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AGENDA

plementation Management Structure — Work Session 2

Anchorage Restoration Office • 645 "G" Street March 21, 1994 — 9:30 am (PLEASE note change in time.)

I. Introduction

- update on Trustee Council activities:
 - FY 94 Work Plan implementation
 - Habitat Protection/Acquisition
 - 5th Anniversary Public Forum
- the Implementation Management Structure in context: ADMINISTRATIVE RECORD
 - the Draft Restoration Plan
 - the Restoration Plan EIS
 - annual work plans
 - integrated research and information management

Review of Work Session #1 Products II.

- Mission Statement
- Definitions
- Guiding Principles
- Injured Resource Matrix
- Goals and Objectives

III. Organizational Structure/SRB

- IV. FY 95 Work Plan Development
 - FY 95 Work Plan Timeline/Process
 - Survey of FY 95 Priorities Summary
 - Monitoring Strategy Identification

(Bob Loeffler/Veronica Gilbert) (Eric Myers) (Byron Morris)

(Alex Wertheimer/Mark Brodersen)

V. **Restoration Work Group Discussions**

(Jim Ayers)

- EXXON VALDEZ OIL SPILL

(Bob Loeffler)

Restoration Plan Implementation

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GOAL: A long-term, comprehensive and cost-effective restoration program comprised integrated strategies that are a balanced combination of Monitoring and Research, bitat Protection and General Restoration.





Exxon '. ...Idez Oil Spill Truste... Council

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



March 3, 1994

Meeting Notes MAR 2 3 1994 January 13 & 14, 1994 Work Session

on EXXON VALDEZ OIL SPILL Ecosystem-based Management StructureTRUSTEE COUNCIL ADMINISTRATIVE RECORD

Mission Statement Definitions **Guiding Principles** Injured Resources and Services, and Ecosystem Goals and Objectives Management Goals and Objectives

Attachment 1 Attachment 2 Attachment 3

Attachment 4 Attachment 5

In January, we distributed draft notes and asked for review and suggestions. These revised notes include changes based on the suggestions we received. Some of the most important changes are: the Guiding Principles are grouped into categories for better communication and understanding, ecosystem definitions are provided for the three ecosystem types, and background information is provided that puts the goals and objectives into perspective.

State of Alaska: Departments of Fish & Game, Law, Natural Resources, and Environmental Conservation United States: National Oceanic & Atmospheric Administration, Departments of Agriculture and Interior

ATTACHMENT 1

MISSION STATEMENT

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The mission of the Trustee Council and all participants in Council efforts is to efficiently restore the environment injured by the *Exxon Valdez* oil spill to a healthy, productive, world renown ecosystem, while taking into account the importance of the quality of life and the need for viable opportunities to establish and sustain a reasonable standard of living.

The restoration will be accomplished through the development and implementation of a comprehensive, interdisciplinary recovery and rehabilitation program that includes:

- Natural Recovery
- Monitoring and Research
- Resource and Service Restoration
- Habitat Acquisition and Protection
- Resource and Service Enhancement
- Replacement
- Meaningful Public Participation
- Project Evaluation
- Fiscal Accountability
- Efficient Administration

- adopted by the Exxon Valdez Oil Spill Trustee Council November 30, 1993

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ATTACHMENT 2

<u>GOAL</u>

A mental concept of what you want.

<u>OBJECTIVE</u>

Pertaining to a material or measurable specific object (as distinguished from a mental concept).

STRATEGY

Activity or expenditure that is directed toward accomplishment of an objective (i.e., who, what, where, when, how).

CATEGORY OF RESTORATION STRATEGY

- Monitoring and Research
- Habitat Protection
- General Restoration

STRATEGY TIMELINE AND COSTS

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March 3, 1994

ATTACHMENT 3

GUIDING PRINCIPLES

General Principles

- 1. Restoration should contribute to a healthy, productive and biologically diverse ecosystem within the spill area that supports the services necessary for the people who live in the area.
- 2. Restoration will take an ecosystem approach to better understand what factors control the populations of injured resources.

Principles that Focus or Direct Restoration Activities

- 3. Restoration will focus upon injured resources and services and will emphasize resources and services that have not recovered. Resources and services will be enhanced, as appropriate, to promote restoration. Restoration actions may address resources for which there was no documented injury if these activities will benefit an injured resource or service.
- 4. Resources and services not previously identified as injured may be considered for restoration if reasonable scientific or local knowledge obtained since the spill indicates a spill-related injury.
- 5. Projects designed to restore or enhance an injured service:
 - must have a sufficient relationship to an injured resource,
 - must benefit the same user group that was injured, and
 - should be compatible with the character and public uses of the area.
- 6. Restoration activities will occur primarily within the spill area. Limited restoration activities outside the spill area, but within Alaska, may be considered under the following conditions:
 - when the most effective restoration actions for an injured population are in a part of its range outside the spill area, or
 - when the information acquired from research and monitoring activities outside the spill area will be significant for restoration or understanding injuries within the spill area.

Principles Concerning Integration of Restoration Activities

- 7. Restoration will include a synthesis of findings and results, and will also provide an indication of important remaining issues or gaps in knowledge.
- 8. Restoration shall take advantage of cost sharing opportunities where effective.
- 9. Restoration should be guided and reevaluated as information is obtained from damage assessment studies and restoration actions.

Public Participation Principles

- 10. Restoration must include a meaningful public participation process at all levels planning, project design, implementation and review.
- 11. Restoration must reflect public ownership of the process by timely release and reasonable access to information and data.

Principles concerning the Design of Restoration Projects

- 12. Proposed restoration strategies should state a clear, measurable and achievable end point.
- 13. Restoration must be conducted as efficiently as possible, reflecting a reasonable balance between costs and benefits.

Principles to Help Establish Priorities for Restoration Activities

- 14. Priority will be given to restoring injured resources and services which have economic, cultural and subsistence value to people living in the oil spill area, as long as this is consistent with other principles.
- 15. Possible negative effects on resources or services must be assessed in considering restoration projects.
- 16. Priority shall be given to strategies that involve multi-disciplinary, interagency or collaborative partnerships.
- 17. Restoration projects will be subject to open, independent scientific review before Trustee Council approval.
- 18. Past performance of the project team should be taken into consideration when making funding decisions on future restoration projects.
- 19. Competitive proposals for restoration projects will be encouraged.
- 20. Government agencies will be funded only for restoration projects that they would not have conducted had the spill not occurred.

These Guiding Principles reflect and elaborate on the Policies identified in Chapter 2 of the Draft Exxon Valdez Oil Spill Restoration Plan (November 1993). Further guidance regarding the categories of restoration action — General Restoration, Habitat Protection and Acquisition, Monitoring and Research, and Public Information and Administration — are provided in Chapter 3 of the Draft Exxon Valdez Oil Spill Restoration Plan (November 1993).

Note from Jan. 13- Vork Session

Attachment 4

This attachment organizes information on injuries and restoration according to general ecosystem types within the spill area, identifies resources and services injured by the spill, and provides a statement of goals and objectives for those resources and services.

Resources and services injured by the spill. The list of injured resources and services is taken from Appendix B of the <u>Draft Exxon Valdez Oil Spill Restoration Plan</u> (November 1993). As a result of the January 13-14 work session, the information was modified by subdividing some resource categories:

- "mussels" was made its own category rather than being included in "intertidal organisms," and
- "intertidal ecosystem" and "subtidal ecosystem" were subdivided into "organisms" and "sediments."

In order to make the ecosystem context more apparent, each resource and service is shown according to where it exists in the ecosystem: pelagic (offshore), near-shore, or upland ecosystem.

Goals. Draft goals are provided for each of the three parts of the ecosystem.

Objectives. Objectives are statements that pertain to a measurable, specific object (as distinguished from a mental concept). They are given for each injured resource and service, and are taken from definitions of recovery in Chapter 4 of the Draft Restoration Plan.

Ecosystem Definitions. The three ecosystem types described below are not intended to have hard-and-fast, legally definable boundaries. Rather, they are intended to describe areas that generally contain similar biological and physical features that influence the relationships of the resources that exist there and the services they support.

Pelagic Ecosystem. The deeper, open water region offshore that is not directly affected by wave action, terrestrial runoff, or other near-shore processes. Examples are the center of Prince William Sound and a few hundred yards beyond the steep cliffs and fiord mouths of the outer Kenai coast.

Near-shore Ecosystem. Terrestrial and aquatic areas dominated by near-shore processes such as tidal movement, salt spray, intertidal and shoreline vegetation, wave action, and terrestrial runoff. Near-shore areas include the intertidal zone, salt marshes, and beach areas where salt and shoreline processes dominate, as well as shallower offshore waters that are greatly influenced by near-shore processes. It also includes narrow fjords and channels that occur in the spill area.

Upland Ecosystem. The area of land and water uphill of the near-shore ecosystem.

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	ECOSYSTEM		
	Pelagic (Off-shore)	Near-shore	Upland
Harbor seal	X	X	
Sea otter		Х	
Killer whale	Х		
Sockeye salmon	Х	X	X
Cutthroat trout		X	X
Dolly Varden		X	X
Rockfish	X	Х	
Pacific herring	X	Х	
Pink salmon	Х	Х	X
Common murre	Х	Х	
Harlequin duck		Х	X
Marbled murrelet	Х	Х	Х
Pigeon guillemot		Х	
Bald eagle		Х	X
Black oystercatcher		Х	X
River otter		X	X
Clams		Х	
Mussels		Х	
Intertidal organisms		Х	
Subtidal organisms	Х	X	
Sediments	Х	Х	
Other Resources			
Archeological Resource	8	x	x
Designated Wilderness		X	X
-			

INJURED RESOURCE — ECOSYSTEM MATRIX

ATTACHMENT 4 (continued)

INJURED RESOURCES

Pelagic (Off-shore) Ecosystem

Sockeye salmon Pink salmon Pacific herring Rockfish Killer whale Harbor seal Common murre Marbled murrelet

Subtidal organisms Sediments

Bald eagle

River otter

Sediments

Harlequin duck Black oystercatcher

Intertidal organisms

Subtidal organisms

Marbled murrelet

Near-shore Ecosystem

Sockeye salmon Pink salmon Cutthroat trout Dolly Varden Pacific herring Harbor seal Sea otter Clams Mussels Pigeon guillemot Rockfish

Archaeologic resources

Upland Ecosystem

Sockeye salmon Pink salmon Cutthroat trout Dolly Varden

River otter

Archeological resources

Designated wilderness areas

LOST OR REDUCED SERVICES

Commercial fishing Recreation/Tourism Passive uses Subsistence

Designated wilderness areas

Common murre

Harlequin duck Marbled murrelet

Bald eagle Black oystercatcher

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Note from Jan. 13-: /ork Session

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GOALS

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Pelagic (Off-shore) Ecosystem: A heathy, productive, pelagic (off-shore) ecosystem that supports resources and services injured by the oil spill, and that maintains naturally occurring biodiversity.

Near-shore Ecosystem: A heathy, productive, near-shore ecosystem that supports resources and services injured by the oil spill, and that maintains naturally occurring biodiversity.

Upland Ecosystem: A heathy, productive, upland ecosystem that supports resources and services injured by the oil spill, and that maintains naturally occurring biodiversity.

OBJECTIVES

(In the table below, the first column shows the ecosystem to which the objective applies: P = pelagic (off-shore) ecosystem, N = near-shore ecosystem, and U = upland ecosystem.)

The overall goal of restoration is recovery of all injured resources and services. Ecosystem goals are described above. This section defines objectives as measures of recovery to meet the overall restoration goal and ecosystem goals. For some resources, little is known about the extent of injury and recovery, so it is difficult to define recovery or develop restoration strategies.

In general, resources and services will have recovered when they return to conditions that would have existed had the spill not occurred. Because it is difficult to predict conditions that would have existed in the absence of the spill, recovery is often defined as a return to prespill conditions. For resources that were in decline before the spill, like marbled murrelets, recovery may consist of stabilizing the population at a lower level than before the spill.

Where little prespill data exists, injury is inferred from comparison of oiled and unoiled areas, and recovery is usually defined as a return to conditions comparable to those of unoiled areas. Because the differences between oiled and unoiled areas may have existed before the spill, statements of injury and objectives for recovery based on these differences are often less certain than in those cases where prespill data exist. However, there can also be some uncertainty associated with interpreting the significance of prespill population data since populations undergo natural fluctuations. Indicators of recovery can include increased numbers of individuals, reproductive success, improved growth and survival rates, and normal age and sex composition of the injured population.

Natural Resources

- N, U Bald Eagle: Bald eagle population and productivity comparable to prespill levels.
- N, U Black Oystercatchers: Populations that attain pre-spill levels, and reproduction and growth rates in oiled areas that are comparable to those in unoiled areas.
- N Clam: Clam populations and productivity that are at prespill levels.
- P, N Common Murre: Prespill populations and fledgling productivity of common murres at all injured colonies.
- P, N, U Cutthroat Trout and Dolly Varden Trout: Growth rates and survival for cutthroat trout and Dolly Varden trout within oiled areas that are comparable to those for unoiled areas.
- N, U Harbor Seal: Population trends in harbor seals that are stable or increasing.
- N, U Harlequin Ducks: For harlequin ducks, prespill populations or when differences between oiled and unoiled areas are eliminated.
- N Intertidal Organisms: For each intertidal elevation (lower, middle, and upper), community composition, age class distribution, population abundance of component species, and ecosystem functions and services at levels that would have prevailed in the absence of the oil spill.
- P Killer Whale: Recovery of the injured AB killer whale pod to the 1988 level (of 36 individuals).
- P, N, U Marbled Murrelet: Population trends in marbled murrelets that are stable or increasing.
- N Mussel: Mussel populations and productivity which are at prespill levels, and which do not contain oil that contaminates higher trophic levels.
- P, N **Pacific Herring:** Populations of pacific herring that are healthy and productive and exist at prespill abundances.
- P, N **Pigeon Guillemot:** Population trends in pigeon guillemots that are stable or increasing.
- P, N, U **Pink Salmon:** Populations of pink salmon that are healthy and productive and exist at prespill abundances. (An indication of recovery is when egg mortalities in oiled areas match prespill levels or levels in unoiled areas.)

Note from Jan. 13- Vork Session

- N, U **River Otters:** For river otters, population levels are unknown but indications of recovery are when use and physiological indices have returned to prespill conditions.
- P **Rockfish:** Populations of rockfish levels are unknown, but indications of recovery are when habitat use and physiological indices have returned to prespill conditions.
- N, U Sea Otter: A population abundance and distribution of sea otters comparable to prespill abundance and distribution, and when all ages appear healthy.
- P, N Sediments: Sediments whose contamination, if any, causes no negative effects to the spill-affected ecosystem.
- P, N, U Sockeye Salmon (Kenai River): Population of sockeye salmon (Kenai River) that is healthy, and productive and exists at prespill levels. (One indication of recovery is when Kenai and Skilak Lakes support sockeye smolt outmigrations comparable to prespill levels.)
- P, N, U Sockeye Salmon (Red Lake): Population of sockeye salmon (Red Lake) that is healthy, productive, and exists at prespill levels in Red Lake.
- P, N Subtidal Organisms: For subtidal organisms, community composition, population abundance and age distribution of component species, and ecosystem functions and services in each injured subtidal habitat that have returned to levels that would have prevailed in the absence of the oil spill.

Other Resources

- N, U Archaeological Resources: For archaeological resources, an end to spillrelated injury including looting and vandalism rates that are at or below prespill levels.
- **N**, **U Designated Wilderness Areas:** Designated wilderness areas where oil is no longer encountered, and when the public perceives them to be recovered from the spill.

Services

Subsistence: Subsistence resources that are healthy and productive and exist at prespill levels, and people that are confident that the resources are safe to eat. (One indication that recovery has occurred is when the cultural values provided by gathering, preparing, and sharing food are reintegrated into community life.)

Commercial Fishing: Population levels and distribution of injured or replacement fish used by the commercial fishing industry match conditions that would have existed had the spill not occurred. Because of the difficulty of separating spill-

Note from Jan. 13-

related effects from other changes in fish runs, the Trustee Council may use prespill conditions as a substitute measure for conditions that would have existed had the spill not occurred.

Recreation and Tourism: Recreation and tourism fish and wildlife resources that are recovered; recreation use of oiled beaches that is no longer impaired, and management capabilities and facilities that can accommodate spill-related changes in human use.

Passive Use: A public that perceives that aesthetic and intrinsic values associated with the spill area are no longer diminished by the oil spill.

March 3, 1994

Note from Jan. 13- /ork Session

Attachment #5

MANAGEMENT PROCESSES

This attachment lists a goal and four objectives for management processes.

GOAL

A long-term, comprehensive and cost-effective restoration program comprised of integrated strategies that are a balanced combination of Monitoring and Research, Habitat Protection and General Restoration.

OBJECTIVES

Administration: Administrative costs that average no more than five percent of overall restoration expenditures over the remainder of the settlement period.

Integrated Research and Monitoring : A research and monitoring program that coordinates project development and design with goals and objectives; appropriately reflects and addresses ecosystem relationships; and ensures that collected data will be readily available and accessible to resource managers, policy makers and the general public.

Information Management: Information that is available in a timely manner and useable format to scientists, managers and the public.

Communication: A public involvement program that provides information and an opportunity for meaningful involvement in all levels of restoration — planning, project design, implementation, and review.

18.1.2B

PREPUBLICATION NOTICE FROM

EXXON VALDEZ OIL SPILL TRUSTEE COUNCIL ADMINISTRATIVE RECORD

ACADEMIC PRESS

IMPACTS OF THE EXXON VALDEZ OIL SPILL ON MARINE MAMMALS

Edited by Thomas R. Loughlin National Marine Mammal Laboratory Seattle, Washington, USA

Scheduled for publication in October 1994

Studies by government and non-government scientists to determine impacts of the *Exxon Valdez* oil spill on marine mammals are included in 21 chapters and 2 appendices. See back for Table of Contents.

IMPACTS OF THE EXXON VALDEZ OIL SPILL ON MARINE MAMMALS Edited by Thomas R. Loughlin

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Foreword by Robert J. Hofman

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- 2. Response activities by Steven T. Zimmerman, Carol S. Gorbics, and Lloyd F. Lowry.
- 3. An overview of sea otter studies by Brenda E. Ballachey, James L. Bodkin, and Anthony R. DeGange.
- 4. Boat-based population surveys of sea otters in Prince William Sound by Douglas M. Burn.
- 5. An intersection model for estimating sea otter mortality along the Kenai Peninsula by James L. Bodkin and Mark S. Udevitz.
- 6. Impacts on distribution, abundance, and productivity of harbor seals by Kathryn J. Frost, Lloyd F. Lowry, Elizabeth Sinclair, Jay Ver Hoef, and Dennis C. McAllister.
- 7. Impacts on Steller sea lions by Donald G. Calkins, Earl Becker, Terry R. Spraker, and Thomas R. Loughlin
- 8. Status of killer whales in Prince William Sound, 1985-1992 by Craig O. Matkin, Graeme M. Ellis, Marilyn E. Dahlheim, and Judy Zeh.
- 9. Assessment of injuries to Prince William Sound killer whales by Marilyn E. Dahlheim and Craig O. Matkin.
- 10. Impacts on humpback whales in Prince William Sound by Olga von Ziegesar, Elizabeth Miller, and Marilyn E. Dahlheim.
- 11. Sea otter foraging behavior and hydrocarbon levels in prey by Angela M. Doroff and James L. Bodkin.
- Observations of oiling of harbor seals in Prince William Sound by Lloyd F. Lowry, Kathryn J. Frost, and Kenneth W. Pitcher.
- 13. Health evaluation, rehabilitation, and release of oiled harbor seal pups by Terrie M. Williams, George A. Antonelis, and Jennifer Balke.
- Effects of masking noise on detection thresholds of killer whales by David E. Bain and Marilyn
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- 15. Cetaceans in oil by James T. Harvey and Marilyn E. Dahlheim.
- 16. Pathology of sea otters by T.P. Lipscomb, R.K. Harris, A.H. Rebar, Brenda E. Ballachey, and R.J. Haebler.
- 17. Gross necropsy and histopathological lesions found in harbor seals by Terry R. Spraker, Lloyd F. Lowry, and Kathryn J. Frost.
- 18. Hydrocarbon residues in sea otter tissues by Daniel M. Mulcahy and Brenda E. Ballachey.
- 19. Petroleum hydrocarbons in tissues of harbor seals in Prince William Sound and the Gulf of Alaska by Kathryn J. Frost, Carol-Ann Manen, and Terry L. Wade.
- 20. Tissue hydrocarbon levels and the number of cetaceans found dead after the spill by Thomas R. Loughlin.
- 21. Conclusions by Joseph Geraci and David St. Aubin.
- Appendix I-- Sample collection, storage, and documentation.

Appendix II -- Oil tanker accidents, 1960-1993.

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Organization Structure "Straw Dog" Science Planning and Management DRAFT 3/20/94



Restoration funds must be used "...for the purpose of restoring, replacing enhancing, of ILL acquiring the equivalent of *natural resources* injured as a result of the Oli Spill and restoration reduced or lost *services* provided by such resources..." Thus, restoration and restoration monitoring activities must be linked to the injured resources. However, we have recognized that a single-species approach to restoration program will take an **ecosystem approach**; this group has reiterated the ecosystem approach as one of the guiding principles. The organization diagram presented here is an attempt to describe a management structure that works from the base of the injured resources to develop an integrated, ecosystem approach to accomplishing the goals of healthy ecosystem components. Monitoring, ecosystem research, and active restoration projects must address the specific needs of particular injured resources in the context of restoring a healthy ecosystem. To implement this, we are proposing injured resource Work Groups coordinated by an interdisciplinary team.

Injured Resources Work Groups

1.) Responsibilities

A. Identify strategies, research approaches, and testable hypotheses for monitoring, research, and general restoration.

a. Emphasis on integrated, interdisciplinary ecosystem approaches. SEA plan as an example.

b. Needed for guidance of FY-95 proposals and beyond.

B. Annual review of resource status and strategies for achieving restoration objectives.

C. Recommend priorities for research and restoration activities needed to achieve restoration objectives.

D. Ensure communication, cooperation, and integration

1

a. Within Work Group.

b. Determine representative for Interdisciplinary Team for communication with other Work Groups.



2.) Composition

A. Scientists from resource disciplines, including PI's with projects for monitoring and restoration of the injured resources.

B. Scientists from other disciplines (e.g., oceanography, toxicology, ecosystem modeling).

C. Public participation. Meetings are open to the public and interested public are kept in the communication loop.

Interdisciplinary Team

1.) Responsibilities

A. Communication, coordination, and cooperation among Work Groups to ensure an integrated effort directed at restoration of injured resources and services and a healthy ecosystem.

B. Coordination of information from Work Groups on strategies, testable hypothesis, priorities, and progress towards restoration for review by the SRB and the Executive Director.

C. Coordination of activities with Restoration Work Force to facilitate agency administration and cooperation.

D. Coordination of Work Groups participation in annual workshops.

2.) Composition

A. Representatives from Work Groups.

a. One representative from each Work Group.

b. Executive Director must confirm selection.

B. One State and one Federal representative from the Restoration Work Force, appointed by the Executive Director.

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C. Trustee Council Chief Scientist.

D. Public participation: Meetings open to the public.

Organizational Diagram Science Planning and Management

(DRAFT 3/19/94)





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Science Review Board

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Duties of the Board:

- 1. Recommend scientific priorities based on technical merit;
 - A. Identify meritorious ideas and projects
 - B. Recommend a prioritized list of ideas and projects
 - C. Recommend resolution of conflicts between competing proposals
 - D. Recommend the best proposal or combination of proposals for a given objective and/or project.
- 2. Assist in the development of an adaptive management process;
 - A. Help integrate research and monitoring efforts
 - B. Help the process run more efficiently and effectively
 - C. Help synthesize study results and information from other sources
 - D. Following review of results, recommend appropriate changes to ongoing and proposed work and identify new projects.
- 3. Review proposed, ongoing, and completed work;
 - A. Review proposals
 - B. Review project design
 - C. Review project conclusions and reports.
- 4. Assist the Executive Director explain what has been done, what has been learned, and what needs to be done;
 - A. Explain the effects of completed projects
 - B. Explain how proposed projects aid restoration
 - C. Explain how proposed projects affect the ecosystem.

Assumptions:

- 1. The Trustee Council makes decisions, the Science Review Board makes recommendations and presentations to the Executive Director and the Trustee Council as appropriate.
- 2. The Science Review Board primarily focuses on technical merit. Social issues and policy considerations should be incorporated by the Executive Director and Trustee Council.
- 3. Social objectives and policy are set by the Trustee Council. When appropriate, the Science Review Board will be requested to make recommendations on how to most efficiently and effectively implement those objectives and policies.

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Science Review Board

- 4. The Science Review Board will operate on a consensus basis with majority and minority reports on an issue when necessary.
- 5. Science Review Board members only work part time and are compensated appropriately.
- 6. Both compensated and uncompensated peer reviewers will be available to the Science Review Board as necessary to review proposals, project descriptions, and reports.
- 7. The Science Review Board will review Work Group product and make recommendations to the Executive Director and Trustee Council. Work Groups under the direction of the Executive Director and an Interdisciplinary Team will be set up for injured resources and services and/or appropriate categories (eg. terrestrial, nearshore, pelagic) to develop information on progress to date, testable hypotheses, research projects, and restoration implementation projects.
- 8. Science Review Board meetings will be open to the public.
- 9. Staff support will be provided by the Executive Director.
- 10. The Science Review Board will hold work sessions to synthesize research and monitoring information.
- 11. The Science Review Board will participate in an annual workshop which will be conducted to disseminate what has been learned and what projects and/or modifications of projects need to be considered for the coming year. The Board will also participate in development of the annual report to the public.

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Qualifications and Membership:

- 1. Members must be recognized experts in their field of expertise with proven track records, must have a multi-disciplinary approach to problem solving, and must have demonstrated professional integrity.
- 2. Since continuity is important, prior knowledge of this oil spill is desirable.
- 3. The Board will consist of six to eight members including the Chief Scientist and needs to cover the following disciplines:
 - A. Archaeology
 - B. Birds
 - C. Ecotoxicology/chemistry
 - D. Fish
 - E. Intertidal/Subtidal
 - F. Marine Mammals
 - G. Oceanography

Additional expertise on specific topics will be covered as necessary from appropriate sources.

- 4. The Chief Scientist will chair the Board (including calling meetings, setting agendas, and conveying results).
- 5. Members will be appointed by the Executive Director following consultation with the Chief Scientist, the agencies, and interested public and confirmed by the Trustee Council.
- 6. The Executive Director will conduct an annual performance review of the Science Review Board and submit a report with recommendations to the Trustee Council. Members will serve at the pleasure of the Trustee Council.
- 7. Members may not be contractually involved in the implementation of projects. Even the appearance of a conflict of interest must be avoided.

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