

Finding Of No Significant Impact (FONSI)
Plan and Environmental Assessment
for
Mosquito Control
for
Bandon Marsh National Wildlife Refuge
April 2014

An Environmental Assessment (EA) was prepared by the U.S. Fish and Wildlife Service (Service) to evaluate a proposal to conduct larvicide applications to control unnaturally high mosquito numbers and to conduct associated mosquito monitoring activities on the Ni-les'tun Unit of Bandon Marsh National Wildlife Refuge (NWR or Refuge) in Coos County, Oregon (USFWS 2014a). A separate Supplemental Environmental Assessment (SEA) was concurrently developed to evaluate modifications to site hydrology intended to improve tidal circulation and reduce mosquito breeding habitat (USFWS 2014b). Taken together, these actions constitute an Integrated Marsh Management (IMM) approach to mosquito control and wetlands management.

The IMM approach emphasizes management and enhancement of tidal wetlands to benefit fish and wildlife while addressing the unnaturally high mosquito numbers and mosquito-related impacts to human health and safety, as identified and documented by federal, state, and/or local public health authorities. The proposed application of larvicide is intended to assist in reducing mosquito numbers until plans to physically reduce breeding habitat, as described in the SEA, are implemented and become effective. The Service seeks to manage mosquito populations within the Ni-les'tun Unit with the least amount of larvicide applications necessary to achieve our objectives.

Three alternatives were evaluated in the EA. Actions that are common to all alternatives include compliance with all applicable laws, policies, and regulations (e.g., general and special use permits); education and outreach; Refuge-wide mosquito population monitoring; access limitations; and annual coordination meeting and trainings between the Service and its partners including Coos County Public Health (CCPH). The Service has selected Alternative B for implementation.

Summary of the actions to be implemented

Under the selected alternative, Alternative B, mosquito populations would be managed primarily through habitat modification and the application of *Bacillus thuringiensis israelensis* (*Bti*), a biological agent and early-stage larvicide (i.e., effective on early larval stages of mosquitoes). Ground-based or aerial application of an appropriate formulation of *Bti* (subject to the Service's pesticide approval process) would be directed at specific locations where monitoring indicates that mosquito populations exceed pre-determined threshold levels. State/local public health authorities (e.g., CCPH), or their authorized, designated representatives, would determine numerical (i.e., number of mosquitoes per sample) action thresholds yearly, in consultation with the Service and based on the factors summarized in Table 2-2 of the EA. The Service would evaluate the thresholds and other elements of the mosquito monitoring and control plan (e.g., monitoring protocol and schedule, specific product and formulation) to ensure that the plan meets the stipulations necessary to ensure compatibility. The Service's Biological Integrity, Diversity, and Environmental Health (601 FW 3), Integrated Pest Management (569 FW 1), and other policies guide the Refuge Manager's review of the public health agency's proposed options for mosquito management. If approved, the Service would issue an annual Refuge special use permit. The Service expects that thresholds would

be adjusted with the improvements in hydrology and reduction of mosquito breeding habitat due to physical manipulations, as described in the SEA.

Effects of management of the Refuge on the human environment

Potential impacts associated with Alternative A, Alternative B (selected alternative), and Alternative C (no action alternative), were fully disclosed and analyzed in the EA. As described in detail in the EA, implementation of the selected alternative would not result in significant impacts to any affected resources.

Public review

The Service incorporated a variety of public involvement techniques in developing and reviewing the EA. This included consultation and coordination with federal, state, and local agencies; Tribes; and non-governmental organizations and public review and comment on the Draft Plan and EA. The Draft Plan and EA was available for a 30-day public review beginning on March 11, 2014 and ending on April 9, 2014. A public open house in Bandon, Oregon was held on March 18, 2014.

In the Draft Plan and EA, Alternative A, which proposed the use of synthetic chemical larvicides methoprene and CocoBear™ in addition to *Bti*, was identified as the preferred alternative. Following comprehensive review and analysis of received comments along with consultation with mosquito experts, the Service has selected Alternative B for implementation. The Service has determined that Alternative B effectively provides for mosquito control on the Ni-les'tun Unit while posing a low risk to fish and wildlife and their habitats and to the human environment. With consistent monitoring and appropriately timed and targeted applications of *Bti*, the Service expects to reduce mosquito populations to below treatment threshold levels. Other changes from the Draft Plan and EA include the removal of the option of using pre-treatment (i.e., larvicide treatment prior to larvae detection or prior to threshold exceedance).

Full responses to the public comments were prepared and are included in an addendum (USFWS 2014c).

Conclusions

The Service has prepared this Finding of No Significant Impact (FONSI) in satisfaction of requirements of the National Environmental Policy Act. This FONSI documents the decision of the Service to work cooperatively with public health managers to monitor, plan, and permit the application of *Bti* to control larval mosquito populations on the Ni-les'tun Unit.

Based on review and evaluation of the information contained in the EA, I have determined that implementing Alternative B would not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969. Accordingly, the Service is not required to prepare an environmental impact statement.

This Finding of No Significant Impact and supporting references are available for public review at Bandon Marsh National Wildlife Refuge, 83673 North Bank Lane, Bandon, OR 97411. These documents can also be found on the Internet at <http://www.fws.gov/oregoncoast/>. Interested and affected parties are being notified of our decision.

Robyn Thorson
Regional Director, Region 1, Portland, Oregon

April 30, 2014
Date

References

USFWS (U.S. Fish and Wildlife Service). 2014a. Draft plan and environmental assessment for mosquito control for Bandon Marsh National Wildlife Refuge. U.S. Department of the Interior, Fish and Wildlife Service, Region 1, Bandon, OR. 209 pp.

USFWS. 2014b. Draft supplemental environmental assessment, Ni-les'tun Unit of the Bandon Marsh National Wildlife Refuge restoration project. U.S. Department of the Interior, Fish and Wildlife Service, Region 1, Bandon, OR. 59 pp.

USFWS. 2014c. Addendum for response to comment for the plan and environmental assessment for mosquito control for Bandon Marsh National Wildlife Refuge. U.S. Department of the Interior, Fish and Wildlife Service, Region 1, Bandon, OR. 11 pp.