

#### **4.0 SELECTION OF THE PREFERRED ALTERNATIVE**

The Trustee Committee has selected Alternative D-An Integrative Restoration Approach as the preferred alternative for the *Tenyo Maru* restoration plan. The following section summarizes the factors considered in this decision.

##### **Alternative A: No Action/Natural Recovery**

Restoration of the injured resources under the no-action alternative would occur only through natural processes and existing or future programs that are unrelated to this restoration plan. This alternative is the baseline against which other alternatives are compared. In order for the no-action alternative to be selected as a preferred restoration alternative, it must be more efficient and effective in restoring the environment than projects that would be conducted under other alternatives. The no-action alternative would not increase the rate of restoration of the injured natural resources and habitats beyond what will result from natural processes and existing or future programs.

This alternative recognizes the capacity of ecosystems to recover naturally and does not in any way alter existing habitats. The principal advantages of this approach are that it permits the natural recovery process to function uninhibited by human intervention and no monetary costs are associated with it because natural processes determine the trajectory of the system.

The no-action alternative could adversely affect wildlife over the long-term because no action would be taken to enhance or restore sensitive injured resources. Furthermore, this alternative does nothing to protect existing habitat that is essential for natural recovery processes to occur. Without some type of additional protection or enhancements, these species, and their habitats, may continue to decline. Threatened species, such as the marbled murrelet, may never reach their pre-spill recovery potential without additional protection and enhancement restoration activities.

OPA clearly establishes trustee responsibility to seek compensation for interim losses pending recovery of the natural resources. This responsibility cannot be addressed through a no-action alternative.

Although some natural recovery is expected, it is the Trustees' opinion that direct intervention is required to address potential acute and sub-lethal injuries to the natural resources resulting from the spill. In addition, no benefits would be realized from the settlement to recover injured resources and the obligations of the consent decree would not be met. For these reasons, the Trustee Committee did not select the no-action alternative as an effective restoration option.

##### **Alternative B: Population-Focused Restoration**

The goal of this restoration alternative is to increase populations of seabird and kelp through direct manipulations to population parameters. Actions taken under this alternative are designed to increase the rate of immigration and potential breeding, decrease the age at which individuals first attempt to breed, decrease disturbance at nesting colonies to potentially increase nesting success, and increase the probability that an adult bird will survive and successfully breed during

any given year. As such, this alternative provides the mechanisms to reduce the mortality of adult seabirds and for rapid colonization and restoration at localities where breeding does not occur, or is severely depressed.

The environmental consequences associated with population manipulation restoration should be minimal. Adverse impacts to wildlife could occur as there is some potential for actions that benefit one group of species to have short-term impacts on other species. In addition, increased interaction between predators and injured prey species may result. There would be no significant effects on the quality of the human environment if these projects are implemented.

The Trustee Committee considers this a strong alternative for an effective restoration of injured resources.

### **Alternative C: Habitat-Focused Restoration**

The objective of this restoration alternative is to provide quality habitats such that natural processes may result in the recovery of injured populations. Furthermore, quality habitats may also provide the range of resources necessary to maintain food webs or other structural components of ecosystems.

Interim and permanent protection of habitats is a viable restoration tool that clearly offers not only the potential for restoration of the resources injured by the *Tenyo Maru* oil spill, but also the potential for comprehensive rehabilitation and protection, in perpetuity, of the ecosystems in which these injured species are a part. The proposed projects listed under this alternative will potentially increase the amount of protected nesting habitats available to marbled murrelets and improve conditions for nesting at existing occupied stands, and decrease sedimentation in selected watersheds to enhance kelp beds at the mouth of rivers. The goals of the projects include reducing the risk of spills associated with drift groundings in the affected area, providing additional assurances that natural recovery of injured resources will occur.

Protection of nesting habitat and a decrease in nesting predation and occupied stand degradation could help reduce the rate of decline of marbled murrelets in Washington. An enhanced kelp community offers more forage habitats for salmonids, and other forage fish, urchins, and subsequently sea otters and seabirds.

Permanent protection and alteration of existing habitats offer moderate to high potential for benefitting injured resources. In addition, impacts from application are low to moderate. The habitat-focused alternative has a high potential for reducing habitat fragmentation and would directly benefit functions that support fish and wildlife resources. Improvement of habitat functions has been the primary method of conducting coastal aquatic restoration over the past fifteen years (Simenstand and Thom 1992). There is a relatively long history documenting the success of this type of action that has shown that fisheries and wildlife resources can benefit from constructing and rehabilitating natural habitats. This alternative offers a growing level of confidence to restore functioning habitats for injured resources.

In addition, prevention of future oil spills is necessary if efforts to restore resources injured by the *Tenyo Maru* oil spill are to enjoy long-term success. The Trustees have proposed to fund an effort to station an emergency towing system at the mouth of the Strait of Juan de Fuca during the 1999-2000 winter season. This effort will help ensure that restoration of injured resources is not disrupted by further oil spills during this period and will collect data that will be used to evaluate the feasibility of more permanent measures to prevent oil spills in the affected area. This alternative offers additional confidence that long-term restoration of injured resource will occur.

#### **Alternative D: An Integrative Restoration Approach**

The intent of the Trustee Committee is to provide a restoration plan that will restore populations injured by the *Tenyo Maru* oil spill and balance activities so that the integrated structural components of whole ecosystems (e.g., physical habitats, food webs) are preserved or enhanced. This integrative approach to restoration combines the positive aspects of Alternatives A, B, and C, and maintains the low level of negative environmental consequences assumed to be associated with these alternatives. This will provide not only the greatest array of potential projects, but also the greatest opportunity to integrate projects into comprehensive ecosystem-level restoration, benefitting the greatest number of species.

This integrative approach to restoration is the only alternative in this restoration plan that fosters comprehensive restoration of injured resources at both the population and ecosystem levels, and by that, promotes the long-term sustainability of resources. It provides the greatest flexibility and the most options for restoring, replacing, rehabilitating, and/or acquiring the equivalent of natural resources injured as the result of the discharge of oil, and therefore, has been identified by the Trustee Committee as the selected alternative.

#### **4.1 Proposed Project Schedules and Estimated Budgets**

##### **Restoration of Common Murre Colonies in Copalis National Wildlife Refuge, Washington State**

***Schedule:*** Upon final approval of the project; a specific work plan for Phase I will be generated by the project coordinator(s). Phase I will be completed within two years. If Phase II is conducted, there will be an annual review of the project and the Trustee Committee will discuss the progress and evaluate the relevance of continuing the project.

***Estimated budget from Tenyo Maru Funds:***                      \$1,800,000

\*Any unused funding will be redistributed to either the Marbled Murrelet Habitat Protection and River Silt Reduction Project (Section 3.3.1) or a tufted puffin restoration project.

##### **Oiled Wildlife Rehabilitation Center**

***Schedule:*** Upon final approval of the project, the Washington Wildlife Rescue Coalition has three years to secure outside funds for the project.

***Estimated budget from Tenyo Maru Funds:***           \$500,000

\*If the State is unable to secure outside funding, the *Tenyo Maru* restoration contribution of \$500,000 will be redistributed to the Marbled Murrelet Habitat Protection and River Silt Reduction Project (Section 3.2.3.1).

**Public Education Signs and Brochures**

***Schedule:*** Upon final approval of the project proposal, implementation must begin within two years.

***Estimated budget from Tenyo Maru Funds:***           \$100,000

**Marbled Murrelet Habitat Protection and River Silt Reduction**

***Schedule:*** Suitable available marbled murrelet nesting habitat protection sites will be selected within 2 years of the final approval of the project. In the interim, the Trustee Committee will identify and consult with co-trustees and environmental organizations who would be willing to assume title on any appropriate parcels or to guarantee their conservation status and restricted uses. Permanent habitat protection (purchase, lease, conservation easement, etc.) will be secured within 1 year of final approval of the site by the Trustee Committee. Because of extenuating circumstances that may be associated with securing properties, the Trustee Committee may choose to extend this schedule on a case-by-case basis. If the time limits are exceeded, the funds earmarked for marbled murrelet nesting habitat protection will be reallocated to other *Tenyo Maru* projects identified in the plan.

Phase 1 (feasibility phase) of the river silt reduction component will be completed within 6 months of the notice of the availability of a final restoration plan. Selected and approved projects will have the appropriate permits in place and be ready to be implemented under Phase II within 2 years of the completion of Phase I. If the time limits are expired, the remaining funds will be reallocated to other *Tenyo Maru* projects identified in the plan.

***Estimated budget from Tenyo Maru funds:***

Habitat surveys, project development, implementation, and monitoring - \$2,500,000  
( *Break out costs: 6 mo. feasibility study for the river silt reduction component = \$ 60,000;*  
*monitoring costs for marbled murrelet nesting habitat protection = \$10,000*)

**Emergency Towing Vessel**

***Schedule:*** Upon final approval of the project, funds will be transferred to the WDOE to be held and made available only to fund the stationing of a rescue tug in the area of operations. These funds would be added to any funds secured by other agencies. By June 1, 2000, the WDOE shall return to the *Tenyo Maru* restoration account any funds disbursed pursuant to this plan and not expended or obligated for this purpose. In the event that the rescue tug assistance efforts funded under this plan are subject to reimbursement from responsible parties, the Oil Spill Liability Trust Fund (established by 26 U.S.C. § 9509) and/or other sources, the WDOE shall seek

reimbursement from those parties or sources. In the event the WDOE subsequently obtains such reimbursement, the WDOE shall promptly return the reimbursed sums to the *Tenyo Maru* restoration account. Any funds returned to the *Tenyo Maru* restoration account under these provisions shall be distributed to the Marbled Murrelet Habitat Protection and River Silt Reduction Project (Section 3.2.3.1).

***Budget from Tenyo Maru Funds: \$400,000***

## 5.0 Environmental Consequences

To restore resources lost as a result of the oil spill, the Trustees examined a variety of restoration alternatives. These included alternatives:

- 1) no action and natural recovery,
- 2) population-focused restoration,
- 3) habitat-focused restoration, and
- 4) integrative restoration.

The integrative restoration approach is the alternative selected by the Trustees. The *Tenyo Maru* Trustees intend to avoid or reduce negative impacts to existing natural resources and services to the greatest extent possible. However, the Trustees could undertake actions that may have short or long term effects upon existing habitats or non-injured species. Project specific environmental consequences for each alternative and associated projects are provided in Section 3. This section addresses the potential overall cumulative, direct, and indirect impacts, and other factors to be considered in both the OPA and the NEPA regulations.

The *Tenyo Maru* Trustees believe that the projects selected in this restoration program will not cause significant negative impacts to natural resources or the services they provide. Further, the Trustees do not believe the proposed projects will adversely affect the quality of the human environment in ways deemed “significant.”

**Cumulative Impacts:** Since the projects are primarily designed to restore degraded habitats and improve recovery of injured natural resources, the cumulative environmental consequences will primarily be beneficial. These cumulative impacts include long-term restoration of the condition and functioning elements of the injured ecosystem by increasing the number of individual seabirds that attempt to reproduce, the recruitment of seabird and kelp populations, and the amount and condition of protected habitats. Both project and NEPA monitoring of projects funded under the *Tenyo Maru* restoration fund will verify that cumulative impacts will be beneficial rather than adverse. Any cumulative adverse effects on an area or other area program, plan, or regulatory regime from a proposed project, will result in the project being redesigned or abandoned.

**Indirect Impacts:** Environmental consequences would not be limited to the project location. Indirect beneficial impacts would also occur throughout populations and habitats in Western Washington and Oregon. Cumulative impacts at the project locations, and in the surrounding area, are expected to increase populations of seabirds and kelp, provide improved habitats for a variety of fish and wildlife, and provide a greater understanding of human interaction with natural resources. This alternative could indirectly benefit a variety of federally *threatened and endangered species* and Washington State listed sensitive species by providing nesting, feeding, resting, rearing and other forms of habitats utilized during the lives of these species.

**Direct Impacts:** Providing improved habitats, improving the survivability of seabirds of all age classes, preventing future oil spills, and enhancing natural seabird and kelp recruitment may aid in replenishing the resources injured in the *Tenyo Maru* oil spill. The restoration projects may increase the survivability of seabirds and kelp not killed in the oil spill, will help protect natural

recovery of affected resources, and will aid in replenishing the natural population by increasing productivity levels.

Overall, this alternative should enhance *water and sediment quality* and the functionality of ecosystems. However, some brief impacts from the proposed actions may include short-term disturbances from *noise and air pollutants* from construction activities and interim emergency response vessel operations; short-term water and sediment quality impacts; temporary disruption of animal migrations, breeding and nesting; short-term disturbances of existing plant communities; and temporary disturbances of ecological processes while the restored system reaches maturity.

It is the Trustees' intention to keep *construction* categorized as very "minor." The term of any construction projects (e.g., sediment control activity, forest manipulation, and the posting of signs) is anticipated to be very short, generally from two to four weeks.

Projects that involve short-term construction activities and the operation of the interim emergency response vessel could generate noise from machinery and equipment. If specific construction projects are to be conducted in "noise sensitive" areas, project specific environmental assessments will be conducted and include the extent of any impact. The proposed restoration projects could cause an increase in noise from resident and migrating birds, which would be a potential long-term impact. As habitat is restored or improved, birds and other wildlife should become more plentiful in the project area. However, the areas surrounding the proposed projects areas are primarily water or wilderness areas. It is not anticipated that any significant *noise impacts* would result from the projects proposed by the Trustee Committee.

Implementation of the proposed projects should result in no significant impact to *water quality*. Habitat modification activities in or next to streams or rivers, could have short-term water quality impacts through temporary increases in sedimentation and turbidity. Any impacts resulting from restoration construction activities will be mitigated by using techniques such as the use of sediment curtains or other technologies designed to reduce sediment transport. Any construction equipment would be monitored to ensure diesel, gas, or oils are not released into waters at or next to the project site. The Committee believes that restoration activities would result in insignificant effects to this resource.

No long-term adverse effects to *sediment quality, soils, or geologic conditions* are anticipated under this restoration plan. The Trustee Committee does not anticipate any temporary or permanent *visual impacts* from any of the projects and none of the proposed restoration actions should have a significant impact on *energy consumption*, although minor increases in the consumption of fuel will likely result from emergency response vessel operations. No projects would directly or indirectly affect *wetlands or flood plain areas*. Furthermore, the *Tenyo Maru* Trustees do not believe any of the proposed restoration projects would have a significant impact on the *coastal zone*, but specific projects in the coastal zone will undergo the appropriate coastal zone consistency review requirements.

The project sites are wilderness areas, areas surrounded by water or areas under water. Restoration work should not have any *social or economic impacts* upon the neighborhoods or community cohesion for various groups from proposed projects. Property values should not be decreased, nor will there be any separation of the communities' residents from community facilities. Due to the nature and purpose of the Restoration Plan, there are no anticipated human relocation issues. Stationing of the emergency response vessel at Neah Bay may result in a short-term increase in economic activity in that community.

General *land use patterns* and *aesthetic qualities* should not be adversely affected under the preferred alternative for the following reasons. Open space and recreational uses are scattered throughout the study area and forested areas. Land ownership may be affected if direct land purchase is required, however this should not affect the overall balance of ownership patterns within the study areas. Land management practices will not be affected since the pertinent local plans and ordinances, and state planning regulations, encourage the preservation and restoration of the area's vital natural resources.

*Public access* to natural resources could be affected. The proposed public education project includes interpretive signs that should make the public more aware of the environment that they are viewing. Subsequently, this could draw more frequent human visitors, however, the number is anticipated to be insignificant. The signs are intended to educate those present, to increase awareness, and not to attract. It is the intent of the Trustees to balance the goals of public access and habitat restoration whenever possible. Recreation and tourism will not be negatively affected by the proposed projects, however, the public may be more educated on how to avoid impacts to seabirds while recreating or touring on or near islands that support seabird colonies.

Specific restoration sites and their perceived potential impact upon *water-oriented commerce* would be addressed on a site-by-site basis, as would be their eligibility for the *National Historic Register of Historic Places*. Since all site-specific projects would be designed to identify historic properties, potential effects on *tribal treaties* and *archaeological preservation* and mitigate for any potential impacts, it is not anticipated that historic properties would be affected under any of the proposed actions. Information on prime and *unique agricultural lands* will be solicited from the United States Department of Agriculture upon selection of specific *Tenyo Maru* restoration sites.

No significant negative impacts to *threatened or endangered species* are expected to result from the integrated approach. Consultation under the Endangered Species Act would occur prior to any on the ground activities that may affect listed species. If actions under this alternative are determined to adversely affect federal or state-listed species, the project would be redesigned, relocated or abandoned. The chance of any *Tenyo Maru* restoration project having a negative impact on *fish and wildlife* is insignificant, limited only to the duration of construction and other activities. The anticipated overall environmental effect on fish and wildlife is to restore and maintain species diversity and abundance in Washington and Oregon.