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This section describes the 17 individual restoration actions that underwent detailed evaluation and National Environmental Policy Act (NEPA)/California Environmental Quality Act (CEQA) analysis. Because the full evaluations of all 17 actions are lengthy, only their summaries are provided here (Section 6.1); the complete write-ups have been placed into four appendices:

- Appendix A (Fishing and Fish Habitat Restoration Actions)
- Appendix B (Bald Eagle Restoration Actions)
- Appendix C (Peregrine Falcon Restoration Actions)
- Appendix D (Seabird Restoration Actions)

The reader is directed to these appendices for a more thorough discussion of each of the 17 restoration actions.

To facilitate review of this Restoration Plan, the Natural Resource Trustees for the Montrose case (Trustees) assembled different combinations of these individual restoration actions into two comprehensive restoration plan alternatives and a "no action" alternative that address the entire range of resources and services to be restored. These three alternatives are evaluated and compared in Section 6.2 to illustrate the trade-offs involved in emphasizing different restoration priorities. The alternatives consist of Alternative 1 (No Action), Alternative 2 (Preferred), and Alternative 3.

Section 7 presents the NEPA/CEQA analysis of potential environmental consequences, including the cumulative impact analysis and the other discussions mandated by NEPA/CEQA for the three alternatives.

6.1 SUMMARIES OF THE INDIVIDUAL ACTIONS THAT RECEIVED DETAILED EVALUATION

This section provides summaries of the 17 restoration actions resulting from the Tier 1 and Tier 2 evaluations. Ten of the restoration actions are of a sufficient level of detail and specificity that they will not need further NEPA/CEQA environmental review beyond this Restoration Plan. The remaining seven restoration actions are still under development and will require supplemental NEPA and/or CEQA documentation before implementation (Table 6-1).

The discussions of costs that accompany the descriptions of the restoration actions are not action-specific allotments of Montrose Settlements Restoration Program (MSRP) funding, as they do not reflect potential cost-sharing opportunities and do not factor in contingencies. Even without contingencies factored in, the sum of all of these individual cost estimates exceeds the available MSRP funding. The Trustees will fund $25 million in restoration work during Phase 1 of implementation (years 2005–2010), allocated among actions that restore fishing and fish habitat, bald eagles, peregrine falcons, and seabirds. The Trustees will also pursue funding partnership opportunities where appropriate.

Table 6-1
Restoration Actions for Which this Programmatic EIS/EIR Constitutes Complete NEPA/CEQA Review

Restoration Actions Evaluated in Tier 2	Actions for Which this Plan Represents the Complete NEPA/CEQA Analysis	Actions That Would Require Additional NEPA and/or CEQA Analysis if Pursued
Fishing and Fish Habitat		
Construct artificial reefs and fishing access improvements		✓
Provide public information to restore lost fishing services	✓	
Restore full tidal exchange wetlands		✓
Augment funds for implementing Marine Protected Areas in California	✓	
Bald Eagles		
Complete the NCI Bald Eagle Feasibility Study before deciding on further restoration actions		✓
Complete the NCI Bald Eagle Feasibility Study; regardless of its outcome, continue funding Santa Catalina Island Bald Eagle Program	✓	
Peregrine Falcons		
Restore peregrine falcons to the Channel Islands		✓
Monitor the recovery of peregrine falcons on the Channel Islands	✓	
Restore peregrine falcons to the Baja California Pacific Islands	✓	
Seabirds		
Restore seabirds to San Miguel Island		✓
Restore alcids to Santa Barbara Island	✓	
Restore seabirds to San Nicolas Island		✓
Restore seabirds to Scorpion and Orizaba Rocks	✓	
Restore seabirds to Baja California Pacific Islands	✓	
Create/enhance/protect California brown pelican roost habitat		✓
Implement an entanglement reduction and outreach program to protect seabird populations	✓	
Restore ashy storm-petrels to Anacapa Island	✓	

CEQA = California Environmental Quality Act
EIR = Environmental Impact Report
EIS – Environmental Impact Statement
NCI = Northern Channel Island
NEPA = National Environmental Policy Act

6.1.1 Fishing and Fish Habitat Restoration Actions

Construct Artificial Reefs and Fishing Access Improvements

Constructed reefs have often been employed as a means of recruiting and/or producing fish as mitigation for environmental impacts. An MSRP-constructed reef program would have the added specific objectives of recruiting and/or producing fish lower in DDTs and PCBs for anglers to

catch and displacing highly contaminated soft-bottom species from a fishing location (Figure 6-1). For this reason, the geographic placement of reefs will require that the predominant reef-dwelling species in the area not be limited or less limited by fish consumption advisories than the predominant soft-bottom species. Several critical design considerations will also guide the location and development of all restoration reefs (including degree of sediment contamination, existing fishing pressure and accessibility, suitability for kelp recruitment and establishment, and consideration of other human uses). Thus, in this Restoration Plan, constructed reefs and fishing access improvements are evaluated as a general action in Tier 2 rather than as a set of site-specific actions. This action will require supplemental analysis, siting, design, and public and environmental review prior to implementation.

A complementary part of this action will be to implement various fishing access improvements (e.g., improvements to piers) to facilitate and encourage fishing in the areas where habitat manipulation is performed. Together, reef construction and fishing access improvements can target fishing sites where the continued impact of contamination is greatest (i.e., where fish consumption advisories are in effect), measurably improve the opportunities for catching fish lower in contamination, and do so in a self-sustaining manner. Access improvements can also act as compensatory restoration for past losses in fishing opportunities resulting from fish consumption advisories by enhancing the quality of the fishing experience.

The costs of this action are scalable. That is, the more funds that are made available, the more reef and access improvements that can be implemented. Depending on reef size, whether and what type of fishing access improvements are included, and potential cost sharing with partners, the Trustees estimate potential costs of $1 million to $4 million per site, and propose an objective of constructing two to three reefs in the initial implementation phase of the Restoration Plan.

Additional information on this action can be found in Appendix A1.

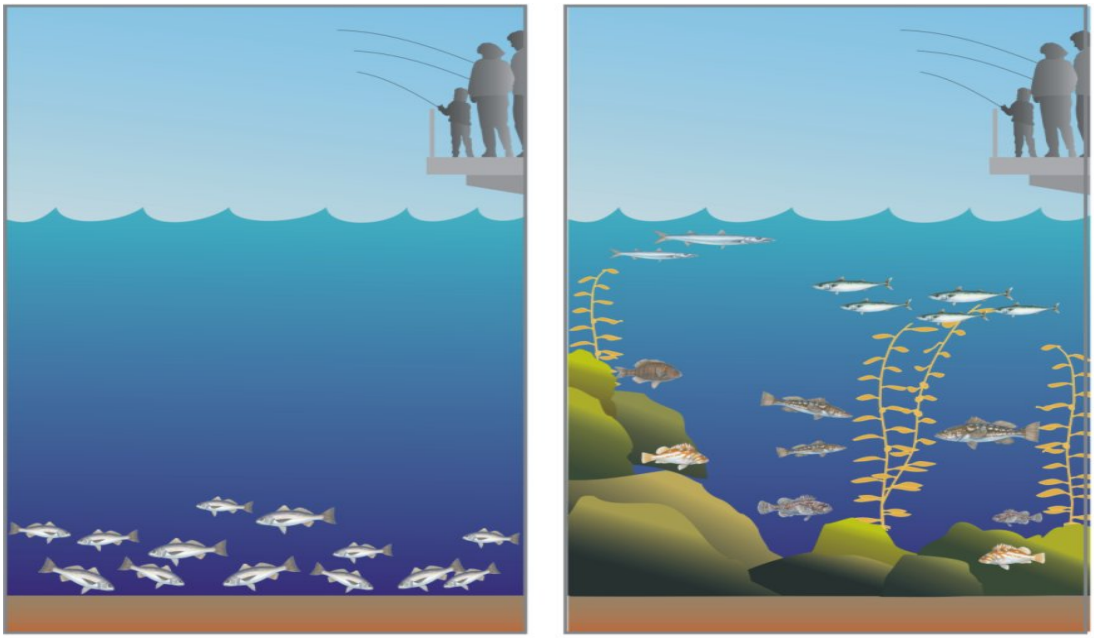


Figure 6-1. Changes in fish community structure with the placement of an artificial reef.

Provide Public Information to Restore Lost Fishing Services

The goal of this action is to build on the public outreach and education work initiated by the U.S. Environmental Protection Agency (EPA) through the establishment of the Fish Contamination Education Collaborative (FCEC). The FCEC is a federal, state, and local partnership project that addresses public exposure to contaminated fish in the Southern California coastal area. The FCEC focuses on educating the public about the human health hazards associated with DDT and PCB contamination in fish. In particular, the FCEC provides information to help people reduce their exposures to DDTs and PCBs from the fish they eat.

The Trustees will expand this ongoing effort to increase fishing services by providing information to anglers that allows them to make sound decisions about where and for which species to fish. The Trustees will also provide outreach materials that establish the link between the ecology and life history of a particular species and its tendency to bioaccumulate contaminants. This information will enable people to make knowledgeable choices about where, when, and for which species to fish and in doing so will minimize anglers' exposure to contaminants, regardless of where they fish. This action has a strong nexus to the ongoing loss of natural resource services caused by the contaminants of the case (which have led to the imposition of state fishing advisories and other limitations on the human use values of fish).

The costs of this action, which will include both public information work and periodic monitoring of fish to supplement the fish contamination survey currently being completed, are scalable. Clear opportunities exist to collaborate with the ongoing EPA-funded efforts to inform the public about fish contamination and safe fish preparation and consumption. This action will expand these efforts by focusing on the link between fish ecology and life history and the risks they impose on their consumers. In particular, the action will identify the fish species that are free of consumption advisories and the locations where anglers can catch them. Thus, this action would directly and effectively address the human use fishing losses associated with the Montrose case.

Additional information on this action can be found in Appendix A2.

Restore Full Tidal Exchange Wetlands

Wetlands restoration was evaluated as a general action that will require further planning and site selection. Because large-scale wetlands restoration is costly and numerous entities are involved in coastal wetlands restoration in the Southern California region, the presumption is that MSRP funds will be used to augment efforts at a specific larger-scale restoration project in the region. In particular, MSRP funding will be directed at habitat restoration that seeks to promote the production of commonly caught coastal fish species, such as the California halibut. Several wetland restoration sites in the region at different stages of planning and funding could serve this purpose.

The benefits from estuarine wetlands habitat restoration and improved fish catch services for anglers who fish in surrounding coastal areas are not as readily measurable or likely as substantial as the benefits from constructed reefs. However, the restoration of coastal estuarine wetlands contributes to the overall restoration of fish and their habitats, as identified in the Montrose consent decree. By including wetland restoration among the fishing and fish habitat actions, the Trustees will provide a more diverse method of addressing the ongoing injuries and

lost services and compensating for interim losses. It is also conceivable that fishing benefits could be derived from coastal wetlands restoration if they are designed to create new fishing sites.

The costs of this action are scaleable and proportional to the size and complexity of the action undertaken. Existing large-scale wetlands restoration work involving significant engineering (such as the work at Bolsa Chica in Orange County) can cost several tens of millions of dollars, not including land acquisition costs. Given the limits of MSRP funding, restoration funds will be best used to complement funding from other sources in achieving larger-scale habitat improvements. The specifics of the site and the nature of the wetlands restoration work will be guided by the MSRP goals and objectives for restoring fishing and fish habitat. The Trustees will inventory current coastal wetlands restoration planning efforts and funding gaps in Southern California and identify a project or projects where MSRP funds will help realize broad-scale accomplishments. Once a specific project is identified, further NEPA and/or CEQA analysis will be performed. Such analysis will likely be part of the broader documentation by the lead agency or agencies for the overall wetlands restoration effort to which MSRP funds will be contributed.

Additional information on this action can be found in Appendix A3.

Augment Funds for Implementing Marine Protected Areas in California

The goal of this action is to improve the fish habitat function in Southern California by augmenting funds needed to evaluate and implement Marine Protected Areas (MPAs) as part of an ecosystem-based management approach for fishery resources. The primary focus of this action will be to provide needed funds for implementation of the recently established Channel Islands network of MPAs to ensure that they provide the best possible basis for further implementations of MPA networks throughout California. Although this action will provide specific benefits to the fish habitats adjacent to the Northern Channel Islands, the action will also provide longer-term benefits for fishing and fish habitats throughout California by helping to generate sound empirical underpinnings for the site and design of future networks of MPAs. The recently established network of MPAs in the Channel Islands is currently the most appropriate area for such an effort because those MPAs were specifically designed to evaluate the utility of using MPAs as a management tool. If MPA networks are established along mainland coasts in the future, the Trustees will consider directing additional funds to their implementation and/or evaluation during the next phase of restoration, particularly if they are established in Southern California.

Through this action, MSRP funds will contribute to the goals of (1) ensuring that the MPAs function as intended (i.e., through effective public awareness and enforcement efforts) and (2) measuring the impacts (positive and negative) of MPAs on fishing services. The Trustees propose to contribute approximately $500,000 toward these MPA efforts over five year to fill, in part, funding gaps identified by the implementing agencies. Depending on the findings of the monitoring efforts, the effective management of MPAs in the Northern Channel Islands may ultimately lead to the expanded use of this fisheries management tool throughout California, including the Palos Verdes Shelf region.

Additional information on this action can be found in Appendix A4.

6.1.2 Bald Eagle Restoration Actions

Bald eagle restoration throughout the Channel Islands presents a special situation because the bald eagles introduced to and currently nesting on Santa Catalina Island continue to exhibit reproductive injuries caused by ongoing exposures to DDTs and PCBs. Also, even though bald eagles historically inhabited most of the Channel Islands, we do not yet know if they would have greater success reproducing on islands other than Santa Catalina Island (none of the Santa Catalina Island bald eagles has established territories on any of the other Channel Islands). Thus, selecting restoration actions requires consideration of interrelated factors and depends ultimately on the outcome of the ongoing Northern Channel Islands (NCI) Bald Eagle Re-establishment Feasibility Study (referred to as the NCI Bald Eagle Feasibility Study). This section describes the two contrasting options for bald eagle restoration addressed in this plan.

Complete the NCI Bald Eagle Feasibility Study Before Deciding on Further Restoration Actions

Under this course of action, the Trustees will defer making longer-term decisions on bald eagle restoration until the NCI Bald Eagle Feasibility Study results are known (in or around 2008). Also, the Trustees will discontinue funding for the Santa Catalina Island Bald Eagle Program during the interim period until the results of the NCI Bald Eagle Feasibility Study are known. At that point, the Trustees will re-evaluate all potential options for bald eagle restoration, including actions that might be taken even if bald eagles are not able to reproduce on their own anywhere in the Channel Islands. The remaining bald eagle restoration funds could then be used on any of the Channel Islands. This action conserves limited restoration funds until sufficient information is known on the ability of the environments on the different Channel Islands to support bald eagles.

This course of action is modified from the one proposed in the draft Restoration Plan and programmatic EIS/EIR, which was released for public comment in April 2005. The modification is a result of the Trustees' consideration of the public comments received. In the draft Restoration Plan and programmatic EIS/EIR, the Trustees had proposed that the restoration of bald eagles proceed only if it was ultimately found that they are able to reproduce on their own in the Northern Channel Islands. If the results of the NCI Bald Eagle Feasibility Study indicated that there were no territories in the Channel Islands where bald eagles could reproduce unaided, the preferred course of action proposed in the draft Restoration Plan called for the bald eagle restoration efforts to cease and the remaining funds to be either set aside or used for seabird restoration.

The Trustees received diverse and opposing public comments on the advisability of bald eagle restoration given the continued observation of contaminant effects on Santa Catalina Island. However, predominantly the public comments expressed the desire to maintain the presence of bald eagles on the Channel Islands regardless of whether or not they can reproduce successfully on their own. After considering the public comments and the evaluation criteria for this Restoration Plan (particularly the preference that actions have long-term benefits and minimal ongoing operation and maintenance requirements), the Trustees modified the preferred action for bald eagles to provide for a re-examination of all options once the results of the NCI Bald Eagle Feasibility Study are known, rather than predetermining subsequent actions. The re-examination will be conducted with opportunity for public review and comment in a subsequent document.

The results of the NCI Bald Eagle Feasibility Study are expected to be known in or around 2008. If the results show that the birds released on Santa Cruz Island are able to fledge chicks without human intervention, the Trustees may continue releasing and monitoring bald eagles on Santa Cruz Island. The Trustees anticipate that if eagles can successfully reproduce on the Northern Channel Islands, then eagles will eventually repopulate the rest of the Channel Islands, including Santa Catalina Island. The general methods for additional hacking and monitoring would be the same as those outlined in the Feasibility Study for Reestablishment of Bald Eagles on the Northern Channel Islands (MSRP 2002).

In light of the continuing high levels of contamination in bald eagles on Santa Catalina Island, continued funding of the Santa Catalina Island Bald Eagle Program over the near term is unlikely to achieve the goal of long-term restoration of bald eagles to the Channel Islands. Thus, during the interim period until the NCI Bald Eagle Feasibility Study is completed, the Trustees have chosen to focus restoration efforts on the Northern Channel Islands, which continue to hold the potential for long-term restoration, and discontinue funding of the Santa Catalina Island Bald Eagle Program.

Even without continued Trustee funding for the current Santa Catalina Island Bald Eagle Program, it is highly likely that bald eagles will remain on the island for several years despite their inability to hatch offspring naturally. Bald eagles in the wild typically live for 25 to 30 years, and Santa Catalina Island currently supports 15 to 20 birds of a wide range of ages. There are currently five active bald eagle nesting territories on the island, and the Institute for Wildlife Studies reports that two birds are currently establishing a new territory near Avalon. Even assuming that the Santa Catalina Island bald eagles fail to hatch new chicks in the coming years, bald eagle experts do not expect that the eagles will immediately break their pair bonds and abandon their Santa Catalina Island territories. Rather, it is likely that bald eagles will remain on the island, with their numbers diminishing gradually over a period of as many as 10 years or longer as some of the birds die and are not replaced by others or certain bald eagle pairs break their pair bonds and leave after several years of failing to produce chicks.

Thus, the Trustees anticipate that bald eagles will still inhabit several of the Channel Islands, including Santa Catalina Island, when the NCI Bald Eagle Feasibility Study results are known in or around 2008. If the results of the NCI Bald Eagle Feasibility Study indicate that bald eagles throughout the Channel Islands still experience reproductive impairment due to the persistence of DDTs and PCBs in their diets, the Trustees would explore various options for further bald eagle restoration on one or more of the Channel Islands, including Santa Catalina Island. Some options may not be as costly as the current egg manipulation and chick fostering work being conducted on Santa Catalina Island. For example, the Trustees could fund a monitoring and hacking program to maintain a non-breeding bald eagle presence on the Channel Islands (and thus maintain their human use and ecological services) for as long as funds remain available or until contaminant levels decline to a level that would support naturally reproducing eagles.

The Trustees will release a subsequent NEPA/CEQA document for public review and input once the results of the NCI Bald Eagle Feasibility Study are known. The document will be released between 2008 and 2010 and will outline the next steps for bald eagle restoration on the Channel Islands.

To fund this course of action, a total of $6.2 million will be allocated for bald eagle restoration on the Channel Islands. This allocation would cover the costs of the Santa Catalina Island Bald

Eagle Program through 2005 (approximately $1.2 million spent since 2001) and the ongoing NCI Bald Eagle Feasibility Study (approximately $3.3 million). After funding these two efforts, the balance remaining would be approximately $1–2 million. The Trustees will defer a decision on how to use these remaining funds until the results of the NCI Bald Eagle Feasibility Study are known. At that time, the Trustees will consider a range of restoration options and decide on the best course of action. Additional funds could be used on any of the Channel Islands.

Additional information on this course of action can be found in Appendix B.

Complete the NCI Bald Eagle Feasibility Study; Regardless of its Outcome, Continue Funding Santa Catalina Island Bald Eagle Program

This course of action would continue to maintain bald eagles on Santa Catalina Island through human intervention (e.g., egg manipulation, incubation, and chick fostering) for as long as funds remain available. Under this course of action, which is not an interim but a longer-term action, efforts to restore bald eagles to the Channel Islands would focus on the continuous maintenance of the Santa Catalina Island bald eagle program for as many years as funds are available, with the hope that eventually the Santa Catalina Island birds' exposures would decline to a level that would allow them to reproduce on their own. Maintenance of the bald eagles on Santa Catalina Island would be favored over efforts to repopulate the Northern Channel Islands due to the existing infrastructure and ongoing program on Santa Catalina Island. Under this course of action, financial support of the Santa Catalina Island program would continue after 2005. The NCI Bald Eagle Feasibility Study would also continue until its results were known.

Under this course of action, the Trustees propose to allocate a total of $10 million for bald eagle restoration on the Channel Islands. Approximately $4 million would be used through the end of the NCI Bald Eagle Feasibility Study (supporting both the NCI and Santa Catalina Island programs), leaving approximately $6 million to place into a long-term endowment or other financial mechanism to support the continuation of the Santa Catalina Island Bald Eagle Program for as long as possible or until such time as the birds are able to reproduce successfully on their own. The $6 million would fund approximately 22 years of restoration efforts on Santa Catalina Island if the average annual cost remains at approximately $270,000. This estimate does not include any interest that may be generated.

Additional information on this course of action can be found in Appendix B.

6.1.3 Peregrine Falcon Restoration Actions

Restore Peregrine Falcons to the Channel Islands

The goal of this action is to accelerate the recovery of peregrine falcons to the Channel Islands. For the last several years, the number of peregrine falcon pairs has been steadily increasing on the islands, though recolonization on the Southern Channel Islands has been slower than on the Northern Channel Islands for reasons not yet fully understood. Because the majority of the known occupied territories in 2004 occurred on the Northern Channel Islands (18 of 21), this 5-year action would involve active restoration of peregrine falcons to the Southern Channel Islands through hacking techniques. Implementation of this action would consist of releasing 10 birds per year on Santa Catalina Island, for a total of 50 birds over a 5-year period. A

monitoring component would also be developed for this action. Should this action be selected, further action-specific NEPA and/or CEQA analysis would be prepared. A 5-year active restoration program for peregrine falcons on the Southern Channel Islands would cost an estimated $603,000 plus the costs of additional monitoring.

Additional information on this action can be found in Appendix C1.

Monitor the Recovery of Peregrine Falcons on the Channel Islands

This action proposes to develop a comprehensive program to monitor the recovery of the peregrine falcon on the Channel Islands. This program would monitor the distribution, number of pairs, reproductive success (i.e., productivity), recruitment, foraging behavior, and dispersal of peregrine falcons on the Channel Islands. An essential part of this program would also include contaminant analysis of addled eggs and eggshell measurements, particularly in light of the lack of current data on levels of eggshell thinning and the potential ongoing effect of DDT contamination. The monitoring program would be designed such that data are comparable to previous studies on the Channel Islands (such as the study conducted in 1992). The scope of the monitoring program (including its frequency and intensity) would be developed in consultation with experts. The estimated cost for comprehensive monitoring to occur twice within Phase 1 of implementation is $250,000.

Additional information on this action can be found in Appendix C2.

Restore Peregrine Falcons to the Baja California Pacific Islands

The goal of this 5-year action is to restore peregrine falcons on the Baja California Pacific Islands. Possible actions would include comprehensive surveys of the islands, efforts to reduce impacts from human disturbance, and habitat enhancement. Peregrine falcons have historically nested on the Baja California Pacific Islands but experienced a sharp decline similar to peregrine falcons nesting in the United States. Although peregrine falcons have resumed nesting on some Baja California Pacific Islands, the current status of this species on these islands is largely unknown. The estimated cost for this action over 5 years is $547,000.

Additional information on this action can be found in Appendix C3.

6.1.4 Seabird Restoration Actions

Eight actions for restoring seabirds and their habitats were evaluated in detail. One of the eight actions, Restore Seabirds to Baja California Pacific Islands, was subdivided into four separate sets of actions addressing seabird restoration in four separate island groups.

Restore Seabirds to San Miguel Island

This action aims to restore seabird nesting habitat on San Miguel Island in the Channel Islands National Park by eradicating the introduced black rat (*Rattus rattus*) over a period of approximately 5 years. San Miguel Island and its associated islets, Prince Island and Castle Rock, support regionally important and diverse seabird colonies, including one-third of the breeding seabirds in the Channel Islands. Introduced rats are responsible for approximately 40 to 60 percent of all bird and reptile extinctions from islands and are known to have ecosystem-wide

impacts on California islands. Target bird species for restoration include burrow/crevice nesting seabirds such as the ashy storm-petrel, Cassin's auklet, and Xantus's murrelet, as well as other seabirds such as the western gull, Brandt's cormorant, and pigeon guillemot. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of all of these species in the Southern California Bight (Kiff 1994, Fry 1994).

Because of the presence of several endemic species on San Miguel Island, including the federally endangered island fox, this action will require substantial planning and the development of a comprehensive mitigation program. The National Park Service, with the assistance of the Trustees, will prepare a supplemental Environmental Impact Statement for this action that will undergo public review and comment. The supplemental document will detail the specific methodologies of the action, the expected benefits and impacts, and the proposed mitigation measures to reduce potential impacts. Estimated costs for this action are $2.5 million to $3 million.

Additional information on this action can be found in Appendix D1.

Restore Alcids to Santa Barbara Island

The goal of this action is to re-establish, over a period of 5 years, a once-active Cassin's auklet breeding population on Santa Barbara Island that was decimated by cats brought to the island in the late 1800s. Efforts to re-establish this colony will include using social facilitation methods (e.g., vocalization playback systems to attract other individuals), installing nest boxes, and improving habitat through the removal of non-native vegetation from historical nesting areas and revegetation with native plants. The state-threatened Xantus's murrelet will also be targeted for restoration on the island. Santa Barbara Island is home to the largest colony of Xantus's murrelets in California despite a documented population decline over the last 20 years. Because some Xantus's murrelet nest sites have been lost due to reduction in shrub cover on the island, this action will provide secure nesting area for this species. The main objectives of this habitat restoration effort will be to benefit Cassin's auklets and Xantus's murrelets by: (1) increasing recruitment, (2) increasing reproductive output, and (3) decreasing egg and chick mortality by providing safe breeding habitat. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of both of these species in the Southern California Bight (Kiff 1994, Fry 1994). The estimated cost of this action is $602,000.

Additional information on this action can be found in Appendix D2.

Restore Seabirds to San Nicolas Island

The goal of this action is to restore western gull and Brandt's cormorant colonies on the U.S. Navy–owned San Nicolas Island by eradicating feral cats over a period of approximately 4 years. Eggshell thinning and /or elevated levels of DDTs were documented in the eggs of both of these species in the Southern California Bight (Kiff 1994, Fry 1994).

Introduced predators, particularly feral cats and rats, are one of the greatest threats to seabird populations on islands. Feral cats are directly responsible for a number of extinctions and extirpations on islands across multiple taxa. The U.S. Navy has funded limited cat removal on San Nicolas Island in the past to protect endangered species and sensitive seabird colonies. This action will include expanding these efforts with the goal of eradicating cats from the island.

The successful eradication of cats from the island would result in increases in the currently reduced western gull and Brandt's cormorant colonies on the island. In addition to seabirds, San Nicolas Island supports a large number of endemic species, including at least 20 plant species, 25 invertebrates, one reptile, three birds, and two mammals. Collateral benefits to the island ecosystem are anticipated from the cat removal. The estimated cost of this restoration action is $1.8 million.

Additional information on this action can be found in Appendix D3.

Restore Seabirds to Scorpion and Orizaba Rocks

The goal of this 5-year effort on Scorpion and Orizaba Rocks (off Santa Cruz Island) is to restore seabird habitat through the removal of non-native vegetation, the installation of artificial nesting boxes, and reductions in human disturbance. This action will directly benefit the following nesting or roosting species: Cassin's auklet, ashy storm-petrel, Xantus's murrelet, California brown pelican, and double-crested cormorant. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). This action will also directly benefit rhinoceros auklets.

This action will involve the elimination of invasive plants (e.g., ice plant) and the restoration of native plants such as tree sunflower, buckwheat, and purple needlegrass. Nest boxes will be installed to provide a stable and secure nesting area for Cassin's auklets, Xantus's murrelets, and ashy storm-petrels. Disturbance reduction efforts will be implemented to protect nesting and roosting seabirds from human disturbance. Signs will be deployed around the rocks and at the visitor center on Santa Cruz Island informing the public about the nesting seabirds and the closure of the rock. The estimated cost of this restoration action is $326,000.

Additional information on this action can be found in Appendix D4.

Restore Seabirds to Baja California Pacific Islands

The Baja California Pacific Islands in Mexico support 17 species and 8 subspecies of breeding seabirds, 10 of which also breed on the California Channel Islands. These birds range freely across the U.S./Mexico border. Of these 10 shared species or subspecies, 5 have special status listings in the United States as endangered species, threatened species, or species of special concern. Restoration efforts would target a suite of seabirds, including the Cassin's auklet, Brandt's cormorant, double-crested cormorant, California brown pelican, ashy storm-petrel, and Xantus's murrelet. Nine of the ten islands identified in Figure 6-2 are being considered for seabird restoration, as described below.

Additional information on these actions can be found in Appendix D5.

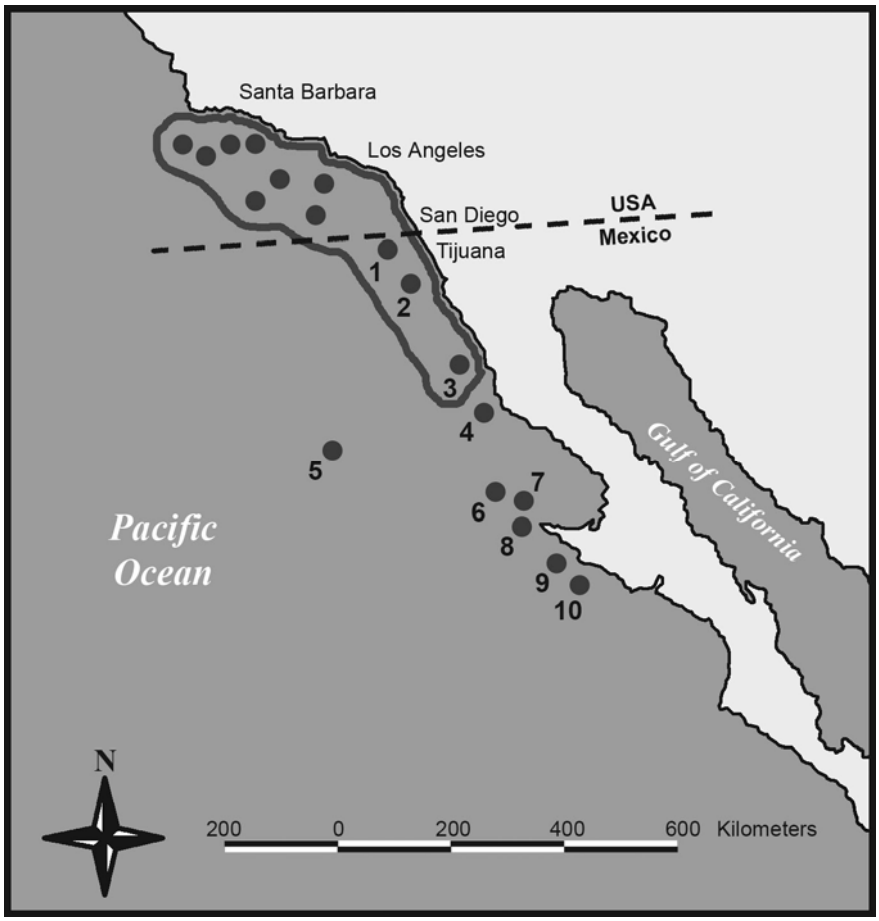


Figure 6-2. Baja California Pacific Islands.

Identification of Islands: (1) Coronado (2) Todos Santos (3) San Martín (4) San Jeronimo (5) Guadalupe (6) San Benito (7) Cedros (8) Natividad (9) San Roque (10) Asunción. The solid line indicates the islands located within the Southern California Bight.

Coronado and Todos Santos Islands

The goal of this action is to restore seabird populations on Coronado and Todos Santos Islands. These islands are oceanographically considered part of the Southern California Bight. To maximize restoration efforts on these islands, which are in close proximity to each other, a combined 5-year restoration action is proposed. Restoration actions will include using social attraction techniques (including decoys and vocalizations), improving nesting opportunities with artificial nests, shielding lights, and reducing human disturbance. The target species for restoration on these islands are Brandt's cormorants, double-crested cormorants, California brown pelicans, western gulls, Cassin's auklets, ashy storm-petrels, and Xantus's murrelets. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). This action will also directly benefit pelagic cormorants and black storm-petrels.

Recent eradication efforts have been undertaken on Coronado and Todos Santos Islands to remove non-native fauna and restore the island ecosystem. The success of these efforts provides a unique opportunity to facilitate seabird recolonization and recovery on these islands. The estimated cost of this restoration action is approximately $1 million.

Guadalupe Island

The goal of this 4-year action is to eradicate feral cats and restore seabird populations on Guadalupe Island. This action will target a suite of seabirds, including Cassin's auklet, Brandt's cormorant, Xantus's murrelet, and western gull. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). Although outside of the Southern California Bight, Guadalupe Island is biogeographically affiliated with coastal Southern California and a part of the critically endangered California coastal sage and chaparral ecoregion. World renowned for its high level of biodiversity, Guadalupe Island supports 34 endemic plants, 2 endemic subspecies of seabirds, 10 endemic land birds, 11 endemic land snails, and at least 18 endemic insects.

Feral cats are a significant threat to seabird populations on Guadalupe Island. Introduced prior to 1880, cats are responsible for the likely extinction of the endemic Guadalupe storm-petrel and the likely extirpation of many other seabird populations from the main island of Guadalupe. Proven techniques used worldwide in recent cat removal programs will be employed in this action. This effort will have both immediate and permanent conservation benefits for seabirds that use the Southern California Bight as well as for the unique ecosystem of Guadalupe Island. The estimated cost of this restoration action is approximately $1.1 million.

San Jeronimo and San Martín Islands

The goal of this 5-year action is to enhance the recovery of seabird colonies following the removal of introduced species on San Jeronimo and San Martín Islands. San Martín Island is oceanographically considered part of the Southern California Bight, whereas San Jeronimo Island is just south of this boundary. To maximize restoration efforts on these islands, a combined action is proposed. Activities on San Martín Island would focus on restoring the California brown pelican, double-crested cormorant, and Brandt's cormorant colonies by reducing human disturbance through signage, public education, and a re-design of the trail system on the island to avoid the colonies. Efforts on San Jeronimo Island would focus on restoring the extirpated Brandt's cormorant colony through social attraction efforts (e.g., decoys) and reducing human disturbance. Additional restoration actions for Cassin's auklets and Xantus's murrelets will include shielding light sources, constructing a boardwalk to stop the destruction of burrows by fisherman walking through the colony, and controlling waste on the island. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). The estimated cost of this action is $751,500.

San Benito, Natividad, Asunción, and San Roque Islands

The goal of these 5-year actions is to restore seabird colonies on the central Baja California Pacific Islands. The San Benito, Natividad, Asunción, and San Roque Islands are clustered around the Vizcaíno Peninsula in central Baja California. Restoration efforts will target a suite of seabirds, including Cassin's auklet, Brandt's cormorant, double-crested cormorant, California brown pelican, and Xantus's murrelet. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). These 5-year restoration actions include rehabilitation of degraded habitat, social attraction of

target species (both decoys and playback systems), use of artificial burrows, reduction in human disturbance through signage, shielding of lights around fishing villages, and waste management.

The estimated budgets for these actions range from approximately $700,000 to $1,000,000.

Create/Enhance/Protect California Brown Pelican Roost Habitat

The goal of this action is to restore critical non-breeding habitat for the California brown pelican by enhancing and protecting coastal roosts along the Southern California mainland. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of this species in the Southern California Bight (Kiff 1994, Fry 1994). Improvements to communal roosts will provide positive benefits to California brown pelicans by reducing the energy costs associated with commuting between prey and roosts as well as flushing and relocating due to human disturbance. This action will consider the creation of new roost habitat, such as a floating dock or a similar structure. Several locations are under consideration for the creation of new habitat, including Batiquitos Lagoon in San Diego County. This action is scalable and the costs can have a considerable range. The estimated costs range from $50,000 to $2 million, depending on the type of action.

Additional information on this action can be found in Appendix D6.

Implement an Entanglement Reduction and Outreach Program to Protect Seabird Populations

The goal of this action is to benefit the California brown pelican and other seabirds by reducing injury from entanglement with fishing line. Entanglement in fishing line and the hooking of California brown pelicans by anglers is a major factor affecting their survival. Seabirds may eat the same fishes being targeted by anglers or may be attracted to the bait at the end of the fishing lines. This action would involve expanding the American Trader Trustee Council's Seabird Entanglement Education and Outreach Program to the fishing piers and wharfs in Southern California where entanglement is a concern. The goal of the program is to provide information in the form of brochures, signs, and wildlife guides that heighten public awareness about the potential hazards to seabirds from fishing tackle and monofilament line. The signs will help promote public awareness and educate anglers about ways to reduce their chances of hooking birds and what to do if one is hooked. The seabirds that will benefit from this action include California brown pelicans, cormorants, and gulls. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of these species in the Southern California Bight (Kiff 1994, Fry 1994). The estimated cost for this action is $22,000.

Additional information on this action can be found in Appendix D7.

Restore Ashy Storm-Petrels to Anacapa Island

The goal of this 5-year action is to facilitate breeding for populations of the rare ashy storm-petrel on Anacapa Island. Eggshell thinning and/or elevated levels of DDTs were documented in the eggs of this species in the Southern California Bight (Kiff 1994, Fry 1994). The suitability of Anacapa Island as breeding habitat for the ashy storm-petrel has been significantly enhanced due to the eradication of the black rat in 2003. Black rats were known to occupy prime nesting habitat on Anacapa Island and likely prevented the ashy storm-petrels from breeding over large

portions of suitable habitat. Ashy storm-petrels were mist-netted on Anacapa Island in 1994, but to date no active nests have been found (Whitworth et al. 2003). Recorded vocalizations and nest boxes will be used to attract the ashy storm-petrels. Ashy storm-petrels are also known to nest on the adjacent Santa Cruz Island (Carter et al. 1992).

This action will benefit a priority seabird that is limited in distribution and has experienced significant population declines. The establishment of a breeding colony of ashy storm-petrels on Anacapa Island will contribute to the recovery of this species. The estimated cost of this action is $609,000.

Additional information on this action can be found in Appendix D8.

6.2 RESTORATION ALTERNATIVES, INCLUDING THE PREFERRED ALTERNATIVE

6.2.1 Development of Alternatives

Under NEPA, CEQA, and the federal National Resource Damage Assessment regulations (Title 43 Code of Federal Regulations [CFR] Part 11.82(c)), the Trustees must consider a range of possible restoration alternatives, including a natural recovery alternative with minimal management actions (i.e., a “no action” alternative). The 17 individual actions evaluated in detail represent a range of options for addressing the specific injuries of the Montrose case. As a final step in developing this Restoration Plan, the Trustees assembled different combinations of the individual restoration actions from Tier 2 into comprehensive alternatives for comparison and analysis.

Not all 17 actions can be included within a single comprehensive Restoration Plan alternative, as some are mutually exclusive (e.g., the two bald eagle actions) and available funding is not sufficient to cover all the actions. The ultimate aim of this Restoration Plan is to identify alternative combinations of these individual actions and to select one preferred alternative that optimizes restoration of natural resources and services within the constraints of available funds. However, one or more actions that are included in the preferred alternative may later unexpectedly prove to be infeasible. If this happens, then actions from the Tier 2 list that were not included in the original alternatives may be substituted as replacements, since all were found to satisfy the evaluation criteria.

Recognizing that this Restoration Plan covers a set of actions that are broad in scope and in some cases still only conceptual, this document has been prepared as a programmatic Environmental Impact Statement (EIS)/Environmental Impact Report (EIR). This programmatic EIS/EIR undertakes general analysis of the restoration program and will be linked to any further action-specific environmental documentation as necessary. The Trustees will proceed by implementing a specific set of actions for the first 5-year phase of restoration (Phase 1). At the end of Phase 1, progress will be assessed and the remaining restoration funds will be allocated. The planning for this subsequent phase of restoration (i.e., Phase 2) will be conducted in or around 2010 with public involvement; however, the Phase 2 planning will not necessarily require the preparation of a new programmatic EIS/EIR.

6.2.2 Allocation of Restoration Funds Among Resource Categories

One important consideration in this Restoration Plan is how available funds should be distributed between the different natural resources and services identified for restoration in the final Montrose consent decree. The decree itself did not specify how restoration funds should be allocated. During the natural resource damage assessment in the 1990s, the Trustees attempted to estimate the costs of restoring injured natural resources and lost services to their baseline level (primary restoration) and compensating for interim lost natural resource services (compensatory restoration). These previous restoration scaling estimates are a part of the administrative record for the damage assessment. They do not provide a useful guide for allocating restoration funding at this stage because: (1) the final settlement was not based on the scaling estimates per se, (2) the recovery status of the injured natural resources has changed in the intervening years since the scaling was performed, and (3) the Trustees have developed a more specific understanding of potential restoration actions in each resource category targeted for restoration.

The final settlements provided a principal amount of approximately $30 million for natural resource restoration. Interest accruing in the settlement accounts provides an additional source of restoration funding. In addition, additional settlement funds ($10 million plus interest) that may be used for EPA response actions could instead be allocated to natural resource restoration depending on the outcome of the EPA's ongoing remedial investigation (see Section 4.3). These funds are referred to as "swing money," as they may be used by either the EPA or the Trustees depending on the EPA's final cleanup decision.

In the summer of 2004, the Trustees commissioned an audit of the Montrose settlement accounts to determine their current balances and interest rates and to develop a reasonable projection of funds available in the future. The audit identified an estimated balance of restoration funds in the settlement accounts of $38 million as of July 2004 (not including the swing money). Interest is currently accruing at 1.75%, adding approximately $700,000 per year to the accounts. Ongoing restoration program operating costs are comparable to the interest currently accruing. The Trustees propose to commit approximately $25 million during the first 5 years (2005–2010) of restoration implementation under this Restoration Plan. After 5 years, several uncertainties should be resolved, including the outcome of the NCI Bald Eagle Feasibility Study and the EPA's cleanup decision. The Trustees will then assess progress and allocate the remaining restoration funds in Phase 2.

The Trustees have allocated the $25 million for Phase 1 among the four restoration categories: fishing and fish habitat, bald eagles, peregrine falcons, and seabirds. Consideration was given to the potential costs of restoring those resources still experiencing injuries due to the contaminants of the case. The continued presence of DDTs and PCBs in the marine environment and the uncertain outcomes of ongoing data gap studies (Section 4.2.1) limit the Trustees' ability to accurately project these costs. Considering the likely costs of actions and the uncertainties, the Trustees reached consensus on a proposal to allocate the initial $25 million on an approximately equal basis between fishing and fish habitat restoration and bird restoration as follows:

- $12 million for fishing and fish habitat restoration actions, and
- $13 million for bald eagle, peregrine falcon, and seabird restoration actions.

This overall commitment (approximately $25 million) and its allocation are built into the restoration alternatives discussed below. The costs of the fish and bald eagle data gap studies

presently being conducted were assumed to be a part of the overall $25 million to be earmarked for Phase 1.

6.2.3 Alternative 1 (No Action)

For the purposes of this plan, the No Action Alternative assumes that the Trustees would not intervene to restore injured natural resources and compensate for lost services for any of the affected resources of the Montrose case. Instead, the Trustees would rely on natural processes for the gradual recovery of the injured natural resources and would only take the limited action of monitoring natural recovery.

The principal advantages of this approach are the ease of implementation and the absence of monetary costs. Although natural recovery may eventually occur for many of the injured resources, the recovery may take a significantly longer period of time than would recovery under an active restoration scenario. Also, the interim losses of natural resource services would not be compensated under the No Action Alternative. In addition, certain events, such as the extirpation of bald eagles and the introduction of exotic species in the Channel Islands, have led to consequences for other natural resources that may not be addressed under a natural recovery alternative. Because feasible restoration actions have been identified that would address the injuries and lost services of the case, the No Action Alternative as an overall approach across all resource categories does not fulfill the goals of this Restoration Plan. However, this does not preclude selection of natural recovery as an option for specific resources (e.g., peregrine falcons) within the overall framework of a comprehensive restoration alternative.

6.2.4 Alternative 2 (Preferred)

After considering the 17 potential restoration actions evaluated in detail and the available funds, the Trustees assembled the following diverse set of actions to generate Alternative 2:

Fishing and Fish Habitat Restoration
Construct artificial reefs and fishing access improvements
Provide public information to restore lost fishing services
Restore full tidal exchange wetlands
Augment funds for implementing Marine Protected Areas in California
Bald Eagle Restoration
Complete the NCI Bald Eagle Feasibility Study before deciding on further restoration actions
Peregrine Falcon Restoration
Monitor the recovery of peregrine falcons on the Channel Islands
Seabird Restoration
Restore seabirds to San Miguel Island
Restore alcids to Santa Barbara Island
Restore seabirds to San Nicolas Island
Restore seabirds to Scorpion and Orizaba Rocks
Restore seabirds to Baja California Pacific Islands • *Coronado and Todos Santos Islands*

The Trustees have concluded that conducting these actions will most effectively address the continuing injuries and lost services of the Montrose case and compensate for past injuries within the limits of funding allocated during Phase 1 of restoration implementation. This combination of

actions represents the Trustees' preferred alternative. Further explanation of why this collection of actions is preferred follows.

Fishing and Fish Habitats

For the fishing and fish habitat resource category under this alternative, the Trustees will conduct a diverse set of four actions that addresses both the restoration of human uses (fishing services) and the restoration of fish habitats. In particular, one of the actions, "construct artificial reefs and fishing access improvements," effectively addresses both the need to restore lost fishing services and the need for fish habitat in close proximity to areas affected by the contaminants of the case. For this reason, this action will receive greater funding emphasis within this category than the other three actions (see Appendix A).

The degree to which each of these four actions fulfills all six of the MSRP evaluation criteria varies, but all of the actions are considered sufficient to satisfy the criteria for selection. "Construct artificial reefs and fishing access improvements" rates high for nexus, resource benefits, and ecological benefits. "Provide public information to restore lost fishing services" rates high for nexus, feasibility, resource benefits, and cost. "Restore full tidal exchange wetlands" rates high for feasibility and ecological benefits. "Augment funds for Marine Protected Areas in California" rates high for feasibility, resource benefits, and ecological benefits.

Bald Eagles

For the bald eagle resource category under this alternative, the Trustees fund the Santa Catalina Island Bald Eagle Program only through 2005, complete the NCI Bald Eagle Feasibility Study to determine whether bald eagles placed on the Northern Channel Islands can reproduce on their own, and only then decide what additional bald eagle restoration will be conducted. This alternative discontinues funding for the Santa Catalina Island Bald Eagle Program during the interim period until the results of the NCI Bald Eagle Feasibility Study are known (in or around 2008). At that point, the Trustees will re-evaluate all potential options for bald eagle restoration, including measures that may be taken even if bald eagles are not able to reproduce on their own anywhere in the Channel Islands (see Section 6.1.2).

This bald eagle restoration approach better fulfills the restoration goals and objectives and the MSRP evaluation criteria than the bald eagle restoration approach considered under Alternative 3, which would continue funding the Santa Catalina Island Bald Eagle Program even though these birds cannot reproduce on their own. The bald eagle restoration approach under Alternative 2 better fulfills restoration goals and objectives because the MSRP evaluation criteria give preference to actions that have a long duration under the resource benefits criterion and actions that require less ongoing operation and maintenance under the feasibility criterion. In other words, the preferred bald eagle restoration approach, which focuses on restoring naturally reproducing bald eagles on the Channel Islands, has greater potential to realize long-term, self-sustaining benefits.

Peregrine Falcons

For the peregrine falcon resource category, this alternative provides for recovery with monitoring. This approach recognizes the evidence that, with the aid of prior release efforts and natural recruitment, peregrine falcons are recovering on the Channel Islands. The number of breeding pairs on the Channel Islands has increased from nine pairs in 1992 (Hunt 1994) to approximately 21 breeding pairs in 2004 (PBRG 2004). Lack of successful breeding on the Southern Channel Islands might be indicative of continuing contaminant-caused injuries in that region; however, if this were the case, further hacking of peregrine falcons would not effectively address this issue. The Trustees also recognize that peregrine falcons benefit from seabird restoration, as an increase in the numbers of seabirds increases the availability of the preferred prey of peregrine falcons. For these reasons, the Trustees did not include active restoration of peregrine falcons to the Channel Islands as part of the preferred alternative; however, restoration funds will be used to monitor the continued recovery of this species on the Channel Islands.

Seabirds

For the seabird resource category, this alternative incorporates a diverse set of actions that provides significant benefits to several species of seabirds. Evaluation of past data indicates that the seabird species benefiting from these actions have demonstrated eggshell thinning and/or elevated levels of DDTs in their eggs (Kiff 1994, Fry 1994). Although the seabird actions not included in this alternative also have a strong nexus to the Montrose case and would benefit seabirds injured by the contaminants of the case, insufficient funding is available at this time to fund all the restoration actions evaluated in Tier 2. Among the MSRP evaluation criteria, the degree of resource benefits best distinguishes the different seabird actions. Therefore, the Trustees have selected those actions that they consider to provide the greatest restoration benefits within the limits of funding.

Should one or more of the seabird actions requiring supplemental analysis later be determined to be inadvisable to pursue, the MSRP will provide public notice and use the available funds to proceed with one or more of the other seabird actions that met the Tier 2 criteria but were not incorporated into this alternative. The Trustees will also seek partnerships to reduce the costs of individual actions. Depending on the level of cost sharing, the Trustees may be able to implement additional seabird actions not currently included in Alternative 2.

Summary of Alternative 2

After consideration of the restoration goals and objectives, the MSRP evaluation criteria, the current status of injured resources, and the continuing presence of contamination, the Trustees believe that Alternative 2 represents the optimal distribution of funding for natural resource restoration across the demonstrated injury categories and for the purposes of both primary and compensatory restoration (Figure 6-3).

6.2.5 Alternative 3

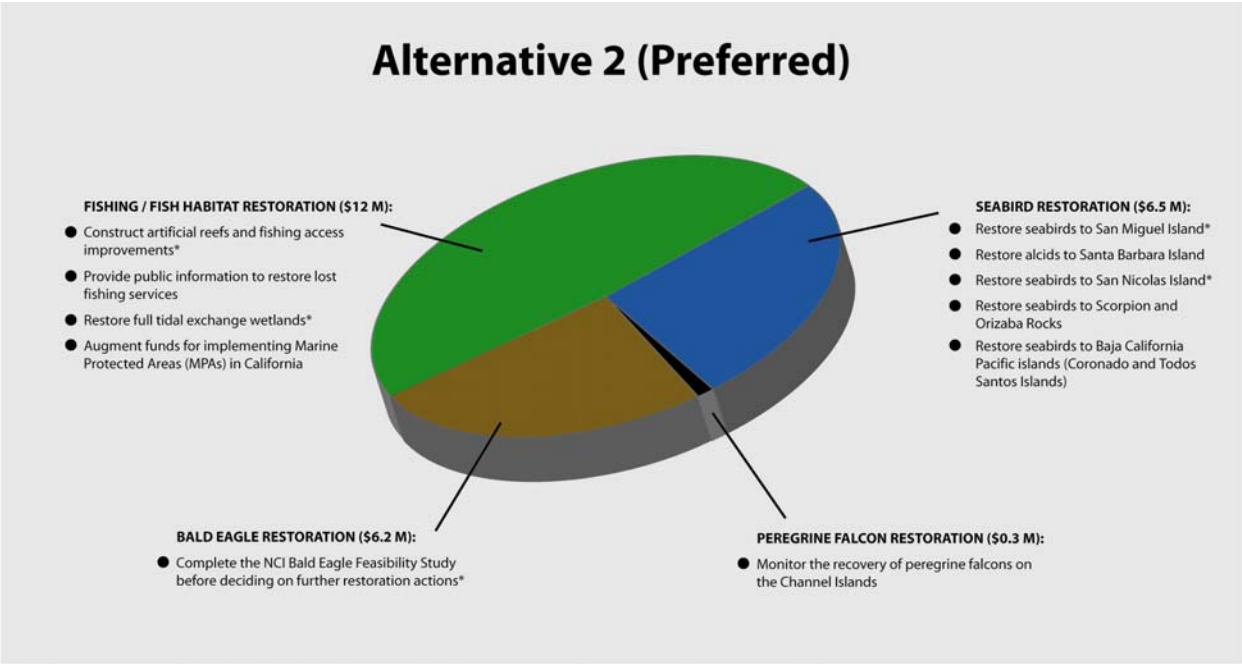
The Trustees assembled another comprehensive alternative for consideration and comparison in this Restoration Plan. Alternative 3 consists of the following set of actions:

Fishing and Fish Habitat Restoration
Construct artificial reefs and fishing access improvements
Provide public information to restore lost fishing services
Bald Eagle Restoration
Complete the NCI Bald Eagle Feasibility Study; Regardless of its Outcome, Continue Funding Santa Catalina Island Bald Eagle Program
Peregrine Falcon Restoration
Monitor the recovery of peregrine falcons on the Channel Islands
Seabird Restoration
Restore alcids to Santa Barbara Island
Restore seabirds to Scorpion and Orizaba Rocks
Restore seabirds to Baja California Pacific Islands • *Coronado and Todos Santos Islands*
Restore ashy storm-petrels to Anacapa Island

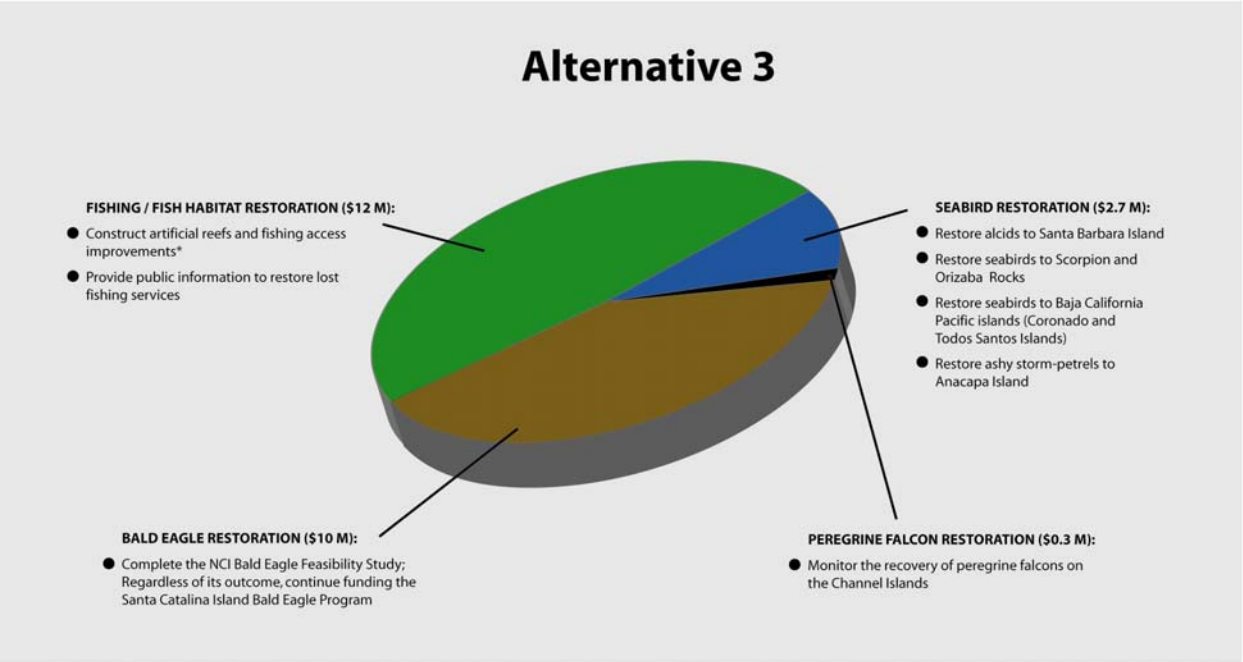
In this alternative, the Trustees would fund a narrower range of actions that would place greater emphasis on primary restoration of injuries and lost services. For the actions that are scaleable (e.g., the two fishing restoration actions), greater levels of funding would be available to each individual action identified in Alternative 3 than in Alternative 2, as available funds within that category would be distributed across fewer actions.

For the fishing and fish habitat category under this alternative, the Trustees focus restoration efforts on the two actions that most directly address the continuing loss of fishing services from contaminated fish. The remaining two actions evaluated in the fishing and fish habitat category, Restore Full Tidal Exchange Wetlands and Augment Funds for Implementing Marine Protected Areas in California, are not included in this alternative, as they restore fish habitats in ways that are not as directly linked to the continuing loss of fishing services of the Montrose case but instead serve to restore fish habitats as specified in the Consent Decree.

For the bald eagle category under this alternative, the Trustees would fund the continued human intervention (i.e., egg manipulation and chick fostering) needed to sustain a bald eagle presence on Santa Catalina Island for many years to come. The Trustees would also complete the NCI Feasibility Study. Funds for seabird restoration would be commensurately reduced. This bald eagle restoration option, considered in the broader context of the need to restore a wide range of injured resources, does not rate as high against the MSRP evaluation criteria as the preferred bald eagle option under Alternative 2. This is because the MSRP evaluation criteria give preference to actions with long term benefits that do not require continuous operations and maintenance. Since it remains to be determined whether DDTs and PCBs have attenuated sufficiently in the Northern Channel Islands to allow bald eagles to be self-sustaining, the Trustees prefer to await the conclusion of the NCI Study before committing further restoration funding for bald eagles.



* These actions require further detailed development and subsequent NEPA and/or CEQA analysis prior to implementation.



* These actions require further detailed development and subsequent NEPA and/or CEQA analysis prior to implementation.

Figure 6-3. Illustration of the collective restoration actions and funding distributions proposed under Alternative 2 (Preferred) and Alternative 3.

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6.2.6 Summary of the Alternatives

Table 6-2 lists the 17 potential restoration actions that received detailed evaluation and indicates how they are assembled into the two comprehensive alternatives and the No Action Alternative for this Restoration Plan and programmatic EIS/EIR. Each alternative allocates approximately $25 million in restoration funding to cover data gap studies and the initial 5 years of restoration implementation (Phase 1). Alternative 2 distributes funding across a wide range of actions that are both primary and compensatory in nature. Alternative 3 focuses greater effort on primary restoration by (1) targeting fish restoration for human use (fishing) benefits and (2) reserving greater funding for long-term intervention to maintain bald eagles in the Channel Islands despite continuing reproductive injuries (thus reducing funds available for seabird actions). The Trustees' preferred alternative is Alternative 2.

Table 6-2
Comparison of Restoration Alternatives

Potential Restoration Actions	Alternative 1 (No Action)	Alternative 2 (Preferred)*	Alternative 3*
Fishing and Fish Habitat Restoration		$12 million	$12 million
Construct artificial reefs and fishing access improvements		•	•
Provide public information to restore lost fishing services		•	•
Restore full tidal exchange wetlands		•	
Augment funds for implementing Marine Protected Areas in California		•	
Bald Eagle Restoration		$6.2 million	$10 million
Complete the NCI Bald Eagle Feasibility Study Before Deciding on Further Restoration Actions		•	
Complete the NCI Bald Eagle Feasibility Study; Regardless of its Outcome, Continue Funding Santa Catalina Island Bald Eagle Program			•
Peregrine Falcon Restoration		$0.3 million	$0.3 million
Restore peregrine falcons to the Channel Islands			
Monitor the recovery of peregrine falcons on the Channel Islands		•	•
Restore peregrine falcons to the Baja California Pacific Islands			
Seabird Restoration		$6.5million	$2.7 million
Restore seabirds to San Miguel Island		•	
Restore alcids to Santa Barbara Island		•	•
Restore seabirds to San Nicolas Island		•	
Restore seabirds Scorpion and Orizaba Rocks		•	•
Restore seabirds to Baja California Pacific Islands • *Coronado and Todos Santos Islands* • *Guadalupe Island* • *San Jeronimo and San Martín Islands* • *San Benito Islands* • *Asunción and San Roque Islands* • *Natividad Island*		• *Coronado and Todos Santos Islands*	• *Coronado and Todos Santos Islands*
Create/enhance/protect California brown pelican roost habitat			
Implement an entanglement reduction and outreach program to protect seabird populations			
Restore ashy storm-petrels to Anacapa Island			

*The budgets shown in this table reflect the estimated costs of data gap studies and the initial 5 years of restoration implementation.

6.3 UNCERTAINTIES

Several uncertainties are inherent in the restoration actions described in this Restoration Plan. As stated in Section 4, the Trustees' strategy is to approach restoration planning as an iterative, adaptive process, and this Restoration Plan will be updated in the future as restoration progress is assessed and new information becomes available. Some of the uncertainties that the Trustees have identified are:

- All of the actions are subject to obtaining the required permits and authorizations (if necessary) before proceeding.
- The budgets assembled for each action in Appendices A–D are estimates and do not include contingencies. These estimates will be refined once the actions approach the stage of implementation and potential funding partners are identified.
- Although all of the actions selected as part of Alternative 2 (preferred) are considered feasible for implementation, unforeseen issues could potentially arise that might prevent implementation. Because all 17 actions evaluated in Tier 2 meet the restoration criteria, in the event that certain actions in Alternative 2 cannot go forward or cost savings are realized that leave funding available, the Trustees would consider pursuing one or more of the remaining Tier 2 actions. The Trustees would document such changes and provide opportunity for public review and comment.
- The outcomes of the ongoing fish contamination and bald eagle data gap studies are not known at the time that this Restoration Plan is being prepared. It is possible that these studies might provide unanticipated new information and cause the Trustees to reconsider the actions of the restoration program.
- Funding beyond that on which this Restoration Plan is based may be made available in the future, depending on the EPA's upcoming determination on the potential in situ response action (see Section 4.3).