

4.0 Environmental Consequences of Restoration Alternatives

The preparation of a Natural Resource Damage Assessment Restoration Plan, a federal action, triggers the National Environmental Policy Act (NEPA) review and documentation requirements when making decisions affecting the quality of the human environment. The charge of NEPA is for “productive harmony between man and nature.” The federal agency, namely the U.S. Fish and Wildlife Service, is required to coordinate their actions, promote and obtain public participation in the decision-making, and disclose the environmental consequences of the federal action, or in this case, the proposed restoration alternatives for the Santa Clara River. Since the California Department of Fish and Game is also a trustee, the preparation of this Restoration Plan/Environmental Assessment also triggers the California Environmental Quality Act (CEQA) review and documentation requirements under state law.

Although restoration measures are intended to recover or rehabilitate injured natural resources, there may be negative environmental impacts associated with the restoration along with the positive environmental benefits resulting from the restoration. Thus, the Trustee Council shall evaluate the proposed restoration alternatives for environmental consequences and benefits related to the physical and biological environment, the economic and social aspects, and recreational use. In addition, the short- and long-term, direct and indirect, and cumulative impacts are addressed.

For all of the proposed restoration alternatives, the potential for project activities to affect prehistoric and historic resources, Native American human remains and cultural objects, will be determined early in project planning. To this end, the procedures in 36 CFR 800 implementing Section 106 of the National Historic Preservation Act, requirements of the Native American Graves Protection and Repatriation Act, and policies and standards specified in the Fish and Wildlife Service Manual 614 FW 1-5 will be followed.

Land Acquisition/Conservation Easements - The restoration alternative of acquiring land and establishing conservation easements concerns land protection, management and restoration. Through land acquisition and conservation easements, areas would be permanently protected and the river would be able to function more naturally. Restoration and management of the acquired land would be necessary including such activities as removing berms, recontouring to a more natural landscape, controlling invasive non-native plants such as *Arundo* and re-establishing native plants. Although all of these activities result in the long-term benefit of the restoration of the Santa Clara River, several short-term impacts may occur.

For this restoration alternative, however, it is the Trustee Council’s intent to allocate restoration settlement funds strictly for land acquisition or the establishment of conservation easements and not to fund land restoration and management activities. At this time, it is more important to protect the land. Thus, there are no environmental impacts associated with land acquisition or the establishment of conservation easements. Restoration and management would come later under the responsibility and authority of various agencies or groups. The Trustee Council would concur on any restoration and management plans that concern lands that are acquired with Trustee Council funds. The agencies that comprise the Council, the U.S. Fish and Wildlife

Service and the California Department of Fish and Game, would also review any restoration activities that routinely require agency review, separate from Trustee Council involvement.

Land acquisition and conservation easements benefit the physical environment and the biological resources associated with the land by providing protected space for the physical and biological resources to function in a more natural state over the long-term. The recreational aspects associated with land acquisition and protection, such as hiking and wildlife observation, result in positive benefits to the economy and society as a whole.

Invasive Non-native Plant Species Control - The long-term environmental benefit resulting from an invasive non-native plant species control program includes the proliferation of native species in a more balanced, diverse riparian system where the invasives are out-competed by the natives. An invasive non-native species control program for the Santa Clara River requires a long-term, vigilant effort aimed at plant species, particularly, Arundo.

The current methods used for Arundo control include physical removal either manually or by mechanical means, cutting and mulching in-place, stockpiling and drying the canes, burning and herbicide application of either the cut stumps or foliar spraying. Arundo control requires a whole suite of methods dependent on such things as site location, accessibility and the features of the Arundo stand itself, whether it be primarily Arundo or dispersed among native vegetation. In addition, it may be necessary to re-establish native vegetation, particularly if a large dense stand of Arundo is removed. In most cases, however, the native vegetation will naturally propagate and replace the Arundo.

The physical removal of Arundo, particularly by mechanical means, and the herbicide treatment are invasive methods that may have environmental consequences on the physical and biological environment. The consequences include the physical presence of a tractor or bulldozer in the environment, in areas where native vegetation occurs along with the Arundo, and where wildlife also occurs in association with the riverine habitat. Another consequence is the use of chemical means to kill Arundo. The environmental impacts can be minimized by the use of low impact machinery, such as the hammer flail device, that has been successfully used to mulch Arundo in place with minimal resprouting. Manual removal of Arundo when possible would also minimize impacts from mechanical removal. Herbicide treatment involves the use of a glyphosate Roundup or its aquatic equivalent Rodeo. These herbicides have been approved for riparian or aquatic use by the U.S. Environmental Protection Agency and the California Department of Pesticide Regulation and pose no appreciable harm to wildlife, fish and other aquatic species if used properly. The use of herbicides would be minimized or avoided depending on the situation. Herbicide use is recommended in the fall when it is most readily and efficiently taken up by Arundo. Also, there is less impact to wildlife in the fall of the year since it is outside the breeding season. The short-term impacts associated with mechanical removal and herbicide use are outweighed by the long-term benefit of removing and controlling the Arundo in order to promote the native vegetation and diversity of species. It is the intent of the Trustee Council to partner with the Ventura County Resource Conservation District, through the Arundo Task Force Group, to prepare a programmatic environmental assessment (EA) and environmental impact report (EIR) for the entire Santa Clara River watershed prior to the initiation of projects, along

with obtaining the required permits for project implementation. This will cover all anticipated impacts associated with invasive plant species control.

From an economic standpoint, there is an interest and may be a market for recycling Arundo for paper and wood products, for energy and as mulch. From a social and recreational perspective, Arundo removal can become a means by which local landowners and groups can promote and participate in stewardship of the land. The recreational aspects of the Santa Clara River would benefit through the long-term enjoyment of a resource that is more in balance and diverse with native species.

Restoration Project Grants Program - A restoration project grants program includes the submittal of restoration projects from the public that would be evaluated, selected, funded and implemented through a grants process. Once the projects are selected for funding, the necessary documentation, environmental review of potential impacts and required permitting procedures would be followed prior to implementation of the projects. This restoration alternative would not be implemented until after the Restoration Plan is final. Thus, there are no environmental impacts associated with this restoration alternative to evaluate at this time. There is, however, a benefit to the local economy through the funding of restoration projects to local individuals and groups that will ultimately benefit the Santa Clara River watershed. It is anticipated that society as a whole would benefit and the recreational aspects of the river would be enhanced by these projects.

Information and Education - This restoration alternative provides a long-term environmental benefit to society through the dissemination of information and educational programs concerning the Santa Clara River, its associated resources, restoration, oil spill awareness, etc. The environmental consequences resulting from education include the promotion of understanding and compassion for our environment, the land, the resources, and how we are part of it all. Some of the educational programs could be accomplished in a more recreational setting and tone, such as through kiosks or interpretive displays at restoration sites along the river. The location of these informational displays would be selected on the basis of no or minimal impact to the surrounding area with materials that are non-toxic to the environment. If necessary, at that time, the environmental consequences would be evaluated and the required permitting procedures would be followed prior to project implementation.

Watershed Evaluation and Monitoring - This restoration alternative includes projects that would facilitate evaluation and monitoring efforts. As such, the project activities would be anticipated to have no negative environmental consequences. The environmental benefit would be the knowledge that is gained from a better understanding of watershed processes, associated habitats and wildlife, and also to monitor the restoration progress and success of the restoration efforts. This would in turn benefit society as a whole.

Cumulative Environmental Consequences - At this time, the only potential negative environmental impacts are those associated with invasive non-native plant species control. Once the grants program restoration projects are further defined, potential impacts from those projects

will then be identified and evaluated. Presently, however, cumulative impacts are only those associated with invasive plant species control.

The environmental consequences associated with invasive non-native plant species control will be further defined and evaluated under a watershed-wide programmatic EA/EIR. Once the grants program restoration projects are defined, potential impacts from those projects will then be identified and evaluated. The programmatic EA/EIR will be written and the grants program restoration projects will be defined after the Restoration Plan is final. Therefore, it is premature to establish a finding of no significant impact (FONSI) for these projects at this time. It is possible, however, to establish a FONSI for the land acquisition/conservation easements, information and education projects, and the watershed evaluation and monitoring efforts in this final Restoration Plan.