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Appendix A2

Provide Public Information to Restore Lost Fishing Services

A2.1 GOALS AND NEXUS TO INJURY

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). FCEC is a federal, state, and local partnership project aimed at addressing 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. Thus, the FCEC program provides information to help people reduce their exposure to DDTs and PCBs from the fish they eat.

The Natural Resource Trustees for the Montrose case (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 would enable people to make knowledgeable choices about where, when, and for which species to fish to minimize their exposure to contaminants. 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).

A2.2 BACKGROUND

For several decades, high levels of DDTs and PCBs have been found in several species of fish commonly caught by anglers along the Southern California coast. White croaker, surfperches, kelp bass, and other species of fish collected from several sites along the Los Angeles County and Orange County coasts carry concentrations of DDTs and PCBs in edible tissues that exceed the guidelines and standards set by federal and state agencies for safe consumption (OEHHA 2003). This situation represents a loss of natural resource value to the public and constitutes a per se injury under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) regulations for damage assessment (Title 43 Code of Federal Regulations [CFR] Part 11.62).

The current state fish consumption advisories were established in 1991 for Southern California coastal locations between Point Dume and Dana Point. These advisories identify eight species and species groups of fish in eleven locations; anglers are advised to either not consume these fish or limit their consumption of these fish (OEHHA 2003). In addition to these fish consumption advisories released by the State of California, the EPA and the U.S. Food and Drug Administration (FDA) have released general fish consumption advisories for locally caught fish (USEPA 2004b) that are based largely on mercury contamination.

The federal advisories suggest that in the absence of site- and/or species-specific advisories generated by local governments, anglers should consume no more than one meal per week of locally caught fish. Thus, consumption of fish should be limited to a maximum of one meal per week where data are absent or do not include mercury concentrations. If data from the Montrose Settlements Restoration Program (MSRP)/EPA-funded fish contamination survey identify species and/or locations where contaminant levels are low enough that the consumption recommendations may be increased to more than one meal per week (i.e., above the EPA/FDA

recommendations), this result would constitute a clear increase in fishing opportunities for those species and locations.

Because contamination levels are not uniform but vary by location and species of fish, and because existing data on fish contamination are out of date and incomplete, it is difficult for anglers to make informed choices about fishing and fish consumption. In some instances, this lack of current information may result in anglers and those to whom they supply some of their catch being exposed to DDTs and PCBs through unknowing consumption of contaminated fish. The EPA's current outreach program specifically addresses such incidences. However, in other cases, the lack of current and complete information may lead potential anglers to alter their fishing habits or avoid fishing altogether out of concern about fish contamination and the uncertainties surrounding it. This issue is the one on which the Trustees will focus their attention.

A2.2.1 EPA Institutional Controls

The EPA established a program of institutional controls (ICs) in 2001 as a set of initial actions to address the immediate human health risks associated with the consumption of fish contaminated with DDTs and PCBs from the Palos Verdes Shelf. Public outreach is one component of the ICs program.

The objectives of the public outreach program established by the EPA are to reduce the health risks associated with eating fish contaminated with DDTs and PCBs by increasing awareness and understanding of fish consumption advisories and building local capacity to address fish contamination issues. To implement this work, the EPA convened a Seafood Contamination Task Force, which is now known as the FCEC. The FCEC is a consortium of federal, state, and local government agencies, local institutions, and community-based organizations that provides a means of coordinating the development and implementation of a public outreach program with direct stakeholder involvement at all levels. The FCEC also serves as a decision-making body for the public outreach and education component of the ICs program and serves in an advisory role to the EPA on other Palos Verdes Shelf IC activities.

The EPA started the full implementation of the public outreach and education program in January 2003. The MSRP Trustees have been an active partner in the FCEC from its beginning and have consistently provided technical support and materials for the program. The materials provided by the Trustees were used as part of an outreach pilot project that was designed to evaluate the viability of outreach as a restoration action. The response to these materials has been overwhelmingly positive, with numerous requests for additional and updated materials.

A2.2.2 The Role of MSRP

With adequate fish contamination data, it is possible to identify and promote optimal fishing opportunities and thus increase public use and enjoyment of fish services. Furthermore, by expanding the information available to encompass other contaminants that are of general concern with regard to fish consumption (e.g., mercury) and including analyses of fish that are less likely to be contaminated, more complete advice regarding the risks and benefits of eating fish can be provided to the public.

This action complements and expands on the current outreach efforts spearheaded by the EPA, which focus on warning citizens about where they should avoid fishing or which fish they should

avoid catching and eating based solely on DDT and PCB concentrations. The EPA is not able to include analyses of and therefore outreach regarding mercury due to limitations imposed on them by Superfund laws. Although the information generated by the EPA's outreach efforts is a critical component of addressing the human health risks associated with consuming fish, this information provides limited guidance regarding what is safe to eat, largely because the basis of the information is limited to DDTs and PCBs and species that are particularly highly contaminated by DDTs and PCBs.

A2.3 PROJECT DESCRIPTION AND METHODS

Public outreach and education is a key strategy of the MSRP on a number of levels. The MSRP already employs outreach and education activities as a means of involving the public in restoration planning and plans to use these activities to keep the public informed and involved as restoration implementation proceeds (see Section 5.4.1 of the Restoration Plan). Under the category of fishing and fish habitat restoration, public outreach and education is proposed as a specific action for restoring lost natural resource services by providing information to people that allows them to make knowledgeable choices about where to fish, and what to fish for. This information differs from, and will complement, the critical information generated by the EPA regarding fish species and locations to avoid.

The program to provide public information to restore lost fishing services would be designed in close coordination with the existing FCEC organization, with the goal of integrating contributions from both MSRP and the EPA into a common and complete message. MSRP would continue to work in close partnership with FCEC and take advantage of many of the existing programs, points of contact, outreach materials, and other aspects of the FCEC. This approach would reduce public confusion, reduce the potential for these agencies to send out mixed messages, and potentially result in substantial cost sharing.

As natural resource agencies, the agencies that serve as the Trustees will also develop outreach materials that provide a link between fish as living marine resources and the risks and benefits they provide to their consumers. Contaminant bioaccumulation rates largely depend on the specific ecological and life-history strategies of a fish. Factors such as habitat use, migratory behavior, age, size, foraging mode, and preferred prey all play a critical role in the level of health risk that a fish imposes on its consumer. Thus, if anglers learn about the ecology and life history of the fish that they typically encounter, they can enable themselves to make more informed decisions about what to eat and what to throw back.

Gathering updated and accurate information on the levels of contamination in the fishes inhabiting the coastal waters of the Southern California Bight is essential if the Trustees are to provide public information on the species that are safe to target for fishing. This gathering process includes continuing to identify and investigate the species that may not impose significant human health risks. Updated information will enable the Trustees to distribute better information to anglers about the species and the locations for fishing that offer minimal contaminant-related threats. Also, if contamination levels have changed since the data for the current advisories were gathered (1987), some advisories my need to be revised or eliminated.

In collaboration with the EPA, the Trustees have already implemented a survey of fish contamination levels for 23 species or species groups in the area from Point Dume to Dana Point.

This data set, once analyzed, will provide a context for the development of restoration projects and highlight the areas that need additional sampling to better understand where restoration activities may be implemented or where the contamination levels are particularly dynamic (e.g., at the edges of the highly contaminated areas).

The specific activities and products of the public information program on fishing will be developed in a work plan once this Restoration Plan has been approved. Although the Trustees will not provide funds to construct specific facilities or support specific staff positions, the budget for the project mentioned above will include a portion to fund the design and production of outreach materials, including stationery or traveling graphic exhibits for learning centers and associated literature for dissemination, signage, advertising spots, public service announcements, pier outreach, or other such activities to dispense information to the public. The Trustees hope to cooperate with the following groups in this endeavor:

- Palos Verdes Peninsula Land Conservancy (PVPLC): PVPLC submitted a proposal requesting supplemental funding to construct an interpretive center at the White Point Nature Preserve. Although MSRP will not fund the construction of specific facilities, the Trustees agree that because this center will be located near the wastewater outfalls where the contaminants of the Montrose case originally entered the marine environment, this center would be a prime location for an educational exhibit. Another reason why the center would be a prime location for an exhibit is the potentially large number of people affected by the Montrose contaminants that the center would be able to reach.
- Marine Mammal Care Center (MMCC)/Center for Marine Studies (CMS) at Ft. MacArthur: MMCC and CMS submitted several proposals for funding for educators and for transportation to expand their current outreach and education programs. Although MSRP will not fund specific staff positions or transportation, the Trustees feel that the location and missions of the MMCC and CMS make Ft. MacArthur another well-suited place for educational exhibits.
- Other groups: The following list shows groups the Trustees currently work with and other groups that the Trustees hope to work with in the future to develop and disseminate additional outreach materials:
    - FCEC
    - Cabrillo Marine Aquarium
    - Long Beach Aquarium of the Pacific
    - EALab
    - Channel Islands National Park
    - Channel Islands Marine Sanctuary

This list is by no means exhaustive and will grow to include other groups as outreach opportunities are identified and expanded.

A2.4 ENVIRONMENTAL BENEFITS AND IMPACTS

A2.4.1 Biological

Benefits

Because this action involves public outreach and education rather than directly affecting biological habitat or organisms, the Trustees do not anticipate any direct benefits to biological resources. However, as part of their message, the Trustees intend to encourage conservation-minded fishing (including the careful handling and release of fish that are not retained by anglers for consumption), which may provide benefits to fish populations.

Impacts

Because this action involves public outreach and education, the Trustees do not anticipate any direct adverse impacts to biological resources. Should the public information lead to changes in fishing practices in the region, it is possible that fishing exploitation of certain cleaner species of fish would increase. It is also possible that the public information that the action provides may lead to increased exploitation of fish populations in locations identified as having fish lower in contamination. The degree to which this public information program would result in increased fishing mortality of certain species and/or at certain locations is not expected to be significant. However, the Trustees will consider both contamination levels and vulnerability to over-fishing as factors when they provide fishing advice to anglers. The Trustees will not advise anglers to focus fishing activity on any species that is currently over-fished or at risk of future over-fishing due to population status or specific life-history characteristics that might make that species more vulnerable to over-fishing. Also, the Trustees will encourage anglers to comply with all state fishing size and bag limits that are established to ensure sustainable fishing.

A2.4.2 Physical

Benefits

This action will not have benefits with regard to geology/earth resources, water resources, oceanographic and coastal processes, air quality, or noise.

Impacts

This action will not have negative impacts on geology/earth resources, water resources, oceanographic and coastal processes, air quality, or noise.

A2.4.3 Human Use

Benefits

The development and dissemination of better data on fish contamination (including information on the locations and species of fish that offer reduced contaminant-related risk) will lead to

improved recreational benefits for anglers and could potentially lead to improved human use of ocean fish resources. By clarifying the current state of contamination in fish and providing advice to anglers about locations and species that do not trigger health advisories, this action directly addresses the loss of natural resource services caused by elevated levels of contamination that have led to the issuance of directives to limit or ban consumption of several species of marine fish.

Impacts

Because this action focuses on providing information that will tend to promote fishing rather than restrict fishing, the action will not have negative impacts on human use. The action may have minor impacts to aesthetics depending on the design, size, and placement of signs. The designs of the program signage would be adopted from the previous designs developed and employed by the State of California and the county health departments in the study area. The signs would be placed in consultation with appropriate local authorities and in coordination with groups conducting outreach activities (such as the FCEC) in such a way as to minimize any impacts to the aesthetics of the surrounding area and avoid duplication of signage and/or message.

A2.5 LIKELIHOOD OF SUCCESS/FEASIBILITY

Education and awareness programs, through their display signs and brochures, nearly always attract public attention. Successful public educational programs instill knowledge and appreciation of the subject considered. This approach has a high probability of increasing human use and enjoyment of fishing resources in the targeted areas.

A2.6 PERFORMANCE CRITERIA AND MONITORING

Public feedback and reaction will be the primary means of monitoring the success of the outreach and educational activities of this action. The action will require the periodic updating and replacement of outreach materials to be effective over time due to the dynamic nature of contamination levels in the fish and changes in state fish consumption advisories.

A2.7 EVALUATION

Lack of public awareness about where fish contamination is a problem along the Southern California coast has significantly contributed to the loss of the natural resource services that fishing provides. Current outreach efforts spearheaded by the EPA provide critical information regarding the risks imposed by DDTs and PCBs, but do little to restore the faith in the resource itself, in general due to the EPA’s inability to seek out fish that provide minimal human health risks. The Trustees have evaluated this action against the screening and evaluation criteria developed to select restoration actions and have concluded that this action is consistent with these criteria. The Trustees have determined that this action will provide immediate benefits to human uses of injured natural resources and will be a cost-effective means of restoring the lost fishing services that have resulted from the contamination at issue in the Montrose case.

A2.8 ESTIMATED BUDGET

The Trustees will develop a work plan for public outreach and education efforts on fishing that addresses the specific components of the action and assumes close collaboration with the FCEC. For planning purposes, the Trustees have initially assumed that approximately $1 million would be used to conduct outreach, develop and produce materials, obtain and review additional contamination data, and perform other activities related to this restoration action.