regarding seafood safety. Field activities may include identification of species and assistance in the collection of specimens for intertidal monitoring.

d) Injury to Lake Resources: High winds and seas carried oil into Summer Bay Lake and impacted large portions of the Lakeshore and Lake bottom. The education curriculum would focus on the ecology and biology of the Lake and awareness of human activities that negatively affect local freshwater lakes. Field activities would include participating in Lake surveys and shoreline revegetation projects.

The Trustees propose building upon the Camp curriculum and opportunities related to ongoing assessment, monitoring and restoration projects to conduct community-wide education on natural resource issues[26]. This aspect of the education plan would have the same goals and priorities as the Camp education, but would be designed to reach the broader community. This outreach effort would include both adult and K-12 education during the school year and could include lectures, public meetings, school field trips, development of interpretive displays for the school and museum, on-site signage and local newspaper/radio/television spots or interviews.

Many of the proposed restoration projects for the *M/V Kuroshima* will benefit from broad public understanding and involvement. For example, the vegetation restoration efforts could involve community volunteers in the collection and dispersion of native seeds. Outreach to and education of the local community will also be an important factor in successful vegetation restoration; hikers, fishermen and other recreational users will need to understand that the newly seeded areas are sensitive and should not be disturbed. Similarly, the recovery of the salmon in Summer Bay Lake will require community understanding of the need to respect harvest limits.

Restoration Objective:
The objective of this project is to compensate for recreational losses by addressing known environmental problems associated with the natural resources affected by the *M/V Kuroshima incident*, with the goal of improving the community's stewardship of the affected natural resources.

Probability of Success:
Environmental education programs have been successful in other communities and the Trustees anticipate success in Unalaska. Funding should allow hiring of a part-time educator or mentor to organize, develop and maintain the Camp and community education program.

Performance Criteria and Monitoring:
The Trustees do not expect to utilize any significant performance criteria and monitoring efforts other than a brief annual report to the Trustees with a summary of the activities conducted and any expenditures.

[26] This could also provide a forum for non-spill related environmental education such as when visiting scientists are working in or transiting through Unalaska.

Benefits and Environmental Impacts:
The proposed restoration should benefit the community and environment by improving the community's stewardship of the affected natural resources. The Trustees do not expect any significant adverse environmental impacts or problems with this proposal. The education would benefit all interested members of the community.

Evaluation:
The success of the proposed restoration projects will depend, in part, on community education. In a broader context, education and environmental awareness are important for the sustained environmental health of the Unalaska region. The Trustees have concluded that augmenting and enriching the existing environmental curriculum in the local school system is one way to help restore and compensate for the injuries resulting from the *M/V Kuroshima* spill.

5.6.4 Preferred Alternative: Shoreline Maintenance:

Project Description
The oil spilled by the *M/V Kuroshima* is expected to weather and degrade very slowly and will result in chronic low-level contamination of shorelines in Summer Bay and Summer Bay Lake. These shorelines are also subject to a chronic debris problem, including large amounts of flotsam from shipping and commercial fishing (Figure 31: Marine Debris at Humpy Cove). Trash items may contain residual petroleum, oils, greases and other toxic or nuisance chemicals harmful to aquatic life.

The Trustees propose funding to: a) conduct an annual "Beach Cleanup Day" in the Spring and b) to conduct periodic maintenance of beaches in Summer Bay, Summer Bay Lake, Morris Cove and other recreational shorelines to remove and properly dispose of marine debris and tar[27].

Beach Cleanup Day: The City of Unalaska sponsors a community-wide cleanup week in April. The cleanup focuses primarily on cleanup of yards and public spaces, but the Trustees propose additional funding to plan, publicize and coordinate the beach cleanup day. Additional funds would be necessary for debris disposal, truck rental, purchase of gloves and bags and other supplies.

Routine Beach Maintenance: The beach maintenance component would utilize a local crew to minimize travel and per diem costs. Because of the potential for working in remote areas, cleanup teams would need to be 2-person minimum. The appropriate level of effort will vary over the season. The Trustees recommend a one-day-per-week effort during June through August and a one-day-per-month level of effort during May and September[28]. This would continue for a period of 5 years. Pending approval from the landowners, signs would be placed

[28] The dates may need to be adjusted to take into account road access. Snow cover may delay access until June in some years.

at Humpy Cove, Morris Cove, Summer Bay and Summer Bay Lake advising users about potential for contamination. The signs would also direct persons to report debris problems to the beach cleanup coordinator.

Restoration Objective:
The goal of this restoration project is to compensate for the aesthetic losses resulting from the spill by cleaning beaches of debris, abandoned fishing nets and oil mats from the general area where the Trustees observed impacts from the oil spill. This project meets the goals of the Trustees by compensating for recreational losses to the shoreline and intertidal habitats and will have positive ecological benefits by reducing smothering of intertidal biota and entanglement of bird and mammals.

Probability of Success:
The probability of success is high. Beach cleanup and debris-removal techniques are cost effective and relatively easy to implement. Periodic removal of such debris should both improve the public enjoyment and overall quality of the environment. Similar projects are conducted elsewhere in coastal Alaska, Hawaii and the mainland U.S. These programs have been successful in improving environmental quality and promoting long-term environmental awareness of the problems associated with marine debris and pollution in general.

Performance Criteria and Monitoring:
The performance criteria and monitoring should be simple. The goal will be to collect all visible tarballs and marine debris from Summer Bay and Summer Bay Lake. If time and funding permits, the crew may also collect debris from other nearby shorelines. The crews will be instructed not to remove any drums, cylinders, or other potentially hazardous materials, but instead refer those problems to the USCG office in Dutch Harbor. A field log should be kept with the types and amounts of debris collected[29] and the method of disposal.

Benefits and Environmental Impacts:
Removal of the pollution will be beneficial, but, in some cases, may result in short-term disruption to the shoreline habitats. Shoreline disruptions include personnel walking on the shore and dragging bags or debris into vehicles for disposal.

Evaluation:
Residual tar, floating debris and abandoned fishing gear is an aesthetic problem and causes injury to shoreline, intertidal and subtidal habitats by smothering or crushing organisms and by abrading the ocean bottom and shoreline areas. The Trustees have determined that the project's overall environmental impacts are overwhelmingly positive.

[29] The Center for Marine Conservation has established standardized data forms for marine debris.

5.6.5 Non-Preferred Recreational Use Alternatives

The Trustees considered the following restoration projects to compensate for recreational losses resulting from the spill. The Trustees rejected these alternatives because the alternatives did not meet one or more of the evaluation criteria discussed in Section 4.2.

- **Off-site Improvements:**

The Trustees considered off-site recreational improvements in other locations on Unalaska and Amaknak Islands. The off-site concepts included funding ballparks, small neighborhood parks, picnic areas, hiking trails, etc. All of these projects have merit, but the Trustees' preference was to have restoration projects at the site of the spill. Some of the off-site projects, such as basketball courts and ballfields, would not compensate for the types of recreation lost as a result of the spill. Furthermore, many of the off-site projects would require the acquisition of land or interests in land, a process that would likely be very time-consuming and possibly cost-prohibitive.

- **Fishing enhancement:**

Recreational fishing on Summer Bay Lake and at Summer Bay was affected by the spill and the Trustees considered a proposal to construct a pier and/or dock on Summer Bay Lake to improve recreational access. The Trustees rejected this proposal for several reasons: 1) the construction would be expensive and require significant annual maintenance because of the ice on the Lake; 2) the fisheries in the Lake are already heavily exploited and construction of a pier and dock would increase pressure on the stocks; and 3) the project would change the natural setting of the Lake.

- **Treat Beach Sands:**

During the response to the spill, the Unified Command made the decision to treat oily sand using a soil incineration device. Sand was trucked to Dutch Harbor, treated and returned to Summer Bay beach. The returned sand was black as a result of the incineration process and did not match the natural color of the beach sand. It was anticipated that wave and wind energy would blend the sands, but after a year, sands dumped high on the beach remained black. The Trustees considered further treatment (e.g., tilling) of the sand, but decided that, while slower than initially thought, the black band of sand would eventually blend into the beach. Furthermore, the Trustees determined that the costs of further treatment would outweigh the recreational benefits.

- **Land Acquisition:**

Land acquisition was considered as a restoration action to compensate for the lost recreational use. This project was similar in concept to land acquisition projects proposed to benefit birds and vegetation and includes the same advantages and disadvantages. Much of the Aleutians are already under protected status under the Alaska Maritime National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service. Large parcels of remote and undeveloped lands are owned by Native Corporations. The Ounalashka Corporation allows recreational access to their lands under a permit fee arrangement, and public uses of these large parcels of Native Corporation Land does not appear to be threatened. There is limited private land near the spill site that would be suitable for acquisition. The Trustees could not identify any willing landowners in the Summer Bay area.

5.7 Restoration Summary

A total of 45 specific restoration alternatives and/or restoration locations were identified. These restoration alternatives were evaluated for restoration location and site characteristics, restoration description, overall goal of restoration, objectives, implementation issues, economic feasibility issues and methods of monitoring and judgment of success.

The injuries and preferred restoration alternatives for the *M/V Kuroshima* Spill are summarized in Table 4 below.

Table 4: Summary of Preferred Alternatives

Injury Category	Preferred Alternative
Birds	Predator removal on Avatanak
Vegetation	Evaluate recovery of injured vegetation
Vegetation	On-Site Planting
Shellfish/Intertidal Biota	Additional testing for contaminants
Shellfish/Intertidal Biota	Seafood Safety Education
Salmonids/Lake resources	On-site Sediment Control
Salmonids/Lake resources	Lakeshore planting
Salmonids/Lake resources	Lakeshore planting contingency
Salmonids/Lake resources	Salmon Enumeration and Limnology
Recreation	Camp Structures
Recreation	Education
Recreation	Beach Cleanup

6.0 COORDINATION WITH OTHER PROGRAMS, PLANS and REGULATORY AUTHORITIES

6.0 COORDINATION WITH OTHER PROGRAMS, PLANS and REGULATORY AUTHORITIES

6.1 Overview

Two major Federal laws guiding the restoration of the injured resources and services in Alaska are OPA and NEPA. OPA and its regulations provide the basic framework for natural resource damage assessment and restoration. NEPA sets forth a specific process of impact analysis and public review. In addition, the Trustees must comply with other applicable laws, regulations and policies at the Federal, state and local levels. The potentially relevant laws, regulations and policies are set forth below.

In addition to laws and regulations, the Trustees must consider relevant environment or economic programs or plans that are ongoing or planned in or near the affected environment. The Trustees must attempt to ensure that their proposed restoration activities neither impede nor duplicate such programs or plans. By coordinating restoration with other relevant programs and plans, the Trustees can enhance the overall effort to improve the environment affected by the *M/V Kuroshima incident.*

In initiating the Final RP/EA, the Trustees propose to combine the Restoration Plan required under OPA with the environmental review processes required under NEPA. This is expected to enable the Trustees to implement restoration more rapidly than had these processes been undertaken sequentially.

6.2 Key Statutes, Regulations and Policies

Oil Pollution Act of 1990 (OPA), 33 USC §§ 2701, *et seq.*; 15 CFR Part 990

OPA establishes a liability regime for oil spills that injure or are likely to injure natural resources and/or the services that those resources provide to the ecosystem or humans. Federal and State agencies act as Trustees on behalf of the public and Indian Tribal Trustees act on behalf of their members to assess the injuries, scale restoration to compensate for those injuries and implement restoration. Section 1006(e)(1) of OPA (33 USC § 2706(e)(1)) requires the President, acting through the Under Secretary of Commerce for Oceans and Atmosphere (NOAA), to promulgate regulations for the assessment of natural resource damages resulting from a discharge or substantial threat of a discharge of oil. Assessments are intended to provide the basis for restoring, replacing, rehabilitating and acquiring the equivalent of injured natural resources and services.

The OPA damage assessment regulations (15 CFR Part 990) provide a framework for conducting sound natural resource damage assessments that achieve restoration. The process emphasizes both public involvement and participation by the Responsible Party(ies). The Trustees have used these regulations in this assessment.

Alaska Oil Pollution Laws

Alaska has several statutes relating to the discharge of oil or petroleum products. Pollution of air, land, subsurface land, or water of the State is prohibited by AS 46.03.710. The discharge of oil or petroleum products into or upon the land or waters of the State is prohibited by AS 46.03.740. Civil penalties are assessed for the discharge of petroleum products into the environment of the State pursuant to AS 46.03.758 and, for the discharge of crude oil, pursuant to AS 46.03.759. Under AS 46.03.760 the State may collect civil damages for various forms of pollution including the discharge of petroleum products. Under AS 46.03.760 and AS 46.03.780 the State may collect damages for injuries to the environment and the cost of restoring the environment to its prespill condition. Strict liability for the discharge of hazardous materials, including petroleum products, is imposed pursuant to AS 46.03.822. Additional State statutes governing the discharge of oil and recovery of damages resulting therefrom are located at AS 46.04. Spending accounts for oil spill response and clean up have been established under AS 46.08. The discharge of oil into state waters also violates Alaska's water pollution statutes, AS 46.03.050 et seq., and regulations, 18 AAC 70.

National Environmental Policy Act (NEPA), as amended, 42 USC §§ 4321, *et seq.* 40 CFR Parts 1500-1508

Congress enacted NEPA in 1969 to establish a national policy for the protection of the environment. NEPA applies to Federal agency actions that affect the human environment. NEPA established the Council on Environmental Quality (CEQ) to advise the President and to carry out certain other responsibilities relating to implementation of NEPA by Federal agencies. Pursuant to Presidential Executive Order, Federal agencies are obligated to comply with the NEPA regulations adopted by the CEQ. These regulations outline the responsibilities of Federal agencies under NEPA and provide specific procedures for preparing environmental documentation to comply with NEPA. NEPA requires that an Environmental Assessment (EA) be prepared in order to determine whether the proposed restoration actions will have a significant effect on the quality of the human environment.

Generally, when it is uncertain whether an action will have a significant effect, Federal agencies will begin the NEPA planning process by preparing an EA. The EA may undergo a public review and comment period. Federal agencies may then review the comments and make a determination. Depending on whether an impact is considered significant, an environmental impact statement (EIS) or a Finding of No Significant Impact (FONSI) will be issued.

The Trustees have integrated this Restoration Plan with the NEPA process to comply, in part, with those requirements[30]. This integrated process allows the Trustees to meet the public involvement requirements of OPA and NEPA concurrently. The RP/EA is intended to accomplish NEPA compliance by: (1) summarizing the current environmental setting, (2) describing the purpose and need for restoration action, (3) identifying alternative actions, (4) assessing the preferred actions' environmental consequences, and (5) summarizing opportunities

[30] NOAA's NEPA compliance policies are summarized in the NOAA Administrative Order 216-6, "Environmental Review Procedures for Implementing the National Environmental Policy Act," dated May 20, 1999.

for public participation in the decision process. Project-specific NEPA documents may be needed for some of the proposed restoration projects.

Clean Water Act (CWA) (Federal Water Pollution Control Act), 33 USC §§ 1251, *et seq.*

The CWA is the principal law governing pollution control and water quality of the nation's waterways. Section 404 of the law authorizes a permit program for the disposal of dredged or fill material into navigable waters. The U.S. Army Corps of Engineers (Corps) administers the program. In general, restoration projects that move significant amounts of material into or out of waters or wetlands -- for example, hydrologic restoration of marshes -- require Section 404 permits.

Under Section 401 of the CWA, restoration projects that involve discharge or fill to wetlands or navigable waters must obtain certification of compliance with state water quality standards. The Alaska Department of Environmental Compliance implements the Section 401 certification program. Generally, restoration projects with minor wetlands impacts (*i.e.*, a project covered by a Corps general permit) do not require Section 401 certification, while projects with potentially large or cumulative impacts must undergo a certification review.

Coastal Zone Management Act (CZMA), 16 USC §§ 1451, *et seq.*, 15 CFR Part 923

The goal of the CZMA is to preserve, protect, develop and, where possible, restore and enhance the nation's coastal resources. The Federal government provides grants to states with federally-approved coastal management programs. The State of Alaska has a federally-approved program. Section 1456 of the CZMA requires that any Federal action inside or outside of the coastal zone that affects any land or water use or natural resources of the coastal zone shall be consistent, to the maximum extent practicable, with the enforceable policies of approved state management programs. It states that no Federal license or permit may be granted without giving the State the opportunity to concur that the project is consistent with the state's coastal policies. The regulations outline the consistency procedures.

The Trustees do not expect that any of the proposed projects will adversely affect the State's coastal zone. However, to comply with the CZMA, the Trustees intend to seek the concurrence of the State of Alaska that their preferred projects are consistent to the maximum extent practicable with the enforceable policies of the State coastal program.

Marine Mammal Protection Act (MMPA), 16 USC §§ 1361, *et seq.*

The Marine Mammal Protection Act is the principal Federal legislation that protects marine mammals. It also recognizes the important role that marine mammals play in the ecosystem as well as their recreational and aesthetic value. The MMPA places a moratorium, with few exceptions, on the taking or importing into the United States of marine mammals or their products. The MMPA defines "take" as "to harass, hunt, capture, or kill or attempt to harass, hunt, capture, or kill any marine mammal." The U.S. Fish and Wildlife Service and the

Department of Commerce/NOAA share responsibility for the management and conservation for these species. The proposed restoration projects are not expected to affect marine mammals[31].

Endangered Species Act (ESA), 16 USC §§ 1531, *et seq.*, 50 CFR Parts 17, 222, 224

The ESA directs all Federal agencies to conserve endangered and threatened species and their habitats and encourages such agencies to utilize their authorities to further these purposes. Under the Act, the National Marine Fisheries Service (NMFS) and the USFWS publish lists of endangered and threatened species. Section 7 of the Act requires that Federal agencies consult with these two agencies to minimize the effects of Federal actions on endangered and threatened species. Prior to implementation of the proposed projects, the Trustees will conduct Section 7 consultations in conjunction with Essential Fish Habitat (EFH) consultation as noted below. Should it be determined that any of the proposed projects will adversely affect a threatened or endangered species, the Trustees will either redesign the project or substitute another project.

Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), 16 USC §§ 1801 *et seq.*

The Magnuson-Stevens Fishery Conservation and Management Act as amended and reauthorized by the Sustainable Fisheries Act (Public Law 104-297) establishes a program to promote the protection of EFH in the review of projects conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After EFH has been described and identified in fishery management plans by the regional fishery management councils, Federal agencies are obligated to consult with the Secretary of Commerce with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH.

The Trustees anticipate that the proposed restoration projects will have no adverse effect on EFH and will promote the protection of fish resources and EFH. The Trustees will consult with NMFS prior to implementation of any restoration project.

Fish and Wildlife Coordination Act (FWCA), 16 USC §§ 661, *et seq.*

The FWCA requires that Federal agencies consult with the USFWS, NMFS and state wildlife agencies for activities that affect, control or modify waters of any stream or bodies of water, in order to minimize the adverse impacts of such actions on fish and wildlife resources and habitat. This consultation is generally incorporated into the process of complying with Section 404 of the Clean Water Act, NEPA or other Federal permit, license or review requirements.

In the case of NRDA restoration actions under this RP/EA, the fact that the three consulting agencies for the FWCA (*i.e.*, USFWS, NMFS and the State) are represented by the Trustees means that FWCA compliance will be inherent in the Trustee decisionmaking process.

[31] Brad Smith, National Marine Fisheries Service, Pers. Comm.

Rivers and Harbors Act, 33 USC §§ 401, *et seq.*

The Rivers and Harbors Act regulates development and use of the nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and vests the Corps with authority to regulate discharges of fill and other materials into such waters. Restoration actions that require Section 404 Clean Water Act permits are likely also to require permits under Section 10 of the Rivers and Harbors Act. However, a single permit usually serves for both. Therefore, the Trustees can ensure compliance with the Rivers and Harbors Act through the same mechanism.

Executive Order (EO) 12898 - Environmental Justice

On February 11, 1994, President Clinton issued EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This EO requires each Federal agency to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low income populations. EPA and the CEQ have emphasized the importance of incorporating environmental justice review in the analyses conducted by Federal agencies under NEPA and of developing mitigation measures that avoid disproportionate environmental effects on minority and low-income populations. The Trustees have concluded that there are no low-income or ethnic minority communities that would be adversely affected by the proposed restoration activities.

Executive Order (EO) 11988 -- Construction in Flood Plains

This 1977 Executive Order directs Federal agencies to avoid to the extent possible the long- and short- term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct or indirect support of development in flood plains wherever there is a practicable alternative. Each agency is responsible for evaluating the potential effects of any action it may take in a flood plain.

Before taking an action, the Federal agency must determine whether the proposed action will occur in a flood plain. For major Federal actions significantly affecting the quality of the human environment, the evaluation will be included in the agency's NEPA compliance document(s). The agency must consider alternatives to avoid adverse effects and incompatible development in flood plains. If the only practicable alternative requires siting in a flood plain, the agency must: (1) design or modify the action to minimize potential harm and (2) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the flood plain. The Trustees have determined that none of the proposed projects is located in a flood plain.

6.3 Other Potentially Applicable Laws and Regulations

This section lists other laws that potentially affect the Trustees' restoration activities. The statutes or their implementing regulations may require permits from Federal or state permitting authorities. The permitting process also may require an evaluation of statutes other than those noted below.

- Archaeological Resources Protection Act, 16 USC §§ 470, *et seq.*

- Clean Air Act, 42 USC §§ 7401, *et seq.*
- Migratory Bird Treaty Act, 16 USC §§ 703, *et seq.*
- National Marine Sanctuaries Act, 16 USC §§ 14
- National Wildlife System Administration Act, 16 USC §§ 668dd, *et seq.*
- Executive Order 12996, National Wildlife System Administration

7.0 Response to Comments

7.0 RESPONSE TO COMMENTS

The Oil Pollution Act of 1990 (33 U.S.C. § 2701 et seq.), and the NOAA damage assessment regulations (15 C.F.R. Part 900 et seq.) require that the public be provided an opportunity to review and comment on oil spill restoration plans. The Trustees, in consultation with the Qawalangin Tribe, prepared a draft restoration plan for the M/V Kuroshima incident. The plan was made available for public review and comment on November 16, 2001. Public notices announcing the availability of the Damage Assessment and Restoration Plan (DARP) were placed in the Federal Register, Anchorage Daily News, and the Dutch Harbor Fisherman. The Trustees held a public meeting at the Unalaska City Hall on November 26, 2001 to present the plan. The Trustees made copies of the Administrative Record available at locations in Seattle, Anchorage, and Unalaska. Finally, the Trustees prepared a publicly accessible Internet site (www.darcnw.noaa.gov/kuro.htm) and posted copies of the draft restoration plan and photographs of the incident.

The public comment period closed on December 21, 2001. A total of seven comments were received on the plan from the following individuals and organizations:

William D. Bradshaw
Richard L. Davis, Ounalashka Corporation
Dan Duame, Qawalangin Tribe of Unalaska
Andrea Fulton, City of Unalaska
Herbert H. Ray, Jr., Kessal, Young, and Logan, on behalf of Kuroshima Shipping, SA and Unique Trading Company, Ltd.
Jacob Stepetin, Qawalangin Tribe of Unalaska
Abi Woodbridge

In addition, the Trustees prepared a summary of comments received during the Unalaska public meeting. Copies of the written comments received during the comment period and the public meeting summary are included in the Administrative Record (AR# 137-143, 148).

7.1 Overview of Comments:

The comments fell into four main categories: 1) questions regarding the spill and restoration planning process; 2) additional factors to support the Trustees' evaluation of injuries; 3) questions regarding the proposed restoration projects; and 4) proposals for additional and/or alternative restoration projects. In general, comments were positive and supportive of the preferred alternatives to restore injured natural resources. However, several commenters took exception to the proposed bird restoration project and raised alternatives for consideration. No comments suggested additional categories of injuries or losses that should have been addressed during the restoration planning process. Finally, no comments were received regarding the technical sufficiency of the Trustees' assessment and quantification of natural resource injuries and losses.

This section summarizes and responds to the comments that are relevant to the restoration planning process. For simplicity, comments are organized by general comments and major elements of the restoration plan, and like comments are combined.

7.2 General Questions and Comments:

Comment: One commenter noted that the DARP discussed the amount of oil spilled during the incident, but provided no information on how much oil was recovered (Fulton).

Response: The Administrative Record provides information on the recovery of oil from the spill. According to the Alaska Department of Environmental Conservation (AR# 1), 97,000 gallons of mixed bunker C, diesel, and seawater were pumped off the M/V Kuroshima. Another 83,000 gallons of liquid wastes were collected, for a total of 180,000 gallons of liquids recovered. All of this material was sent to Seattle for recycling and disposal. A total of 76 CONEX[32] containers, filled with approximately 288,000 pounds of oily solid wastes, were collected and shipped to a disposal facility in Arlington, Oregon. An additional 5 CONEX containers of oily waste and contaminated soils and debris was shipped to a disposal facility in Idaho. Some oily wastes, including oiled driftwood and woody debris, were burned on the beach near the grounding site. Determining the net amount of oil recovered is difficult. The best estimate based on ADEC calculations, is that 60% or approximately 23,000 gallons of the spilled material was recovered (Leslie Pearson, ADEC). The estimates are not precise.

Comment: One commenter expressed the desire for greater consultation between the Trustees and the Ounalashka Corporation (Davis). Another commenter wondered whether the City should be formally recognized as a contributor in Section 7 of the DARP, since the City had provided some restoration concepts to the Trustees (Fulton). The commenter also asked about whether mooring buoys in Summer Bay might be considered as restoration (Fulton).

Response: The Trustees met with representatives of the Ounalashka Corporation and the City of Unalaska on several occasions to discuss the status of the damage assessment investigations and to discuss restoration proposals. The Trustees solicited and considered restoration proposals from the Ounalashka Corporation and its oil spill consultant (AR# 76, 105, 114) and from the City of Unalaska (AR# 113). The Trustees will also seek input from these parties during the implementation of the restoration projects. The section on contributors has been modified to reflect these contributions. The specific restoration proposal on mooring buoys was not formally considered in the draft DARP because more direct restoration alternatives were available, because a revised storm plan was developed in response to the incident (AR# 134) and because port operations are under the jurisdiction of the Port of Dutch Harbor and the USCG.

[32] A standard 40 foot shipping container contains approximately 50 cubic yards of wastes.

Comment: One commenter wondered how much it would cost to implement the proposed restoration projects (Fulton).

Response: The Trustees have included a proposed budget table in Section 10.

Comment: During the public meeting one person asked about what efforts were being taken to prevent future incidents and whether the harbor anchorage management plan developed after the spill was being complied with.

Response: The Trustees understand that port operation policies and procedures have been revised to address anchoring and stormy weather procedures. These procedures fall under the jurisdiction of the Port of Unalaska and the US Coast Guard. Planning and preparedness questions should be addressed to those organizations.

7.3 Comments on Bird Restoration:

Comment: Several commenters do not agree that the fox eradication project should be conducted for this Incident. These comments in general questioned the environmental benefits associated with the project. Several commenters asserted that the proposed project location is too far away from the area impacted by the spill and, as such, will not benefit the birds of Unalaska Island (Bradshaw, Woodbridge) because birds that utilize Avatanak Island don't use the Unalaska area (Woodbridge).

Response: The technique of removing foxes from Avatanak Island to enhance native bird populations, including many of the species injured by the spill, is a sound restoration technique used during the Exxon Valdez oil spill restoration program (e.g., removal of foxes from two islands in the Shumagin Islands) (AR# 8). The concept is that by removing introduced foxes, breeding populations of native birds are enhanced and overall populations in the region increase. For example, red-breasted mergansers, which were injured by this oil spill, are ground-nesting birds that breed and winter in this region. The elimination of introduced foxes on Avatanak Island would allow this species to expand its breeding range on a local level and increase its numbers in this region.

Avatanak Island is approximately 40 miles from Unalaska. From a local perspective this may seem a great distance, but from a regional perspective these two islands are within the same island group - the Fox Islands Complex of Islands. Unalaska is the largest island in this island group and offers many protected and sheltered embayments for water birds wintering in the area. Few seabirds nest on Unalaska Island because of the large number of predators, fox and rats, on the island. However, large nesting populations of water birds occur on nearby islets and smaller islands in the area that are fox and rat free. According to the environmental sensitivity maps for the region, most Aleutian seabird colonies are populated between April 1 and September 30. At the time of the spill (late November) Aleutian seabirds were away from their colonies and

wintering in other areas. It is very likely that birds nesting on Avatanak Island that also winter in this region, would frequent the protected bays of Unalaska - including the Unalaska Bay area. The people of Unalaska that use the local bird resources for observation and viewing pleasure will benefit from the enhancement of bird populations at Avatanak Island. Water birds that nest on the nearby islets and islands of the Fox Islands group and winter in the area are very likely wintering in and around the embayments of Unalaska Island. Birds that were injured during the oil spill, such as cormorants or pigeon guillemots, are likely to nest on nearby islands. Also, other bird species that were not injured in the oil spill but nest on nearby islands and winter in the area will also benefit from the enhancement of nesting opportunities at Avatanak Island. These include tufted puffins and harlequin ducks. Accordingly, enhancing bird populations on Avatanak Island will benefit Unalaska Island.

Comment: *Two commenters asserted that the project was selected not for its environmental benefits but rather to augment an existing government fox removal program. (Bradshaw, Woodbridge).*

Response: It is true that the USFWS is currently conducting a fox eradication project on seabird nesting islands within the Alaska Maritime National Wildlife Refuge, and Avatanak Island is within the Alaska Maritime NWR. However, the existing fox eradication program only includes those islands solely owned by the USFWS. Since Avatanak Island is partly owned by the Akutan Native Corporation, it is not included in the USFWS's fox eradication program. The Trustees evaluated several locations to implement the project. Because of the benefits previously described, the Trustees ultimately selected Avatanak Island as the best option to maximize these benefits. For the purposes of this restoration program, the co-owner, Akutan Native Corporation, has agreed to the implementation of the project and to the maintenance of the island as fox-free in the future (AR# 132).

Comment: *Another commenter requested that the Trustees reconsider the non-preferred alternative identified in the DARP regarding seabird population surveys in Unalaska Bay. The commenter asserted that information generated by the surveys would help to guide future growth and development in the area and would be more beneficial than predator removal (Davis).*

Response: When considering restoration options, the Oil Pollution Act damage assessment regulations direct the Trustees to consider direct restoration activities over indirect restoration options. It is preferable to select an option that would directly benefit the injured resource over an option that would provide indirect benefits. When an option that provides direct benefits is not available or is not feasible, then options that provide indirect benefits are considered. In this case, fox eradication on a seabird-nesting island, Avatanak, would directly benefit the injured bird resources and other birds in the immediate vicinity of the oil spill. It is a direct restoration option with relatively low costs and very large benefits that should show positive results within a relatively short time period of several years. On the other hand, seabird population surveys in Unalaska bays, while beneficial, are an indirect restoration option that would not directly compensate for the injuries from the spill. This survey work is costly and labor intensive and would need to be conducted on an annual basis for many years to begin to be of value.

Comment: One commenter questioned whether restoration projects needed to directly relate to the injuries from the spill and two commenters stated that restoration of freshwater fish habitat on Unalaska Island would provide a greater benefit to bird populations impacted by the spill than the fox eradication project (Bradshaw, Woodbridge). One commenter proposed a specific alternative: restoration of Morris Cove Lake. The commenter asserts that oil from the spill can still be found along Morris Cove. The commenter states that the lake was heavily modified during WWII resulting in intermittent anadromous fish passage. By addressing restoration of fish passage to Morris Cove Lake, the commenter asserts that there will be multiple benefits including bird enhancement. The commenter also requested that moneys from the oil spill be used only for concrete aspects of the Morris Cove project and not be used for planning purposes. (Woodbridge).

Response: When considering restoration options, the Oil Pollution Act damage assessment regulations direct the Trustees to consider restoration activities with direct benefits to the injured resource over those restoration options that provide indirect benefits. When an option that provides direct benefits is not available or is not feasible, then options that provide indirect benefits are considered.

Fox eradication on Avatanak Island, a seabird nesting island, would directly benefit the injured bird resources and other birds in the immediate vicinity of the oil spill. It is a direct restoration option with relative low costs that should show positive results within a relatively short time period of several years.

The option of restoring a local freshwater fish habitat, however, would only indirectly benefit local bird populations. Although improving the freshwater fish habitat at this site would increase the local fish population, which would in turn increase the number of outmigrating smolts, the increase in the local fish population would only indirectly benefit bird populations feeding in the vicinity by providing an additional food source. As such, restoring a local freshwater fish habitat would not provide a greater benefit to the injured birds than the fox eradication project.

Furthermore, the factor limiting bird nesting at Morris Cove is predation and human disturbance, not the food supply. Few birds nest in the vicinity of Morris Cove because of the foot and vehicular traffic in the area and the presence of terrestrial predators, including fox and rats, on the island. Improving fish habitat will not eliminate these problems.

Finally, from a bird restoration perspective, this restoration option would be very costly for a small benefit that would not begin to show results for a number of years. The costs for planning, design, permitting, and costs associated with acquisition of conservation easements or purchase of lands would likely be significant. The planning effort would also take time because of the potential complexity of the proposed project. The Trustees cannot ignore the federal and state planning and permitting requirements that would be necessary to re-route a salmon stream, nor can the Trustees intentionally flood private land without the landowner's permission or going through a condemnation process.

Comment: Another commenter endorsed the preferred bird project and provided additional references to support the benefits and probability of success of the project (Ray). The commenter affirmed that the Trustees' injury analysis was reasonable, citing delays in wildlife crews traveling to Unalaska, cold weather, complex shorelines, ocean currents, and delays in setting up hazing equipment to scare birds away from oiled shorelines as factors that should be considered in the evaluation of bird losses. The commenter asserted that the fox eradication/bird restoration project should not be attempted on Unalaska Island because of the presence of terrestrial predators and human disturbance, and the high cost of predator control on a large island such as Unalaska Island.

Response: The Trustees considered many of the factors mentioned by the commenter in their evaluation of the injury to birds, but have modified the discussion in the DARP to specifically include the factors that accounted for low recovery of dead birds and the additional reasons why predator control would not be effective on Unalaska Island.

Comment: During the public meeting one individual asked about the methods used to eradicate foxes. (Public Meeting)

Response: The standard methods used by the USFWS include trapping and shooting. Removal methods will be used that target only the foxes.

7.4 Comments on Recreation Projects:

Comment: Several commenters stated their support of the proposed recreation projects (Davis, Bradshaw, Stepetin). Several commenters expressed a desire to participate in the proposed activities.

Response: The Qawalangin Tribe will administer Qawalangin Camp. The Trustees intend to work directly with the Tribe in the other components of the recreation project. The public is invited by the Tribe and the Trustees to work with the Tribe and the Trustees to implement the components of the recreation projects. Opportunities for public participation will be provided.

Comment: One commenter articulated a concern that the Community-wide education program emphasis on protection of resources affected by the spill might result in further restrictions to the public use and enjoyment of the spill area and its resources (Stepetin).

Response: The community education program is not intended nor expected to result in additional restrictions on public use of the spill area or its natural resources. Among the goals of the community education program will be to convey a greater understanding of injured natural resources to the public and to educate recreational users of natural resources in techniques or ways to utilize them that are less damaging to the resources. This should not increase the need for restrictions on the use of natural resources.

Comment: Most comments were supportive of the proposed camp structures, but several commenters requested further information regarding the project. One commenter questioned who would pay for the maintenance and storage of the camp structures during the off-season (Stepetin). Another commenter requested more information on the design of the proposed temporary water and sanitation facilities (Fulton). Several commenters raised questions about the location of the proposed recreational projects. One commenter asserted that the facilities should be sited at Summer Bay because the recreational losses were greatest at Summer Bay and because the area is open to the general public (Bradshaw). Other commenters expressed concern that use of the facilities might be restricted because the facilities are being constructed on private corporation land (Fulton, Bradshaw).

Response: Funds for annual maintenance and storage of the proposed camp structures for the first five years are provided as part of the proposal. It is anticipated the Tribe will work with local entities to address needs beyond the five year period. The exact nature of the water and sanitation facilities to be constructed and/or purchased has not yet been determined. It is likely that some kind of water tank on wheels will be purchased. Further consultation will be held with the Tribe on the best alternative to address sanitation needs. The recreational facilities will be portable and will not be permanently located at any one site. The Tribe expects to use the facilities for its summer youth camp, which is open to all young people, at the Humpy Cove location used in past years. The facilities are otherwise available to be used by any qualified local group at any site for which permission is secured from the landowner.

Comment: One commenter observed that the phrase "subsistence and recreation" was interchangeably used with the term "recreation" in a few specific instances in the text of the DARP. The commenter noted that the focus of the DARP was on public recreation losses and suggested that the term "recreation" was the most appropriate since subsistence issues and losses were not evaluated as part of the recreational losses and the proposed recreation restoration alternative does not compensate for subsistence losses. (Stepetin)

Response: The Trustees have removed the references to subsistence.

Comment: One commenter asserted that the Trustees' preferred recreational projects did not adequately compensate the affected landowner. The commenter requested that the preferred project be augmented with additional projects to compensate the landowner, including road, bridge, trail, and parking lot improvements at Humpy Cove and Morris Cove (Davis). Another commenter (Duame) also supported these improvements.

Response: The Oil Pollution Act of 1990 (33 U.S.C. § 2701 et. seq. (OPA) provides that the natural resource trustees may recover damages for injuries to, destruction of, loss of, or loss of use of natural resources (33 U.S.C. § 2702 (2)(A)). OPA also provides for recovery of damages for injuries to private lands by the landowner (33 U.S.C. § 2702 (2)(B)). The road, bridge, trail, and parking lot that provide access to Humpy Cove and Morris Cove are on land owned by the Ounalashka Corporation. Although at least portions of these improvements are on land that is

subject to easements reserved pursuant to Section 17(b) of the Alaska Native Claims Settlement Act, the validity of those easements has been successfully challenged by the Ounalashka Corporation. The Trustees explored the possibility of making improvements similar to those suggested by the commenter but were not able to secure guaranteed public access to the improvements from the Ounalashka Corporation. Without guaranteed public access to the proposed improvements, the Trustees could not be assured that projects undertaken on the Ounalashka Corporation lands would restore lost recreational opportunities to the public.

Comment: *Another commenter agreed with the scope of the recreational projects, but requested that the Trustees clarify and include the regulatory citation for valuing recreation losses in the DARP. The commenter also supported the Trustees' analysis of the non-preferred recreational alternatives, asserting that some of the non-preferred alternatives, especially fishing enhancement, would have adverse affects for the quality of the Lake habitats (Ray).*

Response: The Trustees valued the loss to recreation in accordance with 15 C.F.R. 990.53(d)(3)(ii). The reference has been added.

7.5 Comments on Salmon and Lake Restoration:

Comment: *The Trustees received generally supportive comments regarding the preferred restoration projects for salmon and Lake restoration. One commenter proposed that the fish weir project at Summer Bay Lake be continued, perhaps at a reduced level of effort (Stepetin). Another commenter requested clarification in the DARP that no further enumeration and limnological monitoring was anticipated and that the focus of the future restoration should be improved management using the information collected during the past four years (Ray).*

Response: The weir was operated for four years to evaluate potential impacts to the various year classes of salmonids that utilize Summer Bay Lake. The four-year period allowed the Trustees to assess the dominant age classes of salmon exposed to oil from the spill. The weir data indicates that no large scale impacts to salmon populations resulted from the spill, but the natural variability makes measurement of small population changes difficult. Fish runs are naturally variable and small changes in populations are not easily detected, even with accurate long-term counts of outmigrating and returning fish. Therefore, the Trustees do not anticipate operation of additional fish weirs at Summer Bay Lake, but intend to use the data collected during the past four years for long-term management purposes. The State of Alaska Department of Fish and Game will conduct some additional limnology work during the summer of 2002.

Comment: *One commenter asked about the overall harvest pressure on Summer Bay Lake, including the significance of poaching and illegal harvest (Fulton). Another commenter proposed that the Trustees ban boat-based and charter fishing on Summer Bay Lake to allow the stocks to recover. (Davis)*

Response: The Trustees are aware of anecdotal information regarding illegal fishing at Summer Bay and considered an alternative of providing additional enforcement (See Section 5.5.5), but

concluded that additional enforcement would not be cost-effective. Proposals to change use regulations for specific bodies of water should be directed to the Alaska Board of Fisheries. Only the Alaska Board of Fisheries can make changes to allocation among subsistence, personal use, sport, guided sport, and commercial users of fish and game resources over which the Board has jurisdiction.

Comment: *During the public meeting one person asked about whether we had considered projects on Unalaska Lake and whether those projects might provide greater benefits than the proposed Summer Lake road project.*

Response: The Trustees considered several projects along Unalaska Lake and the Iliuliuk River (see section 5.5.5) but determined that the scope of the injuries to salmon from the incident could be better addressed by on-site restoration at Summer Bay Lake.

Comment: *Several commenters stated their approval of the proposed sediment and road improvement projects along Summer Bay Lake (Ray, Davis, Fulton). However, one individual raised the potential for landowner approval and also observed that the improvements should be coordinated with the City's long-term maintenance and improvement plans for the Overland Drive. The commenter also requested that the project scope be expanded to include a minimal-width protective and vegetated buffer between the Right of Way and the Lake (Fulton).*

Response: The Trustees will work with the City of Unalaska and Ounalashka Corporation to ensure that the project is not in conflict with long-term plans and maintenance needs. The Trustees' plan is to establish native vegetation along the lakeshore, but note that the establishment of a minimum width vegetated buffer along the entire lakeshore may not be feasible because of the proximity of the road and lack of suitable substrate in certain sections of the lakeshore.

Comment: *One commenter endorsed the preferred restoration project and provided some additional factors in support of the Trustees' injury analysis, including the lakeshore trampling by response workers and the temporary increase in sedimentation that likely resulted from the loss of lakeshore vegetation (Ray). The commenter also cited some additional benefits that would result from the sediment control project, including benefits to aquatic vegetation, juvenile fish habitat, and nutrient levels in the lake (Ray). The commenter also listed additional reasons to reject the non-preferred salmon alternatives, including the high cost of implementation, uncertain benefits for salmon, and lengthy design and permit processes. Finally, the commenter requested that the Trustees include a statement regarding the probability of success of the salmon projects and provide references to other successful projects (Ray).*

Response: The Trustees considered many of the factors listed by the commenter in their evaluation of injuries and the benefits of the proposed restoration. The Trustees have reviewed the draft DARP and incorporated the suggested revisions.

7.6 Comments on Shellfish and Intertidal Resource Restoration

Comment: Several commenters supported the proposed restoration projects for shellfish and intertidal resources, and indicated their desire to participate in the project, but also articulated their concerns about the safety of local seafood (Stepetin, Bradshaw, Davis, Woodbridge). One commenter asked for information on what actions will be taken if health and safety problems are identified (Bradshaw).

Response: The primary reason that the Trustees propose further sampling and community involvement and education is to help address local concerns. The sampling and analyses conducted in the weeks and months after the spill showed a rapid decline in PAH contamination to levels deemed safe by the Federal and State Health agencies. The Trustees anticipate that further sampling will demonstrate further PAH declines. If additional sampling demonstrates continued PAH contamination concerns, the Trustees will refer the issue to the US Coast Guard, Environmental Protection Agency, and the Alaska Department of Environmental Conservation to determine whether additional cleanup is appropriate.

Comment: Another commenter questioned whether the monitoring effort will restore use of local shellfish and asserted that if the monitoring is to be helpful and accepted locally, local concerns will need to be compassionately handled in the education process and not just brushed aside as unreasonable fear (Woodbridge).

Response: The Trustees fully intend to address local concerns and sensitivities. Concerns will be addressed in a serious and professional manner through the intended educational project.

Comment: One commenter pointed to the high rate of cancer among Unalaska residents as an example of why locals are skeptical about environmental contamination and requested that if health problems are found, the whole area should be posted and closed until the shellfish can be safely consumed (Woodbridge).

Response: The local skepticism regarding environmental contamination will be taken into consideration in the final design of the education project. If unhealthful levels of contamination are found that might warrant consumption advisories or closures, the Trustees will refer those concerns to the appropriate state or federal agency.

Comment: One commenter articulated concern over the seafood risk analysis conducted during the spill- specifically the recommendation that users should avoid consumption of foods on which oil can be seen, smelled or tasted. The commenter noted that this may be misinterpreted, and if users cannot see, smell or taste oil, those users may erroneously conclude that the seafood is safe, when in fact they may be tainted by non-visible contaminants (Woodbridge).

Response: The Trustees understand that many in the local community feel that the preliminary health risk analyses did not adequately address local concerns. The Trustees recognize that a

successful outreach effort needs to be clear and sensitive to local concerns. The Trustees intend to work with the local community to identify the deficiencies of the past efforts and address the factors that would increase local confidence with the outreach effort and the data and results of the additional sampling. This may include public participation in the choice of the public health expert, design of the outreach materials, selection of sampling sites, and collection of the samples.

Comment: *Several commenters requested further information on the testing program, including sampling locations, frequency, duration, what contaminants would be tested, whether the project would be long-term, and how the public would be informed of the results (Davis, Woodbridge).*

Response: The Trustees will work with the local community and the seafood safety expert to develop the details of the sampling plan. All requested information, including the design, details of the testing program, and raw data will be publicly available.

Comment: *Two commenters reminded the Trustees that there is a diverse population in Unalaska and requested that public information be translated into every language spoken locally, and that the language be understandable to the layperson. (Davis, Woodbridge).*

Response: Every effort will be made to ensure that all local residents have access to all available information, and the Trustees will work with the seafood safety expert to develop non-technical outreach information that is provided in "layperson" terms. Language barriers will be addressed in the final design stage of the project.

Comment: *One commenter suggested that the probability of success for seafood safety education is high provided that the effort is modeled after successful education programs elsewhere. The commenter also provided additional reasons to reject non-preferred shellfish alternatives including the high cost and low effectiveness of some of the non-preferred alternatives (Ray). The commenter declared that the lost use of the shellfish was based on the perception of contamination and noted that the health risk assessments conducted during the spill concluded that shellfish are safe to consume (Ray).*

Response: The Trustees agree with the recommendations, but disagree with the implication that the local concerns about shellfish are unwarranted. The Trustees believe that the local concerns are real and note that the persistence of oil along the shoreline of Summer Bay is not a perception (AR# 131). With additional sampling and careful outreach efforts, these concerns can be addressed. Individuals may still choose not to consume local shellfish, but users can base their decisions on recent and understandable information.

Comment: *One commenter noted that the proposed restoration did not adequately address the impact of cleanup activities on City tidelands resulting from trenching that was necessary to refloat the vessel (Fulton).*

Response: The Trustees considered the physical impact of the grounded vessel on the nearshore habitats along Summer Bay and concluded that the impacts to natural resources were limited and short term. The Trustees note that the City, as the owner of the tidelands, may present a claim under the Oil Pollution Act if it believes its properties were adversely affected.

Comment: One individual at the public meeting asked whether the monitoring and education could be integrated into a project being proposed on establishing certified areas around Unalaska for safe recreational/subsistence harvest.

Response: The focus of the proposed sampling effort is to address concerns about residual oil contamination. To the extent that that goal intersects with the broader sampling goals in the area, the Trustees will work to combine sampling and analytical efforts.

7.7 Comments on Vegetation Restoration:

Comment: Comments on the proposed restoration alternative were generally favorable, but several detailed issues were raised. One commenter requested that local expertise be hired for the vegetation project to ensure that it is successfully completed (Davis).

Response: As noted in the description of the preferred alternative in the draft DARP, the Trustees will seek local expertise in developing and implementing the plan.

Comment: Another commenter, asserting that restoration of vegetation can take decades, asked about the duration of the monitoring and whether replanting of native vegetation would take place on an on-going basis for as long as necessary to ensure recovery. The commenter also asked about species diversity and asked whether other plant species besides rye grass were injured from the spill (Stepetin). Another commenter endorsed the preferred alternative and asserted that the vegetation injury was small and short-term and therefore did not warrant any restoration efforts in beyond those included in the preferred alternative (Ray).

Response: The details of the monitoring plan have not been developed yet. The Trustees expect that the monitoring will continue for at least five years, but note that the intensity of the monitoring in later years may be reduced if the preliminary results show positive regrowth of vegetation. The Trustees will review the first cycle of monitoring results before determining which areas and which species will need to be planted.

Comment: A commenter requested clarification that the RP implemented restoration efforts conducted during the response were successful in restoring the injured vegetation and minimizing interim losses. The commenter also asserted that most of the injury to vegetation resulted from mechanical injury as a result of response actions, staging equipment, etc, rather than oiling and specifically pointed to AR# 128 as support for this. Finally, the commenter suggested that the vegetation project should include installation of signs and fences to prevent trampling of recovering areas (Ray).

Response: One of the goals of the proposed monitoring is to determine the success of the early RP-implemented replanting efforts. The Trustees agree that mechanical impacts were a major factor in vegetation injury. The Trustees will work with the landowner regarding signage and fencing to protect recovering areas. Use of fencing will be minimized to avoid limiting access to recreational sites.

Comment: *During the public meeting, one individual asked whether the techniques used to restore vegetation would be different than the methods used during the RP's early restoration efforts*

Response: The first step in the proposed alternative will be to monitor and evaluate the success of the RPs' early restoration efforts. If additional replanting efforts are warranted, the Trustees expect to consider the possible reasons for the failure of the early restoration efforts before designing and implementing additional planting projects.

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10.0 BUDGET

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Final costs and the allocation of available funds among restoration projects may change pending finalization and approval of associated design documents.

Table 5: Restoration Cost Summary

Injury Category	Preferred Alternative	Estimated Cost
Birds	Predator removal on Avatanak	$162,217
Vegetation	Evaluate recovery of injured vegetation	$10,000
Vegetation	On-Site Planting	$10,000
Shellfish/Intertidal Biota	Additional testing for contaminants	$10,000
Shellfish/Intertidal Biota	Seafood Safety Education	$20,000
Salmonids/Lake resources	On-site Sediment Control	$113,200
Salmonids/Lake resources	Lakeshore planting and Contingency	$28,900
Salmonids/Lake resources	Salmon Enumeration and Limnology	$131,400
Recreation	Camp Improvements	$59,500
Recreation	Education	$55,000
Recreation	Beach Cleanup	$52,800
Total		$653,017.00