a workshop in September 1995 to bring together experts in seabird biology and restoration. It will include discussions of the theoretical and practical aspects of seabird restoration and provide recommendations for restoration plans founded on the best available scientific information and opinion. This proposal seeks funds for the writing and publishing of manuscripts summarizing the workshop discussions.		<u>Chief Scientist's Draft Recommendation</u> The results of the workshop should appear in print and be accessible to the public. I don't recommend funding at the amount requested. However, pending review of a Table of Contents, I could support a lesser amount, perhaps with a matching requirement. Also needs to make greater effort to prepare summary/public information materials for general public as opposed to scientific public.		<u>Executive Director's Draft Recommendation</u> Defer decision pending review of results of September workshop (95038) to determine whether additional reporting is useful. If funded, recommend reduced Trustee Council support, with balance from other sources to be sought by proposer.						
96101	Removal of Introduced Foxes From Islands	DOI	DOI	\$88.9	\$10.0	\$0.0	\$0.0	\$0.0	\$10.0	3rd yr. 3 yr. project
<u>Abstract</u> Populations of three species of birds injured by the oil spill (black oystercatcher, pigeon guillemot and common murre) will be allowed to increase by removing introduced arctic foxes from Seguam Island. Although it is outside the area directly affected by the oil spill, Seguam Island has a particularly high potential for restoring populations of these species because it contains substantial amounts of habitat and remnant populations of all three species are present.		<u>Chief Scientist's Draft Recommendation</u> I have supported fox removal as a highly effective but low cost restoration technique. One issue is that Seguam Island is far from the spill zone. Target species were injured by the spill, but would have to be justified on replacement/equivalent resource basis. Every opportunity to take concrete measures of program effectiveness should be used.		<u>Executive Director's Draft Recommendation</u> Fund close-out of prior work (95041) contingent on revision of DPD and budget to reflect this reduced scope of work. Do not fund new work at Seguam Island because the benefit to spill-affected populations is weak.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96120-BAA	Proximate Composition and Energetic Content of Selected Forage Fish Species in Prince William Sound, AK	NOAA	Worthy/TXAM	\$40.9	\$0.0				\$0.0	
	<u>Abstract</u> This study will provide the data necessary for interpreting food web dynamics and ecology of the "apex" predators of PWS. In any long-term study of foraging ecology, especially those investigating the recovery of impacted species, knowledge of prey species composition and energetic value is critical in the interpretation of consumption rates and therefore the impact of consumer species upon prey species stocks. Compositional analysis will also yield important information on the general quality of the environment by assessing the condition of important prey species.		<u>Chief Scientist's Draft Recommendation</u> While technically sound, this proposal lacks sufficient linkage to a particular model or hypothesis and there is no prioritization of potential sources of samples. The proposal is currently a "service" contract with no clear use for the data. This work should be considered in the future if net-caught forage fish are to be used as an index of prey quality for seabirds.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Project will be considered during November 1995 APEX review (96163). Any funds for this project will need to come from the overall funding approved for APEX.					
96122	Mapping Potential Nesting Habitat of the Marbled Murrelet in Prince William Sound Using Habitat Models Linked to Geographic Databases	USFS	USFS	\$168.8	\$100.0	\$20.0	\$0.0	\$0.0	\$120.0	1st yr. 2 yr. project
	<u>Abstract</u> This project would identify potential habitat of the marbled murrelet in PWS by linking habitat models to geographic databases of vegetation and physical site characteristics. Areas identified as having a high probability of containing nesting habitat could become focal areas for planning management prescriptions to favor maintenance of murrelet habitat.		<u>Chief Scientist's Draft Recommendation</u> This could be an important project, but I have questions about quality of the murrelet habitat model and extent to which USFS is picking up costs associated with completing existing draft region vegetation type map. Would reconsider with budget that requests Trustee support for murrelet portion, pending review of model among murrelet biologists.		<u>Executive Director's Draft Recommendation</u> Defer decision pending successful resolution of budget cost-sharing with USFS, consultations on the murrelet habitat model, and the GIS workshop sponsored by ADNR in July 1995. This project would summarize several years of Trustee-sponsored studies on marbled murrelet nesting habitat. Resulting maps of potential murrelet habitat will be useful in planning and carrying out timber harvests that could impact marbled murrelets in the spill area.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96142-BAA	Status and Ecology of Kittlitz's Murrelet in Prince William Sound	NOAA	ABR, Inc.	\$110.2	\$110.2	\$38.4	\$0.0	\$0.0	\$148.6	1st yr. 2 yr. project
<u>Abstract</u> This project would investigate the status and ecology of Kittlitz's Murrelet, a rare seabird breeding in glaciated fjords of Prince William Sound (PWS). The study will evaluate the abundance, distribution, and productivity of this little known seabird and assess its habitat use and feeding habits in northwestern PWS. Given uncertainty about the effects of the oil spill on this species, a better understanding of its status and ecology is required to ensure its long-term conservation.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent proposal on a bird species that was perhaps the most injured of any by the spill. Our knowledge of this species is so sketchy that this project is justified. This project may be useful for discovering restoration actions. The investigator is well qualified with an extensive background in alcid biology. The study should be reviewed after the first year to assess progress, but I recommend against collecting any specimens. Two points for policy review: 1) ABR, Inc. is former Exxon contractor; and 2) is acquisition of knowledge about a rare injured species a sufficient link to restoration?				<u>Executive Director's Draft Recommendation</u> Fund FY 96 only; future years' funding dependent on FY 96 results. Kittlitz's Murrelet has a small world-wide population, and, proportionate to that population, it may have been the species hardest hit by the oil spill. This study will gather basic information on a rare, poorly known seabird, which may lead to identification of restoration measures.				
96143-BAA	Recovery of Bird and Mammal Populations in Prince William Sound After the Exxon Valdez Oil Spill	DOI	ABR, Inc.	\$321.2	\$0.0				\$0.0	
<u>Abstract</u> This study will assess the status of recovery of bird and mammal populations injured in the aftermath of the Exxon oil spill and is an extension of a study conducted in Prince William Sound in 1989-91. The project proposes to conduct three surveys each year during 1996-98 in nearshore and offshore habitats and will assess recovery based on wildlife use of oil-affected habitats and population status relative to prespill levels.		<u>Chief Scientist's Draft Recommendation</u> This project essentially duplicates the boat surveys of bird and sea otter populations being carried out by the USFWS (96159). Although the project is very professional and actually has the advantage of a broader look at population recovery over the USFWS, we would have to abandon the time-series compiled by the government since 1972 due to methodological differences.				<u>Executive Director's Draft Recommendation</u> Do not fund. Cannot justify support for this new survey while continuing funding of 96159.				

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96144	Common Murre Population Monitoring	DOI	DOI	\$101.7	\$101.7	\$125.3	\$44.0	\$458.5	\$729.5	1st yr. 3 yr. project
<u>Abstract</u> The project is designed to determine whether common murre populations at a series of index colonies within the area affected by the oil spill are recovering. This objective will be accomplished by counting murrets at all five locations to document the presence or absence of post-spill population trends. Each location will be surveyed every 3 years, but the field work is planned so that a portion of it will be accomplished annually (i.e. colonies in the western portion of the spill zone will be surveyed in FY 96, central colonies will be counted in FY 97, and the eastern-most colonies will be visited in FY 98).		<u>Chief Scientist's Draft Recommendation</u> This is a solid continuing study that is an integral part of the restoration program to monitor recovery of murrets. However, all '96 monitoring programs are to have done a power analysis to determine the appropriate frequency of sampling. This proposal lacks a power analysis.		<u>Executive Director's Draft Recommendation</u> Lower priority. Project can be deferred until FY 97 with no harm to the injured resource. The results of the power analysis should be included in future proposals.						
96148	Kittlitz's Murrelet: Biology, Abundance, and Population Genetics	DOI	DOI	\$99.8	\$0.0				\$0.0	
<u>Abstract</u> This project will 1) compile and analyze available unpublished and published data to assess the abundance and distribution of Kittlitz's Murrelet in Alaska, and, 2) conduct original research on the breeding biology, pelagic distribution and population genetics of Kittlitz's Murrelet in Alaska.		<u>Chief Scientist's Draft Recommendation</u> Kittlitz's murrelets are a species that is of great interest to the Trustee Council restoration program. This proposal, however, is poorly presented, and the design is not explicit nor focused. There is a better proposal before the Trustee Council in 1995.		<u>Executive Director's Draft Recommendation</u> Do not fund. Cannot justify support for this project while also starting 96142-BAA, which is a superior proposal.						
96159	Surveys to Monitor Marine Bird Abundance In Prince William Sound During Winter and Summer 1996	DOI	DOI	\$262.9	\$262.9	\$25.0	\$0.0	\$0.0	\$287.9	1st yr. 2 yr. project
<u>Abstract</u> We propose to conduct small boat surveys to monitor abundance of marine birds and sea otters in PWS during March and July 1996. Previous surveys have observed >65 bird and 8 marine mammal species in PWS. Data collected in 1996 will be used to examine trends from summer 1989-96 and from winter 1990-96 by determining whether populations in the oiled zone changed at the same rate as those in the unoiled zone. Overall population trends for PWS from 1989-96 also will be examined.		<u>Chief Scientist's Draft Recommendation</u> This is a solid proposal for monitoring seabirds and sea otters. The surveys have been done since 1989 and there are similar data from 1984 - 85. The proposers have done a power analysis that indicates a low power of detecting change in populations with infrequent sampling. The proposed biannual monitoring schedule appears reasonable in light of the analysis.		<u>Executive Director's Draft Recommendation</u> Fund for this monitoring cycle only. Future monitoring will be evaluated when proposed. The surveys provide basic information on status and recovery of an entire suite of marine birds (and sea otters) in PWS.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96163	APEX: Apex Predator Ecosystem Experiment in Prince William Sound and the Gulf of Alaska	NOAA	Duffy, et. al.	\$1,982.6	\$1,982.6	\$1,964.0	\$1,964.0	\$2,200.0	\$8,110.6	2nd yr. 5 yr. project
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
This study will use seabirds as "probes" of the trophic environment of PWS and compare their reproductive and foraging biologies with similar measurements from the Barren Islands, an area with more suitable or abundant food. Measurements will be compared with hydroacoustic and net samples of fish to calibrate seabird performance with fish distribution and abundance. The project will use fish samples to compare diet, energetics and reproductive parameters of different forage-fish species to determine whether competitive and predatory interactions or different responses to the environment may be favoring the abundance of one fish species over another.		Project to be subject of detailed review in November 1995, as voted by the Trustee Council in approving the FY 95 startup of this project.		Defer decision until November 1995, when a project review with the Chief Scientist is scheduled. Funding contingent on completion of report from previous year by one of the project's principal investigators. Project addresses the "is it food?" hypothesis for several seabird species that are in continuing decline. This information could help inform future fisheries management decisions, particularly if commercial interest in fisheries for capelin and other small, oil-rich species was to emerge.						
96175	Remote Video System Seabird Monitoring Project	DOI	DOI	\$38.7	\$0.0				\$0.0	
<u>Abstract</u>		<u>Chief Scientist's Draft Recommendation</u>		<u>Executive Director's Draft Recommendation</u>						
The project will test the ability of a robotically controlled video monitoring system to remotely collect real-time productivity, nesting chronology, adult time budget, and chick feeding rate data on common murres and other seabirds more accurately and at lower costs than current methods allow at colonies with difficult access. The proposal is based on a prototype system that was designed and successfully tested in Kachemak Bay and the Barren Islands in FY 94. Data will be collected both remotely and manually on the same sets of plots using the same basic methods in conjunction with Project 96163J.		The proposed testing of a promising technology is innovative, but the link to restoration (assessing murre productivity) is not compelling given the apparent recovery. The cost effectiveness of this project was questionable given expense of equipment and associated technicians, and the fact that some deployment costs are being absorbed in other projects.		Do not fund at this time. Project could be reconsidered in the future if extended monitoring of murres is necessary.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Subsistence Projects				\$2,602.6	\$1,399.8	\$1,292.9	\$968.2	\$1,619.2	\$5,280.1	
96009D-BAA	Survey of Octopuses in Intertidal Habitats	NOAA	Scheel/PWSSC	\$134.0	\$134.0	\$40.9	\$0.0	\$0.0	\$174.9	2nd yr. 3 yr. project
<u>Abstract</u> This project addresses concerns that octopus and chiton have been depleted by EVOS and that subsistence uses are impaired. The first year (FY95) is to establish the feasibility of working on octopus in the Sound, identify suitable study sites, and evaluate techniques. The second year (FY96) will focus on the vertical distribution of octopus in the nearshore where they are harvested. Close-out costs are requested in the third year (FY97).		<u>Chief Scientist's Draft Recommendation</u> Defer decision until results of FY 95 field season available.		<u>Executive Director's Draft Recommendation</u> Defer decision until results of FY 95 field season are available. Will then fund close-out or continuation in FY 96. Project is designed to address concern that octopus and chiton have been depleted by EVOS and that subsistence uses are impaired.						
96052A	Community Involvement & Use of Traditional Knowledge	DOI	Chugach OSIR	\$210.0	\$250.0	\$250.0	\$250.0	\$1,000.0	\$1,750.0	2nd yr. 8 yr. project
<u>Abstract</u> This project, submitted by the Chugach Heritage Foundation on behalf of a consortium of communities in the oil spill impacted region (OSIR), will continue a program begun in FY 95. This project will encourage and facilitate communication among the Trustee Council, researchers working on oil spill restoration projects, regional organizations and residents of communities impacted by the oil spill. The goal is to make optimal use of the complementary nature of scientific data and traditional knowledge.		<u>Chief Scientist's Draft Recommendation</u> Like 96052B, addresses needed restoration work. However, there is a need for Chugach Heritage Foundation and ADFG/Subsistence Division to coordinate their efforts in this direction. Also, both 96052A and 96052B need more concrete identifiable objectives. Key to continued viability of 96052A is the resolutions of support from the individual tribal councils.		<u>Executive Director's Draft Recommendation</u> Fund contingent on integration with 96052B and development of clear objectives with measurable milestones. Consider including objectives from 96204, 96210 and 96428. Recommend total funding for this effort of \$250,000. This project will continue a program to facilitate communication and interaction among the Trustee Council, scientists, and residents of communities impacted by the oil spill.						
96052B	Community Interaction/Traditional Knowledge	ADFG	ADFG	\$298.3	\$0.0				\$0.0	
<u>Abstract</u> This project, submitted by Subsistence Division/ADFG, will continue a program to encourage and facilitate communication among the Trustee Council, researchers working on oil spill restoration projects, regional organizations and residents of communities impacted by the oil spill. The goal is to make optimal use of the complementary nature of scientific data and traditional knowledge.		<u>Chief Scientist's Draft Recommendation</u> Like 96052A, addresses needed restoration work. However, there is a need for Chugach Heritage Foundation and ADFG/Subsistence Division to coordinate their efforts in this direction. Also, both 96052A and 96052B need more concrete identifiable objectives.		<u>Executive Director's Draft Recommendation</u> Do not fund as separate project. See 96052A.						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96127	Tatitlek Coho Salmon Release	ADFG	Tatitlek IRA	\$52.7	\$52.7	\$42.8	\$40.3	\$40.3	\$176.1	2nd yr. 5 yr. project
	<u>Abstract</u> Project will create a coho salmon return to Boulder Bay near Tatitlek village. Enough coho eggs to produce 20,000 smolts will be collected from an ADF&G approved stream, incubated and reared to smolt at the Solomon Gulch Hatchery, transported and held for two weeks in net pens in Boulder Bay before release. Release will produce a 2,000 to 3,000 adult return to Boulder Bay for harvest in a subsistence fishery.		<u>Chief Scientist's Draft Recommendation</u> Excellent project, technically sound, highly feasible. However, Trustee Council funding should be limited to maximum of one life cycle of coho (approximately 4 years). Funding contingent on environmental assessment (EA) being approved in FY 95 and resolution of additional questions raised by peer reviewers in regard to the FY 96 proposal.		<u>Executive Director's Draft Recommendation</u> Fund contingent on completion of environmental assessment funded in FY 95 and review of need for contract to produce smolts. Fund for 4 years (one coho life cycle). Project will create a coho salmon run near Tatitlek as a replacement resource for subsistence resources injured by the oil spill.					
96131	Chugach Native Region Clam Restoration	ADFG	ChugachRRC	\$405.6	\$405.6	\$413.6	\$417.4	\$417.4	\$1,654.0	2nd yr. 6 yr. project
	<u>Abstract</u> Resident clam populations near the Native villages of Port Graham, Nanwalek, Chenega Bay, Tatitlek, Eyak and Ouzinkie will be re-established to restore diminished subsistence opportunities. The Qutekcak hatchery in Seward will annually provide about 800,000 juvenile littleneck clams, cockles and, if possible, butter clams for seeding. Historical information, local and agency expertise, and research will be used to identify areas to seed and methods used. Total seeded area will not exceed 5 hectares.		<u>Chief Scientist's Draft Recommendation</u> I recommend that there be a late autumn/early winter review of progress before FY 96 funding is approved. Very promising project; good potential. Environmental assessment (EA) should consider sea otter populations. Need to review production capacity of current facility and plans for future expansion.		<u>Executive Director's Draft Recommendation</u> Defer decision pending results of FY 95 field season. Project would establish subsistence clam populations near several Native villages as replacement for subsistence resources injured by the oil spill.					
96202	Port Lions Community Hall	ADFG	Port Lions	\$150.0	\$0.0				\$0.0	
	<u>Abstract</u> Funds would match \$175,000 requested from the State Legislature for a community hall. Funds for the community hall were received prior to the oil spill but were lost, as no manpower was available for construction.		<u>Chief Scientist's Draft Recommendation</u> No link to restoration.		<u>Executive Director's Draft Recommendation</u> Do not fund. No link to restoration of an injured natural resource.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96204	Kodiak Subsistence Resource Restoration Planning	ADFG	ADFG	\$39.4	\$0.0				\$0.0	
	<u>Abstract</u> The project would implement a more intensive subsistence resource restoration planning effort in Kodiak Island Borough communities as a follow-up to Projects 94428 and 95428. The goal would be to develop a coordinated set of resource restoration proposals for consideration in the FY 97 work plan. Methods will include several workshops and a series of community meetings.		<u>Chief Scientist's Draft Recommendation</u> Some further planning seems justified. However, unclear whether such planning should go on under this project or under 96052.					<u>Executive Director's Draft Recommendation</u> Do not fund as a separate project. Objectives can be integrated into 96052.		
96205	Eyak Subsistence Recovery Camp Planning Project	DOI	Eyak Nat Vill	\$40.8	\$0.0				\$0.0	
	<u>Abstract</u> This project would plan for a Subsistence Recovery Camp for Alaska Native subsistence users affected by the oil spill. As identified by Picou and Gill (1992), Post-Traumatic Stress Syndrome is directly linked to the environmental damage done by the oil spill and the subsistence way of life. With the results of the oil spill still being felt by the communities through lack of or reduced abundance of specific species, there has been an upsurge of addictive behaviors.		<u>Chief Scientist's Draft Recommendation</u> Appears to be worthwhile idea; has worked in other localities. Consider for other funding.					<u>Executive Director's Draft Recommendation</u> Do not fund. Not appropriate for civil settlement funds. Recommend seeking alternate funding, since idea is worthwhile.		
96206	Old Harbor Lagoon (Midway Culvert) Salmon Enhancement Feasibility Study	ADFG	Old Harbor	\$28.8	\$0.0				\$0.0	
	<u>Abstract</u> As a step towards restoring subsistence uses and resources at the community of Old Harbor, this project will determine the feasibility for coho and chum salmon enhancement for the Old Harbor lagoon system, by evaluating the potential for improving the early marine rearing opportunities for chum and coho salmon. It will evaluate the utility of raising the culvert through which this system empties into Sitkalidak Straits to a level which would provide increased water retention in the lagoon and thus increase the rearing area.		<u>Chief Scientist's Draft Recommendation</u> Project needs further refinement and greater detail.					<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Proposer may want to work with agency and Trustee Council staff to strengthen a future version of this proposal.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96207	Ocean Beach Sockeye Enhancement Feasibility Study	ADFG	Old Harbor	\$92.7	\$0.0				\$0.0	
	<u>Abstract</u> As a step towards restoring subsistence uses and resources at the community of Old Harbor, this project will determine the feasibility for sockeye salmon enhancement for the Ocean Beach Lake System, located on the east side of Sitkalidak Island. Feasibility determination efforts would focus on collecting stock status data, identifying minimum and optimum escapement requirements for natural production, and investigating the feasibility of enhancing wild production from this system.		<u>Chief Scientist's Draft Recommendation</u> Significant questions raised by this proposal. Would create substantial risks to native species; opportunity to address/minimize risks is low.				<u>Executive Director's Draft Recommendation</u> Do not fund. Project raises significant questions about risk to native species.			
96208	Kempff Bay Sockeye Enhancement Feasibility Study	ADFG	Akhiok City	\$70.7	\$0.0				\$0.0	
	<u>Abstract</u> As a step towards restoring subsistence uses and resources at the community of Akhiok, this project will determine the feasibility for sockeye salmon enhancement for the Akhiok Village Lake System, located at Kempff Bay on southern Kodiak Island. The feasibility study would focus on collecting stock-status data, identifying minimum and optimum escapement requirements for natural production, and investigating the feasibility of enhancing wild production from this system.		<u>Chief Scientist's Draft Recommendation</u> Significant questions raised by this proposal. Would create substantial risks to native species, and opportunity to address/minimize risks is low.				<u>Executive Director's Draft Recommendation</u> Do not fund. Project raises significant questions about risk to native species.			
96210-BAA	Prince William Sound Youth Area Watch	ADFG	Chugach RRC	\$233.4	\$0.0				\$0.0	
	<u>Abstract</u> Students from Chenega Bay, Tatitlek and some outlying areas will participate in research projects identified by the Prince William Sound Science Center. The objective is to increase the awareness of youth regarding the effects of the oil spill and encourage their involvement in research/restoration. Students will be involved in oceanographic testing, fish monitoring, bird and mammal observations, pristane/mussel analysis and octopus studies. By the second year, students will begin applying the research skills and knowledge that they have gained to local restoration efforts.		<u>Chief Scientist's Draft Recommendation</u> Project needs further refinement. Feasibility of project could be demonstrated through a pilot project matching a small number of students with researchers.				<u>Executive Director's Draft Recommendation</u> Do not fund as proposed. Support concept of involving students in restoration projects, and recommend that these objectives be integrated with those of 96052A. However, it is difficult to show how curriculum development is linked to restoration.			

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96211	Community-Based Harbor Seal Biological Sampling Program	ADFG	ANHSC	\$44.0	\$0.0				\$0.0	
	<u>Abstract</u> A pilot project for collecting biological samples from subsistence-taken harbor seals from six communities of PWS and lower Cook Inlet would be designed, implemented, and evaluated. "User-friendly" data collection forms and an instructional video would be produced. Village-based technicians would be trained for collecting samples taken by hunters and transporting these samples to Anchorage for further sampling and transport for analysis. Findings would be disseminated by the Alaska Native Harbor Seal Commission (ANHSC) through a newsletter network.		<u>Chief Scientist's Draft Recommendation</u> Good approach to addressing the problem of lack of information on status and trends of harbor seals; good community involvement. However, more hands-on training (rather than a video) might provide a more long-term, cost-effective approach to the problem. Need assurances that samples collected will be used; need to coordinate with harbor seal research projects and other sampling programs. Also, possibly integrate with 96244.		<u>Executive Director's Draft Recommendation</u> Do not fund as separate project. Good project, but objectives should be integrated into 96244.					
96212	Restoration of Subsistence Shellfish Consumption: A PSP Screening Program	ADEC	Kodiak Tribal	\$167.7	\$167.7	\$178.3	\$151.3	\$0.0	\$497.3	1st yr. 3 yr. project
	<u>Abstract</u> Subsistence users in the Kodiak Island Borough probably consume more shellfish (clams and crabs) per capita than any other region of Alaska. Since the oil spill, numerous cases of severe paralytic shellfish poisoning (PSP) have created fear about the safety of consuming these traditional foods. This proposal addresses the health concerns of subsistence users through active participation in a systematic testing program. Faster lab results should curtail the number of cases of PSP and save lives.		<u>Chief Scientist's Draft Recommendation</u> Excellent technical merit. However, successful implementation requires that Sea Grant proposal produce workable/approved assay by May '96, which is when 96212 would have a network of technicians in the field for PSP testing. If developed in the right timeframe relative to assay availability, this project would be of great use to Kodiak Island residents.		<u>Executive Director's Draft Recommendation</u> Defer decision until outstanding questions can be answered. Timing of development of chemical assay is uncertain, plus need to develop plan for a transition to non-Trustee Council funding. This project will increase subsistence users' confidence that the resources injured by the oil spill, or other replacement subsistence resources, are safe to eat.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96213-BAA	Alaska Native Harbor Seal Commission	ADFG	ANHSC	\$99.2	\$0.0				\$0.0	
	<u>Abstract</u> The overall goal is to involve Alaska Natives directly in the harbor seal research and monitoring process and to help find solutions to restore the health of the injured species. Goals of the Alaska Native Harbor Seal Commission include: educating and informing the public and scientists on the traditional and contemporary relationship between harbor seals and Alaska Natives; informing scientists about the type and extent of knowledge held by local people about the harbor seal; involving Alaska Natives in the regulatory and management process.		<u>Chief Scientist's Draft Recommendation</u> Proposal is a good approach to harbor seal management, but is unclear as to how goals and objectives of commission are to be met. Other projects (96211 - Biological Sampling and 96244 - Cooperative Harvest Assistance) better address the problem. An additional concern is the appropriateness of the Trustee Council funding operating costs for a statewide commission.		<u>Executive Director's Draft Recommendation</u> Do not fund. It is not appropriate for the Trustees to provide operating support for a statewide commission, but it may be appropriate to contract some of the tasks outlined in 96211 and 96244 to the commission.					
96214	Documentary on Subsistence Harbor Seal Hunting in PWS	ADFG	Tatitlek Village	\$74.5	\$74.5	\$0.0	\$0.0	\$0.0	\$74.5	1st yr. 1 yr. project
	<u>Abstract</u> The purpose of this project is to make a documentary on subsistence hunting of harbor seals in PWS. This video will document all facets of harbor seal hunting including the ecological and biological knowledge hunters use to hunt harbor seals. By documenting this knowledge, the project will enhance the restoration of the seal population by providing an indigenous hunter's perspective on harbor seal ecology.		<u>Chief Scientist's Draft Recommendation</u> Project is an excellent idea. Will directly serve the interests of the communities, and will assist restoration of harbor seals by allowing subsistence users to make better decisions about the resource.		<u>Executive Director's Draft Recommendation</u> Fund first year of proposal only (harbor seal documentary). This project will enhance the restoration of the harbor seal population by providing an indigenous hunters' perspective on harbor seal ecology and provide information that will help subsistence hunters assess the effects of their harvest on harbor seal recovery.					
96218	Ouzinkie Clam Restoration Project	ADFG	Ouzinkie Tribe		\$0.0				\$0.0	
	<u>Abstract</u> This project will begin to reestablish local clam populations for subsistence use in the Ouzinkie area. Clams were once a major subsistence food in the community of Ouzinkie, but local clam populations have decreased to low levels since the oil spill. Additionally, due to food safety concerns, clams no longer contribute to this community's subsistence harvest.		<u>Chief Scientist's Draft Recommendation</u> Duplicates 96131; consider as part of 96131.		<u>Executive Director's Draft Recommendation</u> Do not fund as separate project. Objectives are already included in 96131.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96220-BAA	Eastern PWS Wildstock Salmon Habitat Restoration	USFS	Eyak Nat Vill	\$77.2	\$77.2	\$115.0	\$12.0	\$0.0	\$204.2	1st yr. 3 yr. project
	<u>Abstract</u> This project will replace lost subsistence services resulting from the oil spill by increasing wild salmon production in eastern Prince William Sound. Instream fisheries habitat improvement techniques, primarily the installation of log structures, will be employed by local subsistence users to increase the capability of selected streams to produce additional salmon.		<u>Chief Scientist's Draft Recommendation</u> Good community involvement. Compatible with Trustee Council guidelines on fish supplementation. Excellent technically.		<u>Executive Director's Draft Recommendation</u> Fund, although the specific funding mechanism needs to be resolved. This project will replace subsistence services lost due to the oil spill by increasing wild salmon production in PWS.					
96222	Chenega Bay Salmon Restoration	USFS	Chenega IRA	\$17.1	\$17.1	\$56.4	\$0.0	\$0.0	\$73.5	1st yr. 2 yr. project
	<u>Abstract</u> This project will open up additional spawning areas for pink and coho salmon, and rearing habitat for coho salmon, in Anderson Creek through placement of a fish pass on a six-foot barrier falls located about one quarter of the way up the stream. Anderson Creek is located adjacent to Chenega Bay village. Additional salmon produced from increased spawning habitat will help replace lost subsistence opportunities in the village.		<u>Chief Scientist's Draft Recommendation</u> Excellent replacement project involving habitat alteration. Enhancement consists primarily of habitat improvement and appears to be relatively benign biologically, with low risk of failure. Recommend assessment of fish population upstream of barrier. Fiscally, question ADFG management costs in this project (USFS is lead agency).		<u>Executive Director's Draft Recommendation</u> Fund contingent on submittal of a complete Detailed Project Description and resolution of agency program management costs.					
96225	Port Graham Pink Salmon Subsistence Project	ADFG	Port Graham	\$88.9	\$88.9	\$83.1	\$77.2	\$161.5	\$410.7	1st yr. 5 yr. project
	<u>Abstract</u> This project will help supply pink salmon for subsistence use in the Port Graham area during the broodstock development phase of the Port Graham hatchery. Because local runs of coho and sockeye salmon, which are the more traditional salmon subsistence resources, are at low levels, pink salmon are now heavily relied on for subsistence. This project will help ensure that pink salmon remain available for subsistence use until the more traditional species are rejuvenated.		<u>Chief Scientist's Draft Recommendation</u> Potentially worthwhile project but lacks details on how objectives will be accomplished. Therefore, at this time it is not possible to assess how this proposal would fit with supplementation criteria and how effective it might be.		<u>Executive Director's Draft Recommendation</u> Defer until outstanding questions can be answered. Project description is not clear about where brood stock is coming from and where it would go. Project is intended to increase the availability of pink salmon for subsistence use, replacing runs of coho and sockeye salmon depleted since the oil spill.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96226	Resurrection Bay Salmon Stock Enhancement	ADFG	Qutekcak Tribe	\$45.0	\$0.0				\$0.0	
	<u>Abstract</u> This project would enhance salmon resources and provide employment at the tribal level. By FY 98, the project should be self-supporting by providing a means of value-added marketing to purchase salmon fry. The plan would entail the hiring of a processor/marketer, the purchase of a smoker, and the purchase of fresh salmon to be smoked and dried.		<u>Chief Scientist's Draft Recommendation</u> Insufficient technical content to evaluate this proposal.				<u>Executive Director's Draft Recommendation</u> Do not fund. Project needs additional information. Because its primary goal appears to be economic development, nor resource restoration, this project may not be appropriate for funding under the terms of the civil settlement.			
96244	Harbor Seal Cooperative Assistance	ADFG	ANHSC	\$70.0	\$90.0	\$65.0	\$20.0	\$0.0	\$175.0	3rd yr. 5 yr. project
	<u>Abstract</u> The goal of the project is to facilitate the involvement of subsistence users of harbor seals in the restoration of this species through two workshops: collection and application of traditional knowledge and development of a traditional knowledge database. A subcontract with the Alaska Native Harbor Seal Commission will contribute to developing a meaningful role for subsistence hunters in research and restoration activities.		<u>Chief Scientist's Draft Recommendation</u> Technical approach is sound, but it needs refinement. Distinction is unclear between work to be conducted by ADFG and by Alaska Native Harbor Seal Commission. Also, overlap between this project and 96211 (biological sampling).				<u>Executive Director's Draft Recommendation</u> Fund contingent on clarification of which objectives would be carried out by ADFG and which would be under contract to Harbor Seal Commission. Needs to incorporate objectives from 96211 as pilot effort.			
96272	Chenega Chinook Release Program	ADFG	PWSAC	\$42.1	\$42.1	\$47.8	\$0.0	\$0.0	\$89.9	3rd yr. 4 yr. project
	<u>Abstract</u> Chinook salmon incubated and reared at the Wally Noerenberg Hatchery will be released in Crab Bay, adjacent to the native community of Chenega. Adult salmon returning to the site of release will provide replacement resources and associated services injured by the oil spill. Two releases have taken place (1994 & 1995) as part of this multi-year project. Adult salmon will begin returning in 1996 and 1997, with larger numbers projected at nearly 1,000 adult fish returning in 1998 and thereafter.		<u>Chief Scientist's Draft Recommendation</u> Excellent proposal. Good match with Trustee Council's fish supplementation criteria. Good local involvement. Suggest continued Trustee Council funding through at least FY 97, pending project review in Fall 1996 to assess effectiveness.				<u>Executive Director's Draft Recommendation</u> Fund through one full chinook salmon life cycle (at least FY 97). Review effectiveness in fall of 1996. Project will provide replacement resources for subsistence salmon injured by the oil spill. However, the proposers should develop a plan for a transition to non-Trustee funding.			

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96279	Resource Abnormalities Study	ADFG	ADFG	\$71.7	\$0.0				\$0.0	
	<u>Abstract</u> Many subsistence users in the oil spill area have reported abnormalities in resource species. There has been a loss of confidence among hunters and fishermen in their abilities to determine if their traditional foods are safe to eat. This project would provide continued support for a project under which they can send samples of abnormal resources to be examined by biologists or pathologists and receive information back on the possible causes for the deformities.		<u>Chief Scientist's Draft Recommendation</u> Fair proposal. Work was originally to be closed out in 1995, and includes training that appears to be slated for funding in FY 96. Budget for ADFG personnel excessive in light of anticipated need for administrative support for this project.			<u>Executive Director's Draft Recommendation</u> Do not fund. Close-out funds were provided in FY 95. Continued communication about the safety of subsistence resources can be provided through 96052 and through harbor seal projects.				
96428	Subsistence Restoration Planning and Implementation	ADFG	ADFG	\$48.8	\$0.0				\$0.0	
	<u>Abstract</u> This project would fund the final reporting for the two-year- long Subsistence Restoration Planning and Implementation Project. Reporting includes community meetings to convey project results to the participating communities and write up, revision, production and distribution of a final report to the Trustee Council.		<u>Chief Scientist's Draft Recommendation</u> FY 95 was 2nd year of 2-year planning effort. Issues addressed are important, but could be done in context of other proposals. 96428 overlaps 96052 substantially.			<u>Executive Director's Draft Recommendation</u> Do not fund. Close-out funds were provided in FY 95. Any further planning, coordination, and community meetings should be done under 96052.				
Archaeological Resources				\$3,737.9	\$424.3	\$195.0	\$195.0	\$135.0	\$949.3	
96007A	Archaeological Index Site Monitoring	ADNR	ADNR	\$146.5	\$146.5	\$135.0	\$145.0	\$135.0	\$561.5	2nd yr. 5 yr. project
	<u>Abstract</u> Monitoring of archaeological sites on public land injured by vandalism and oiling will concentrate on a sample of index sites in the three regions of the spill. Oiled sites will be tested for re-introduced oil. The 10-year project will end at five years if monitoring shows no continued injury.		<u>Chief Scientist's Draft Recommendation</u> This is an excellent proposal that represents the minimum that can be done in archaeological site monitoring. There is a need to continue consultations with native groups.			<u>Executive Director's Draft Recommendation</u> Fund. Proposer should continue and expand consultation with Native groups. The project provides continued monitoring of archaeological sites injured by vandalism and oiling. The ten year project will end at five years if monitoring shows no continued injury.				

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96007B	Site Specific Archaeological Restoration	USFS	USFS	\$78.4	\$78.4	\$0.0	\$0.0	\$0.0	\$78.4	3rd yr. 3 yr. project
	<u>Abstract</u> Funding is requested for the final phase of the Forest Service's archaeological restoration at sites SEW-440 and SEW-488. Project 96007B is a continuation of projects 94007 and 95007B. Analysis and interpretation of data gathered during previous field work will result in a peer-reviewed final report, prepared and distributed according to Trustee Council procedures. This will complete the restoration process initially prescribed for these sites in 1991.		<u>Chief Scientist's Draft Recommendation</u> This is a close-out of a previously funded project. The budget appears reasonable, though the rate for the Principal Investigator is not consistent with 96007A. Continued consultations with native groups are required by federal law.		<u>Executive Director's Draft Recommendation</u> Fund contingent on submission and approval of Detailed Project Description for 95007B. Proposer should continue consultation with Native groups. Project closes out previously funded work to restore archaeological sites in the spill area.					
96149	Archaeological Site Stewardship	ADNR	ADNR	\$74.4	\$74.4	\$60.0	\$50.0	\$0.0	\$184.4	1st yr. 3 yr. project
	<u>Abstract</u> The archaeological site stewardship program will provide training and coordination for a cadre of volunteers to monitor vandalized archaeological sites in the oil spill area beyond the ability of agency monitoring. Volunteer site stewards will protect damaged sites in Kachemak Bay, Uganik Bay, Uyak Bay and the Chignik area of the Alaska Peninsula. Further protection will come from increased local awareness of harm from site vandalism.		<u>Chief Scientist's Draft Recommendation</u> The concept was favorably reviewed.		<u>Executive Director's Draft Recommendation</u> Fund contingent on transition to agency or private management after 3 years. The project will provide training and coordination for volunteers to monitor vandalized archaeological sites in the oil spill area. This effort is currently beyond the ability of agency monitoring.					
96150	Expansion of Alutiiq Archaeological Repository	ADNR	Alutiiq HF	\$535.0	\$0.0				\$0.0	
	<u>Abstract</u> Many communities within the EVOS area have expressed interest in museums, but the cost of constructing such facilities in all these locations is prohibitive. The new Alutiiq Museum and Archaeological Repository, which is designed to hold collections from the Kodiak area, suggests expanding its existing facilities to hold collections from the remainder of the oil spill area. Selected artifacts would be displayed in other spill communities, where facilities or display areas could exist without the necessity of funding the staff and physical plant needed for large collections.		<u>Chief Scientist's Draft Recommendation</u> Needs to be considered in regional context before there is justification for expansion of this facility.		<u>Executive Director's Draft Recommendation</u> Do not fund at this time. Proposal should be addressed through a planning effort in a revised Project 96154.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96152	Community Museum, Repository, Archaeological, Site Stewardship, Co-Management Training & Human Resource Development Project	DOI	Chugach OSIR	\$190.3	\$0.0				\$0.0	
	<u>Abstract</u> This project would provide training and career development for 14-21 local residents or 2-3 participants from each Chugach Oil Spill Impacted Region community engaged in the development of a cultural center, or a subsistence restoration, site stewardship, and/or resource co-management facility, or attendant local service enterprise. Provision for training personnel is a prerequisite to local contracting assumption under P.L. 638 and attendant Federal regulations.		<u>Chief Scientist's Draft Recommendation</u> This proposal lacks clear technical details relating to the need for the work, how the goals will be accomplished, and the qualifications of those who will do the training. This could be considered if these points are addressed in another proposal. It is also not clear where the resources for sustained support of the suggested facilities will come from.					<u>Executive Director's Draft Recommendation</u> Do not fund until significant questions are answered and planning is completed.		
96153	Community Cultural Centers, Repositories and Subsistence Restoration Facilities - Comprehensive Design, Engineering, Financing, and Construction Development Project	ADEC	Chugach OSIR	\$2,588.3	\$0.0				\$0.0	
	<u>Abstract</u> This project would provide a consolidated, coordinated and cost-effective approach to the progressive development, financing, and construction of local community and region-wide service facilities. Completed construction of such facilities, scaled to the local needs and capacity of each community, is considered fundamental to achieving and maintaining the region-wide long-term restoration of injured resources, subsistence services, and assuring provision for local and regional repository and site stewardship services.		<u>Chief Scientist's Draft Recommendation</u> This proposal does not outline the needs of each community in relation to the restoration program. With an adequate "scoping/project" feasibility assessment, there may be reason to proceed with particular aspects of the plan in the future. Annual maintenance costs of repositories/museums must be considered in future proposals.					<u>Executive Director's Draft Recommendation</u> Do not fund until significant questions are answered and planning is completed.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96154	Chugach OSIR Community Repositories, Cultural Centers, Subsistence Restoration Facilities Comprehensive Services Development Planning Project	DOI	Chugach OSIR	\$125.0	\$125.0				\$125.0	1st yr. 1 yr. project
	<u>Abstract</u> This project would provide coordinated and cost-effective approach to the provision and delivery of technical assistance planning services to each of the Chugach Oil Spill Impacted Region communities engaged in the development of a cultural center or subsistence restoration facility. The project is designed to facilitate a region-wide effort, coordinate and provide for the various technical service elements associated with and essential to the planning and development of community cultural centers or subsistence restoration facilities and their attendant long-term programs.		<u>Chief Scientist's Draft Recommendation</u> Project proposal is incomplete and therefore difficult to examine but addresses an important need for planning. The proposal should be fully developed for future consideration.					<u>Executive Director's Draft Recommendation</u> Fund contingent on revision of DPD and budget to provide for a comprehensive planning effort. The consortium of spill-affected communities, museums in the spill area, the University of Alaska and other affected parties should meet to evaluate the need for additional archaeological repositories in the spill area and to develop an approach to a regional planning effort. Budget should be reviewed to determine whether \$125,000 is adequate for this effort.		
96219	Ouzinkie Archeological Culture Center Project	ADEC	Ouzinkie Tribe		\$0.0				\$0.0	
	<u>Abstract</u> The Ouzinkie Archeological Culture Center will preserve and protect artifacts and the associated data that would otherwise be lost to vandals, looters and erosion or that have been recovered from looters and will preserve local cultural resources and traditional Native culture. This facility will also provide an opportunity for neighboring communities to participate in mini-conferences focusing on issues such as archeological history and the effects of the Exxon Valdez oil spill on declining subsistence resources, life skills and native culture.		<u>Chief Scientist's Draft Recommendation</u> This project to build an Ouzinkie Cultural Center needs to be better coordinated with region-wide efforts and with the existing Alutiiq Cultural Center.					<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal should be addressed through planning effort in 96154.		

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
	Reducing Marine Pollution			\$164.6	\$29.6	\$0.0	\$0.0	\$0.0	\$29.6	
96091	Monitoring for Current and Potential Environmental Impacts of Oil Industry Activities in Cook Inlet	ADEC	Cook Inl RCAC	\$135.0	\$0.0				\$0.0	
	<u>Abstract</u> This proposal requests assistance in funding the Cook Inlet Environmental Monitoring Study. For two years, Cook Inlet RCAC has devoted its entire environmental research budget as sole supporter of this critical program. Goals of the program are: 1) establishing baseline hydrocarbon and biological data; 2) evaluating potential hydrocarbon accumulation in Cook Inlet sediments; and 3) evaluating potential environmental impacts of crude oil production and transportation in the Inlet.		<u>Chief Scientist's Draft Recommendation</u> Link to EVOS is weak; no work in areas that were really oiled, but monitoring sites are in spill zone. Insufficient detail for full evaluation. Focus is on gathering environmental baseline data, as opposed to actively reducing marine pollution.		<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal is not appropriate for EVOS civil settlement funds. It would monitor existing industrial activity, only peripherally related to recovery from EVOS, and prepare for future accidents. Neither of these is allowable under the civil settlement.					
96115	Sound Waste Management Plan	ADEC	PWS Econ DC	\$29.6	\$29.6	\$0.0	\$0.0	\$0.0	\$29.6	2nd yr. 2 yr. project
	<u>Abstract</u> The Sound Waste Management Plan is a comprehensive plan to identify and remove the major sources of marine pollution and solid waste in PWS that may be affecting recovery of resources and services injured by the Exxon Valdez Oil Spill. This request completes the first phase -- planning begun in FY 95. The following phases of the plan will be to implement these solutions using funds from a variety of sources, possibly including the Trustee Council.		<u>Chief Scientist's Draft Recommendation</u> Prior work won't come to fruition if these final funds are not supplied in 1996. In theory, this project could speed recovery of injured species but those linkages are not clear. Future funding requests need close scrutiny.		<u>Executive Director's Draft Recommendation</u> Fund. Project completes comprehensive planning for PWS communities to determine appropriate strategies for minimizing marine pollution, some of which may be affecting recovery of injured resources and services.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Habitat Improvements				\$1,077.1	\$992.9	\$890.5	\$660.0	\$180.0	\$2,723.4	
96058	Landowner Assistance Project	USFS	USFS	\$205.9	\$206.0	\$0.0	\$0.0	\$0.0	\$206.0	2nd yr. 2 yr. project
<u>Abstract</u> Landowners in the oil spill area have expressed an interest in receiving assistance and advice on how to do a better job of protecting and/or enhancing habitat during resource development activities. Impacts often occur because landowners and development contractors lack an awareness of resource sensitivities during pre-project planning. The project, on an as needed basis, will attempt to make development and restoration objectives compatible so that land use activities do not impede natural recovery.		<u>Chief Scientist's Draft Recommendation</u> The concept of providing assistance to private landowners who want to minimize further impacts on spill-injured resources is good. However, I need more information about the results of current ('95) efforts and what is proposed in '96. My impression is that the initial response to the offer of landowner assistance in '95 is weak.		<u>Executive Director's Draft Recommendation</u> Defer decision until consideration of results of FY 95 effort. Project would continue effort begun in FY-95 to assist private landowners in protecting habitat during resource development activities.						
96141	Afognak Island State Park - Habitat Restoration Survey	ADNR	ADNR	\$45.0	\$45.0	\$0.0	\$0.0	\$0.0	\$45.0	1st yr. 1 yr. project
<u>Abstract</u> The objective of this project is to recommend ways to restore habitat in logged areas and along logging roads in Afognak Island State Park. The park was established in 1994 on land (Seal Bay and Tonki Cape parcels) purchased by the Trustee Council. A private contractor would conduct a regeneration survey that would document the density of seedlings that have returned to the 1200 acres that have been logged, and recommend ways to improve habitat (e.g., tree planting or thinning). The contractor would also recommend cost-effective ways to improve habitat along the 12 miles of logging roads within the park.		<u>Chief Scientist's Draft Recommendation</u> This is a technically sound proposal, which appears to have taken into account previous peer review comments. My only concern is that most of the needed restoration actions may not take place for 25 years, and we have no guarantee that in the year 2020 someone responsible for making management decisions at Afognak State Park will have read a survey report from 1996.		<u>Executive Director's Draft Recommendation</u> Lower priority in context of overall restoration program						

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96176	Restoration of Essential Wetland Habitat at San Juan Bay on Montague Island	USFS	USFS	\$67.5	\$67.5	\$90.5	\$60.0	\$180.0	\$398.0	1st yr. 6 yr project
	<u>Abstract</u> Project has the potential to create wetland habitats used by waterfowl and anadromous fish impacted by the oil spill. Study in FY 96 will determine project feasibility from hydrologic, soils, geomorphology, fisheries, wildlife and engineering perspectives. Detailed project plan will be developed if findings warrant. Environmental analysis will be conducted in FY 97. If project is implemented, succession will be reversed in the uplifted lake at San Juan Bay on Montague Island. Flooding of the uplifted area will maintain the wetland component. Pools/ponds will be created in riparian and floodplain areas to restore associated aquatic vegetation.		<u>Chief Scientist's Draft Recommendation</u> This is a feasibility study to restore freshwater wetlands on Montague Island that were altered by the 1964 earthquake. Although this project is proposed as a replacement for wetlands injured by the oil spill, the link to specific injured species is not clear. I need additional justification about the link to injury, as well as more information about what methods, degree of manipulation, and cost might be required to restore these wetlands.		<u>Executive Director's Draft Recommendation</u> Defer decision until questions about link to restoration can be answered. These and other questions raised by the Chief Scientist should be addressed through a revised Detailed Project Description.					
96178	Second Growth Forest Habitat Enhancement for Injured Wildlife Species	USFS	USFS	\$84.3	\$0.0				\$0.0	
	<u>Abstract</u> The PWS area has several watersheds on National Forest System lands where timber harvest occurred in the early 1970s. These were done without an understanding of optimum stand structure for wildlife populations. This project has the potential to improve habitat for river otter, marbled murrelet, harlequin duck and bald eagle by accelerating succession and developing forest stand structure beneficial to wildlife species faster than natural forest succession. Habitat for old-growth dependent species such as river otter, marbled murrelet, harlequin duck, and bald eagle, whose populations were proven to be damaged by the 1989 oil spill, can be improved with this project.		<u>Chief Scientist's Draft Recommendation</u> The proposers seem to have a good understanding of understory characteristics in relation to forest types and management, but they have not presented a persuasive case that enhancing forest growth through pre-commercial thinning will demonstrably benefit river otters, harlequin ducks, marbled murrelets, and bald eagles. Most of the technical references cited concern deer. The link to restoration is weak, and I cannot recommend funding at this time.		<u>Executive Director's Draft Recommendation</u> Do not fund. Link to restoration is weak.					

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
96180	Kenai Habitat Restoration & Recreation Enhancement Project	ADNR	ADNR	\$674.4	\$674.4	\$800.0	\$600.0	\$0.0	\$2,074.4	1st yr. 3 yr. project
<u>Abstract</u> Adverse impacts to the banks of the Kenai River total approximately 19 miles of the river's 166 mile shoreline. Included in this total are 5.4 river miles of degraded shoreline on public land. Riparian habitats have been impacted by trampling, vegetation loss and structural development. This riparian zone provides important habitat for pink salmon, sockeye salmon and Dolly Varden, species injured by the <i>Exxon Valdez</i> oil spill. The project's objectives are to restore injured fish habitat, protect fish and wildlife habitat, enhance and direct recreation and preserve the values and biophysical functions that the riparian habitat contributes to the watershed.		<u>Chief Scientist's Draft Recommendation</u> This is a well presented proposal, but I need additional information about what specific activities are proposed in '96 and how they relate to work that is being carried out with funds provided from the <i>Exxon Valdez</i> criminal settlement and other sources. The proposal also would be strengthened with more discussion of the criteria for selecting restoration sites. With additional information, this could be a strong project aimed at the direct restoration of habitats that are important to the recovery of sockeye and other fish species of commercial and recreational importance.				<u>Executive Director's Draft Recommendation</u> Defer decision until there is an understanding of how this effort complements other state and federal efforts funded for the Kenai River. (ADFG received \$3 million from the criminal settlement for habitat restoration projects in the Kenai River watershed, as well as \$1 million from NOAA.)				
Public Info/Science Mgt/Administration				\$3,400.0	\$3,400.0	\$3,200.0	\$2,800.0	\$7,200.0	\$16,600.0	
96100	Public Information, Science Management, and Administration	ALL	Exec Director	\$3,400.0	\$3,400.0	\$3,200.0	\$2,800.0	\$7,200.0	\$16,600.0	Annual through 2002
<u>Abstract</u> DPD and detailed budget under development. This project includes funding for the former 95089 (Information Management System/OSPIC).		<u>Chief Scientist's Draft Recommendation</u> Chief Scientist did not review proposal.				<u>Executive Director's Draft Recommendation</u> Fund. Project is ongoing administrative/public information/science management support for the Trustee Council.				
96155	Prince William Sound Information Service	ADNR	Fairweather		\$0.0				\$0.0	
<u>Abstract</u> The proposed Fairweather integrated information system is designed to accept, process and store scientific and other information from studies and environmental data collection programs from PWS and then allow easy access for manipulation and display of the data. Basic information from PWS studies will be converted to a common data format and stored on computer disk accessible to all researchers, government officials and other interested parties. Users would have a variety of access and display options.		<u>Chief Scientist's Draft Recommendation</u> Chief Scientist did not review proposal.				<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal duplicates work ongoing under 96100 begun under 95089.				

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Proj. No.	Title	Lead Agency	Proposer	FY 96 Request	FY 96 Recommendation	FY97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate	Project Duration
Restoration Reserve				\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$48,000.0	\$84,000.0	
96424	<i>Exxon Valdez</i> Restoration Reserve	All	All	\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$48,000.0	\$84,000.0	Annual through 2002
<u>Abstract</u> This project calls for an additional \$12 million deposit into the Restoration Reserve. \$12 million was allocated to the Restoration Reserve by the Trustees in both FY 94 and FY 95.				<u>Chief Scientist's Draft Recommendation</u> No recommendation.		<u>Executive Director's Draft Recommendation</u> Fund.				
Research Facilities				\$3,000.0	\$0.0				\$0.0	
96151-BAA	Expansion of the Prince William Sound Science Center/Oil Spill Recovery Institute	NOAA	NOAA	\$3,000.0	\$0.0				\$0.0	
<u>Abstract</u> This project addresses the need for basic marine research infrastructure important to the long-term restoration effort in PWS. It will expand currently overcrowded research facilities and provide new capacity for research and monitoring of ocean processes, marine plankton and nekton, and interrelationships between physics and the biology of the region. The laboratories will emphasize remote sampling (underwater acoustics and optics), data communication, visualization and numerical modeling.				<u>Chief Scientist's Draft Recommendation</u> Chief Scientist did not review proposal.		<u>Executive Director's Draft Recommendation</u> Do not fund. Proposal incomplete. Planning money already obtained from alternate funding source.				
Habitat Protection/Acquisition				\$841.8	\$841.8	\$170.0	\$115.0	\$115.0	\$1,241.8	
96126	Habitat Protection and Acquisition Support	ADNR	ADNR	\$841.8	\$841.8	\$170.0	\$115.0	\$115.0	\$1,241.8	2nd yr. 5yr. project
<u>Abstract</u> Project 96126 provides negotiation support to the Trustee Council in order to reach closure on habitat protection priorities. This support includes those services such as title reports, appraisals, on site inspections, hazardous materials surveys, surveys, timber cruises and reviews, and other services necessary for the successful completion of habitat protection negotiations.				<u>Chief Scientist's Draft Recommendation</u> No recommendation.		<u>Executive Director's Draft Recommendation</u> Fund contingent on review and revision of budget to reflect most current assessment of needs.				

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	Number of Projects	FY 96 Request	FY 96 Exec. Dir. Recommendation	FY 97 Estimate	FY 98 Estimate	FY 99 to end Estimate	Total FY 96 to end Estimate
Research/Monitoring /General Restoration	121	\$32,033.4	\$21,278.8	\$16,852.8	\$13,066.7	\$9,170.0	\$60,368.3
Public Information/Science Management/Administration	2	\$3,400.0	\$3,400.0	\$3,200.0	\$2,800.0	\$7,200.0	\$16,600.0
Restoration Reserve	1	\$12,000.0	\$12,000.0	\$12,000.0	\$12,000.0	\$48,000.0	\$84,000.0
Research Facilities	1	\$3,000.0	\$0.0	-	-	-	-
Habitat Protection/ Acquisition Support	1	\$841.8	\$841.8	\$170.0	\$115.0	\$115.0	\$1,241.8
Totals:	126	\$51,275.2	\$37,520.6	\$32,222.8	\$27,981.7	\$64,485.0	\$162,210.1

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