

RECLAMATION

Managing Water in the West

FINDING OF NO SIGNIFICANT IMPACT

Sacramento-Yolo Mosquito and Vector Control District Treatment Plan

FONSI 11-062

Recommended by:

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the Bureau of Reclamation (Reclamation), has determined that an environmental impact statement is not required for the Sacramento-Yolo Mosquito and Vector Control District Treatment Plan. This Finding of No Significant Impact is supported by Reclamation's Environmental Assessment (EA) Number 11-062, Sacramento-Yolo Mosquito and Vector Control District Treatment Plan, and is hereby incorporated by reference.

Background

Reclamation owns property near the town of Locke and Walnut Grove in southern Sacramento County, California, referred to as Delta Meadows (EA 11-062 Figure 1). Historic agricultural operations created a network of drainage ditches to drain surface storm water and possible levee seepage from surrounding waterways, including Sacramento River, Delta Cross Channel and Snodgrass Slough.

The Sacramento-Yolo Mosquito and Vector Control District (District) is responsible for controlling mosquitoes in portions of Sacramento and Yolo Counties including the area near the town of Locke and Walnut Grove. The District relies on an integrated pest management strategy and incorporates physical, biological, and chemical control. Methods include water and vegetation management, addition of predatory fish, and the application of insecticides. Nonchemical methods are preferred but chemical applications are used when necessary for public health and safety. Among chemical treatments, adulticides would be used as a last resort.

Proposed Action

Reclamation is proposing a 10-year license for access and accessibility to implement the District's Integrated Pest Management (IPM) Plan, as well as its Mosquito Reducing Best Management Practices (District 2008), at Delta Meadows. Management of mosquito populations on Reclamation land would include the use of biological and/or chemical methods. As a condition of Reclamation's license, annual notification of the intent to conduct biological or chemical mosquito control on Reclamation lands shall be made one month prior to their use, along with the submission of a completed Pesticide Use Proposal form. A monthly report documenting surveillance, monitoring, and control activities by the District shall be submitted to Reclamation.

Mosquito Monitoring The District would monitor mosquito populations to determine population estimates and location of infestations, and measures would be implemented. The District's state certified technician would use various sampling and monitoring methods to determine the appropriate measures to control mosquito populations, as described in the IPM Plan, including both biological control(s) and adulticide application.

Biological Control The District would implement various biological control methods including, but not limited to, introducing species such as mosquito fish (*Gambusia affinis*), three spine stickleback (*Gasterosteus aculeatus*), guppies (*Poecilia reticulata*), backswimmers (*Notonectidae* spp.), flatworms (*Platyhelminthes* spp.), etc. into standing water to prey upon

larval mosquitoes. The number of individual fish or other species placed into the water would be based upon the judgment of the District’s state certified technician.

Larvacide Application Prior to the use of adulticides, the District’s state certified technician would apply larvicides to areas infested with larval mosquito populations. Larvicides would be applied by ground methods according to their IPM Plan.

Adulticide Application If necessary, adulticides would be applied to infested areas within the June 1st to September 30th application window as a last resort after all larvicide options have been considered.

Environmental Commitments

The District shall implement the following environmental protection measures to reduce environmental consequences associated with the Proposed Action (Table 1). Environmental consequences for resource areas assume the measures specified would be fully implemented.

Table 1: Environmental Commitments

Resource	Protection Measure
General	The District shall make annual notifications of the intent to conduct biological or chemical mosquito control on Reclamation lands one month prior to their use, along with the submission of a completed Pesticide Use Proposal form. A monthly report documenting surveillance, monitoring, and control activities by the District shall be submitted to Reclamation.
General	Adulticides would be applied from existing access areas including ditch banks, levee roads and defined roadways by foot, truck, or quad mounted ULV foggers.
General	Mosquito populations would be re-evaluated, and treatments reapplied as necessary.
Water Resources	The application of adulticides containing pyrethrin, pyrethroid, and the organophosphate, Naled, would be subject to the National Pollutant Discharge Elimination System (NPDES) Permit for Vector Control, which authorizes the applications of these pesticides over Waters of the US, including the Sacramento River, Delta Cross Channel, and/or Snodgrass Slough.
Water Resources	The existing NPDES Permit (Water Quality Order No. 2012-0003-DWQ General Permit No. CAG 990004 (Amending Water Quality Order No. 2011-0002-DWQ) is scheduled to expire February 29, 2016. The District is responsible for renewal/re-issuance of the NPDES Permit prior to that date to continue applications. The District is also responsible to comply with any changes in Permit conditions.
Water Resources	Standard safety practices for pesticide storage, mixing, transportation, disposal of containers and unused pesticide, and spill management would be followed. Mixing of chemicals and cleaning of equipment should be done well away from waterways in situations from which runoff would not directly enter waterways. Pesticide mixtures would be stored in leak-proof containers.
Biological Resources	Adulticide application would be restricted to June 1 st through September 30 th when valley elderberry longhorn beetle (VELB) would have already emerged (mid-March to early June about the same time as the elderberry produces flowers) (USFWS Conservation Guidelines for the Valley Elderberry Longhorn Beetle July 1999).
Biological Resources	Fogging would be prohibited when bees are foraging flowering vegetation on Reclamation’s Lands. If this is not feasible, fogging would be limited to nighttime treatment to avoid bees.
Biological Resources	The District would adhere to pesticide label instructions and implement any avoidance measures developed during the Endangered Species Act, section 7 consultation. All of these formulations have been approved for use by the U.S. Environmental Protection Agency (EPA), under their Endangered Species Protection Program, to not result in harm to federally protected species or habitat critical to those species’ survival (EPA 2000b).

Reclamation’s South-Central California Area Office has initiated an Environmental Commitment Program in order to implement, track and evaluate the environmental commitments developed for the Proposed Action.

Permitting

All applications would be in accordance with Reclamation and National Pollutant Discharge Elimination System (NPDES) requirements and label instructions, as described in Water Quality Order No. 2012-0003-DWQ General Permit No. CAG 990004 Amending Water Quality Order No. 2011-0002-DWQ (EA 11-062 Appendix A). As such, there would be no adverse impacts to water resources with this alternative.

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the quality of the human environment is supported by the following findings:

Findings

Water Resources

It was determined that the Proposed Action would not have adverse impacts to water resources with compliance to NPDES requirements. In addition, it was determined that three projects located in the general vicinity described in EA 11-062 Section 3.1.2 did not involve adverse impacts to water resources. There are no other reasonably foreseeable projects at or near the Proposed Action area that would result in cumulative impacts to water resources. As such, there would be no cumulative impacts to water resources with the Proposed Action.

Land Use

The Proposed Action is limited to mosquito monitoring, biological controls and pesticide application and as such would have no adverse impacts to land use.

Neither the Proposed Action nor the three projects located in the general vicinity described in EA 11-062 Section 3.1.2, have adverse direct or cumulative impacts to land use. In addition, there are no other reasonably foreseeable projects at or near the Proposed Action area that would result in cumulative impacts to land use. No native or previously untilled lands would be put into production. The Proposed Action would maintain existing land uses and would not contribute to cumulative changes or impacts to land uses or planning. Therefore, there would be no cumulative effects to land use as a result of the Proposed Action.

Biological Resources

Under the Proposed Action, the District would be allowed to monitor and control mosquitoes at Delta Meadows. There would be no work done within the waterways and therefore would have no direct or indirect impact to fish. Monitoring and surveillance activities would be accessed through preexisting routes which already have the occasional traffic. The valley elderberry longhorn beetle or its host plant would be avoided. Therefore, monitoring and surveillance would have *No Effect* to wildlife. A detailed discussion (summarized below) is available in EA 11-062.

Biological Control The typical mosquito control period is from March through October, the drier summer months. Mosquitofish and/or other biocontrol agents would be planted in stagnant ponds that are not connected to waterways and would die out at the end of the season, requiring restock as needed. Therefore, biological control would have *No Effect* to wildlife.

Larvacide Application Larvacides are typically applied to discrete locations (i.e. infested vegetation and/or isolated pools) so as not to contaminate water resources, and indirectly affect aquatic wildlife or other nontarget organisms. Adverse effects on nontarget wildlife from exposure to larvacides listed above are not expected when applied according to the label instructions.

Adulticide Application In the event adulticide applications becomes necessary, the District would utilize pyrethrum-based chemical control, and as a last resort for public health, the organophosphate Naled.

Pyrethrums are potentially lethal to most insects, including both beneficial insects and pests. However, pyrethrums are inactivated and decomposed by exposure to light and air. Pyrethrum compounds are also toxic to fish but are broken down in water to nontoxic products (Ecotoxnet 1994, EPA 2006a).

Naled affects the nervous system of adult mosquitoes and other insects and is also highly to moderately toxic to birds, fish, and aquatic invertebrate species (ETN 1996). Yet, Naled breaks down and dissipates rapidly from the environment is not likely to leach into ground water (EPA 2006b).

Adulticides are typically applied to discrete locations like infested vegetation and/or isolated pools by fogging under controlled conditions such as accounting for downwind deposition and drift, so as not to contaminate water resources, and indirectly affect wildlife or other nontarget organisms (Davis et al. 2007). Based on toxicity studies, when these insecticides are applied according to the label, they are not expected to directly harm mammals, birds, reptiles, and amphibians (NPDES Permit Water Quality Order No. 2012-0003-DWQ General Permit).

The Delta Meadows property preserves and protects one of the last remaining areas of the northern Sacramento-San Joaquin River Delta that exhibits remnants of the natural conditions that existed prior to Euro-American settlement. The property's waterways, located on the Pacific flyway and influenced by Pacific Ocean tides through the lower Sacramento River, contain permanent and seasonal water areas, as well as adjacent uplands that support a variety of riparian plant and animal life.

Granting the District access to Delta Meadows to implement their Plan is not expected to contribute cumulatively to habitat loss or impacts to special-status species, and Delta Meadows would be used consistent with current uses. Therefore, there would be no cumulative adverse impacts to biological resources as a result of the Proposed Action.

Cultural Resources

On October 31, 2011 Reclamation's Cultural Resources Branch issued a determination that the Proposed Action has no potential to cause effects to historic properties pursuant to 36 CFR Part 800.3(a)(1).

Indian Sacred Sites

There would be no adverse impacts to Indian Sacred Sites or changes to access to Indian Sacred Sites resulting from the Proposed Action.

Indian Trust Assets

On September 12, 2011 Reclamation's Indian Trust Assets (ITA) Branch issued the determination that there are no ITA within the Proposed Action area and therefore the proposed action does not have a potential to affect Indian Trust Assets.

Socioeconomic Resources

There is a potential benefit for socioeconomic resources resulting from decreased medical costs in adjacent communities associated with mosquito borne disease. There would be no adverse impacts to socioeconomic resources.

Environmental Justice

There is not a residential population within the Proposed Action area. There would not be any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations as the Proposed Action is limited to mosquito abatement within the Proposed Action area.

Air Quality

Comparison between the emission thresholds for federal conformity determinations and estimated emissions indicate that estimated emissions are well below federal conformity thresholds.

Global Climate

Global greenhouse gases generated by the Proposed Action is expected to be extremely small compared to sources contributing to potential climate change since the emission estimates for CO₂ and CH₄ were well below the Sacramento Metropolitan Air Quality Management District emission thresholds. Accordingly, activities under the Proposed Action would result in below *de minimis* impacts to global climate change.