

**SUNRIVER VECTOR CONTROL  
ENVIRONMENTAL ASSESSMENT  
DECISION NOTICE  
AND  
FINDING OF NO SIGNIFICANT IMPACT**

USDA Forest Service  
Bend/Fort Rock Ranger District  
Deschutes National Forest, Deschutes County, Oregon

**Decision**

I have decided to implement the proposed action (Alternative 2) described in the Sunriver Vector Control Project Environmental Assessment (EA). This decision will reissue a Special Use permit, with modified terms and conditions of the agreement, to allow for treatment of mosquitoes on National Forest lands within the permit area. This decision does not affect mosquito treatment plans targeted for private lands adjacent to the permitted area. The purpose of the permit is to reduce the potential of disease transmission to humans and reduce nuisance from mosquitoes to residents and visitors of the Sunriver area. Treatments of mosquitoes will be accomplished through the use of the U.S. Environmental Protection Agency (EPA) registered bacterial pesticide *Bacillus thuringiensis israelensis* (Bti). Bti is a microbial larvicide, attacking the larval stage of the mosquito before they emerge as the biting adult form. No treatments of adult mosquitoes will occur with this permit. Four Rivers Vector Control District (FRVCD), under contract to the Sunriver Owners Association, will apply Bti liquid form with hand crews and Bti granules with a combination of hand crews and a small helicopter. Aquatic areas along the river containing species of mosquito larvae known to carry diseases will be targeted for treatment, after field tests determine the need. Approximately 170 acres of National Forest lands will be treated with Bti. Treatments could occur as frequently as every 14 days as needed. Approximately 4-5 treatments will occur annually on Forest Service lands, based on what has occurred in the past 15 years. The season of application will run from approximately April 1 to September 15<sup>th</sup>. An annual operating plan will be submitted to the Bend/Ft. Rock District Ranger by FRVCD for approval prior to application of Bti. FRVCD will provide public service announcements on a minimum of two radio stations and in the local newspaper (The Bulletin) prior to aerial larvicide drops and adulticide fogging treatments on private land. Public Notices will be posted at Forest Service recreation sites along the river prior to treatments. In addition, the Sunriver Nature Center will be notified by the Sunriver Owners Association prior to aerial applications of Bti.

My decision will modify the terms and conditions of the existing Special Use permit to expand the treatment area downriver from the present boundary at the north end of Sunriver to East Benham Falls Day Use area at river mile 181.7. The permit area will be adjacent to or near 11.25 river miles and activities will include the use of a small helicopter to apply pesticide granules. The permit area is located approximately 15 miles southwest of Bend, Oregon. The legal description is Township 19 South, Range 11 East, Sections 16 - 20, and 29 - 31, Township 20 South, Range 10 East, Sections 2, 26, and 35, and Township 20 South, Range 11 East, Sections 6 and 18, Willamette Meridian, Deschutes County, Oregon.

West Nile Virus (WNV) has recently spread into Oregon and Deschutes County, and is potentially a health threat to humans, birds, and other animals. A spike in the number of humans sickened by WNV

was observed in the state in 2006, and the first human death attributed to WNV occurred in Oregon in the fall of 2006. Species of mosquitoes capable of transmitting the disease are known to occupy habitats within the permit area. From April through September each year, large hatches of mosquitoes create a nuisance to forest users and Sunriver residents and guests, and potentially transmit disease to humans, pets, and birds. In a typical year, most complaints to FRVCD of adult mosquito populations come from residents of the north end of Sunriver. FRVCD attempts to control populations with the use of larvicides first, including Bti on national forest lands, but uses adulticides (private land only) as a last resort. Under existing conditions, the FRVCD vector control program reduces mosquito populations and the associated health risks on both private and national forest lands.

The project area is outside the boundaries of the Northwest Forest Plan and spotted owl habitat. There are no inventoried (RARE II) roadless areas. There is one Threatened species, the northern bald eagle, and one Candidate species, the Oregon Spotted Frog that inhabit the project area. The project area is located within Riparian Habitat Conservation Areas (RHCAs) designated under the Inland Native Fish Strategy. Riparian-dependent resources receive primary emphasis within RHCAs.

## **Issues**

Issues identified during scoping were addressed by developing alternatives to the proposed action. The interdisciplinary team considered all the comments received during consultation with other agencies and public scoping to address the following issues:

Potential direct and indirect effects from treatment with Bti to other invertebrates, the prey base for fish including the sensitive species redband trout, and food webs important to threatened, candidate, sensitive, and other specially designated wildlife species. *Project design and mitigation measures were derived to minimize potential impacts to non-target species and food webs, such as minimizing annual treatments and drift into rivers (EA, pages 14 – 15).*

Potential disturbance to and safety concerns for forest visitors if aerial applications of Bti are allowed on national forest land, especially users of developed sites. *Project design and mitigation measures limit the disturbance and account for safety of forest visitors within the project area during aerial applications. Aerial applications are of limited frequency and duration, and no-fly buffers have been established (EA, pages 14 - 16).*

Disturbance to existing and potential new nest sites for osprey and northern bald eagles. *Project design and mitigation measures limit potential disturbance to nest sites, such as requiring no-fly zones near nest sites (EA, pages 15 - 16).*

## **Mitigation Measures**

### **Fisheries/Water Resources**

1. To limit drift, aerial application of Bti over National Forest lands within 100 feet of the Deschutes River and Spring River will not be allowed when constant wind speed exceeds 5 mph. Potential impacts to non-target invertebrates and associated food webs would be reduced.

2. Treatments will be limited to 5 times annually and must be a minimum of 14 days apart to limit potential impacts to food webs that support fish and wildlife species. This frequency and treatment total are similar to what has occurred over the last 15 years.
3. To limit the possibility of accidental concentrated spills and potential effects to non-target invertebrate species, Bti will be stored outside of Riparian Habitat Conservation Areas (consistent with INFISH Standard & Guideline RA-4). Short term storage (< 1 day) while conducting treatments is permitted. Locations for short term storage are to be approved by Forest Service.
4. The terms and conditions of the Special Use permit may be modified in the event of the discovery of a listed fish species (Proposed, Endangered and Threatened) in the project area, or in the event of proposed or designated Critical Habitat. A fisheries biologist would review new information and evaluate the need for seasonal restrictions and/or consultation requirements if needed.

### **Wildlife**

1. The terms and conditions of the Special Use permit may be modified in the event of the discovery of a listed wildlife species (Proposed, Endangered and Threatened) in the project area, or in the event of proposed or designated Critical Habitat. A wildlife biologist would review new information and evaluate the need for seasonal restrictions and/or consultation requirements if needed.
2. No human disturbance within ¼ mile non line-of-sight or ½ mile line-of-sight (1/2 mile for helicopter) of known bald eagle nests between January 1 and August 31. This condition may be waived in a particular year if nesting or reproductive success surveys reveal that bald eagles are non-nesting or that no young are present that year. Waivers are valid only until January 1 of the following year. There are currently no nesting sites within ½ mile line-of-sight of the project area (Forest Plan S & G M 3-15)
3. No aerial treatment within ¼ mile of active osprey nest sites between April 1 – August 31. There is currently one known nest site in the permit area. A site may be considered inactive for the year if there is no nesting activity by May 15. The Forest Service will make the determination if nest site(s) are active (Forest Plan S & G M 5-12). This mitigation would eliminate approximately 7 acres of mosquito treatment sites from aerial treatments.
4. No Bti treatments on 5 acre oxbow area adjacent to the Deschutes River within Township 20 South, Range 10 East, Southeast ¼ of Section 26, to eliminate potential impacts to the prey base of Oregon Spotted Frog located on private land within the same oxbow.

5. In the event a new active raptor nest is located within ¼ mile of project activities, work should immediately stop and the seasonal operating restriction applied:

January 1 - August 31: northern bald eagle

April 1 – August 31: osprey

March 1 - August 31: red-tailed hawk & northern goshawk

April 15 – August 31: Cooper’s hawk & sharp-shinned hawk

6. If an active great gray owl nest is located within 0.25 mile of the project activity with the potential for disturbance, a limited operating period would be placed on all activities through August 31 of the year the nest(s) are active.

### **Recreation**

1. No aerial treatments on weekends or holidays, which have the greatest number of forest visitors, to reduce potential disturbance. No aerial treatments after 2 p.m. when recreation activity is generally higher. No aerial treatment within a 100 yard radius of Besson Camp, Big River Campground, Big River Group Camp or the Sunriver Horse Trail loop near Cardinal Landing Bridge on National Forest lands to reduce disturbance and maintain visitor safety. This mitigation would eliminate approximately 37 acres of potential mosquito treatment sites from aerial application.
2. Public notice in local media about all applications prior to treatment to inform and educate the recreating public. Notice should also be posted at recreation sites along the river (Big River, Besson Camp, Cardinal Landing Bridge, East Benham Falls Day Use area and Besson Camp Day Use Area). Remove notices after applications are completed.
3. Helicopter will maintain a distance of 100 yards from forest visitors while conducting aerial treatments to maintain safety and reduce disturbance.
4. Helicopter will not be allowed to land on National Forest lands (except in the case of emergencies) to maintain forest visitor safety and reduce disturbance.

### **Decision Rationale**

I have chosen to implement the proposed action because it is best able to respond quickly and effectively to achieve the purpose and need of reducing a source of potential disease transmission and nuisance to residents and visitors of the project area, while still minimizing impacts to forest resource values. This alternative addresses the need to increase the range of the treatment area to reduce populations of

disease-carrying mosquito larvae in the north end of Sunriver. The use of adult mosquito fogging agents (adulticides) applied on private land, which are generally less environmentally compatible, could potentially be reduced with an expanded and more efficient larval reduction operation.

There is considerable research literature available on the effects of Bti in the environment, many of which are cited in the EA. Products containing Bti are used worldwide for mosquito treatment programs similar in application rates and methods of treatment to the one approved under this decision, and the potential beneficial or adverse effects to the environment are well-documented. In addition to information located in the EA with its many scientific literature references, I also considered specialist reports and biological evaluations which were located in the appendices to the EA in making this decision. The proposed action is consistent with the 1976 National Forest Management Act (EA page 68), 1973 Endangered Species Act (EA page 58), 1972 Clean Water Act (EA page 38), 1976 Magnuson-Stevens Act (EA page 47) 1968 Federal Wild and Scenic Rivers Act (EA page 64), 1988 Omnibus Oregon Wild and Scenic River Act (EA page 64), 1966 National Historic Preservation Act (EA page 17), Executive Orders 11988 and 11990 (protection of wetlands and floodplains – EA pages 47-48), and Executive Order 119898 (environmental justice for minority and low-income populations – EA page 67).

### **Alternatives Considered in Detail**

The Sunriver Vector Control EA described the effects of implementing each of three (3) alternatives that addressed control of disease-carrying and nuisance mosquitoes on National Forest lands in the project area.

Alternative 1: The No Action alternative was a No Change alternative, and would have continued the existing Special Use Permit to treat for mosquitoes on National Forest lands, with one exception. Permission for the application of the insecticide *Aerosurf* would be discontinued on National Forest lands. FRVCD has not been applying this product in recent years after determining this product was not effective or economical to use. Approximately 150 acres of wetlands and river margins would have been treated on National Forest lands annually with hand crew applications of Bti. No aerial treatments would have occurred. Current conditions and trends would likely have remained unchanged with selection of this alternative. Alternative 1 provided a baseline, which compared relative changes and their effects that would occur with implementation of proposed activities in the other alternatives. This alternative was not selected because this alternative did not allow for the quickest and most effective response to population increases of disease-carrying mosquito larvae. This alternative also did not address the need to reduce populations of disease carriers in the north end of Sunriver, where numerous adult mosquito swarms are reported to FRVCD each season, nor would it have potentially reduced the reliance on adult fogging agents through a more effective larval control program.

Alternative 3: This alternative would have discontinued the application of Bti on National Forest lands in the existing project area, as presently allowed under the Special Use Permit. Treatments with insecticides would have continued on private lands. No new treatment areas on National Forest lands, nor any other pesticide use for control of mosquitoes, were proposed under this alternative. This alternative did not meet the Purpose and Need of the project because it did not reduce a source of potential disease transmission and nuisance to residents and visitors of the affected area by decreasing mosquito populations on National Forest lands through a larval control program. West Nile Virus

(WVN), transmitted by mosquitoes, is a disease of growing concern that would not have been addressed by this alternative. The use of adult mosquito insecticides, including fogging agents, would likely increase on adjacent private lands without larval control with Bti on National Forest lands. Adult insecticides are generally less species-specific than Bti.

## **Public Involvement**

The complete record of the public involvement process to date is available for review in the planning record at the Bend/Ft. Rock Ranger District.

Scoping A Forest Service letter requesting public involvement was mailed February 15, 2006 to 88 individuals, businesses, and organizations that have expressed an interest in the project development process. Included in the mailing was *The Bulletin*, the local newspaper. The scoping letter was also placed on the United States Forest Service (USFS) web site. Six responses were received, none objected to the project. Four approved of the project outright, two others approved of the project with contingencies: (1) as long as the analysis could show minimal effects to food webs, and (2) efforts conducted carefully and in a manner consistent with good integrated pest management protocols and minimizing pesticide use.

The proposed Sunriver Vector Control Project was included in the Central Oregon Schedule of Projects in the 2006 spring, summer, and fall editions. This notification, through quarterly mailings, reaches approximately 80 interested individuals and groups. The Oregon Department of Fish and Wildlife and the U.S. Fish and Wildlife were conferred.

Consultation The northern bald eagle (threatened) and Oregon spotted frog (candidate) are the only two Threatened and Endangered species with *potential* habitat and occupancy within the projects boundaries. Communication with USFWS in addition to mailing of the scoping letter, was initiated March 17, 2006. All Project Design Criteria listed in the FY 2006-2009 Programmatic Biological Assessment have been met for northern bald eagle and consultation with U.S. Fish and Wildlife Service (USFWS) was not recommended. Bald eagles use the river corridor for foraging but none are known to nest or use winter roosts within the project area. All Project Design Criteria listed in the FY2006-2009 Programmatic Biological Assessment have also been met for the Oregon Spotted Frog. Formal consultation with USFWS is not required since it has Candidate status, rather than Threatened or Endangered. There are no known Oregon Spotted Frog populations on National Forest land within the project area.

EA Comment Period A 30 day public comment period Legal Notice for the EA was posted in *The Bulletin* on December 11, 2006. Comments on the EA were accepted through 11:59 p.m. January 10, 2007. Three responses were received within the comment period, two were in favor with no concerns. One respondent approved of the proposed action but commented that Bti should only be applied where field site visits have confirmed the presence of mosquito larvae. Field confirmation of larvae is a component of the treatment strategy of the chosen alternative description described on page 1 of this document and on pages 12-14 in the EA. The respondent also desired improved notification when aerial applications are to be made. As a result of this comment, the public notification plan described under the chosen alternative on pages 13-14 of the EA has been modified to include a provision for notification of the Sunriver Nature Center prior to aerial applications of Bti (See page 1 of this document). Public notification also includes alerting the local newspaper (*The Bulletin*) and a minimum of two radio stations

prior to aerial treatments of Bti and application of fogging agents on private land. Aerial applications of Bti on National Forest lands would coincide with private land applications.

The same respondent also reported that the data presented to the Forest Service for the analysis of effects to Oregon Spotted Frog from this project has been superseded with new information. The EA states that OSF population numbers have not recovered from declines following weir failures near Sunriver in 2001. However, the most recent data from 2005-2006 showed a marked increase in breeding numbers and recruitment of juvenile frogs. The adult numbers are predicted to reach numbers in 2007 similar to record numbers of 1999/2000.

### **Finding of No Significant Impact**

I have determined through the Sunriver Vector Control Project EA that this is not a major federal action individually or cumulatively that will significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination is based on the analysis of the context and intensity of the environmental effects, including the following factors:

(1) Beneficial and adverse direct, indirect and cumulative environmental impacts discussed in the EA have been disclosed within the appropriate context and intensity. The treatments would be limited seasonally (April to September) and to the permit area (approximately 170 acres National Forest lands adjacent to the Deschutes River). No significant effects on the human environment have been identified. Some uncertainty of the effects of Bti may have on non-target invertebrates and food webs for fish and wildlife were discussed in the environmental effects section, pages 18-64. However, these effects were considered to be minimal and immeasurable, and mitigation measures have been incorporated to minimize potential adverse effects. Monitoring of aquatic invertebrates and Oregon Spotted Frog populations has occurred for many years without any unanticipated effects. No other unknown anticipated effects have been observed in the project area. There will be no significant direct, indirect or cumulative effects to soil, water, fisheries, wildlife resources, roadless areas, or other components of the environment (see EA, pages 18 - 64 for full discussion of beneficial and adverse effects).

(2) No significant adverse effects to public health or safety have been identified. None are unusual or unique to this project. Implementing Alternative 2 would have a beneficial effect on public health and safety (EA pages 19, 20, 36, and 37).

(3) There will be no significant adverse impacts to park lands, wild and scenic rivers, floodplains, prime farm lands, old growth forests, range and forest land, Pacific Yew, minority groups, civil rights, women or consumers. No effects are expected to historic properties or cultural and scientific resources (EA pages 17, 47, 48, and 67). The project is not ground-disturbing. All Wild and Scenic River Values associated with the Deschutes River would be protected (EA page 64). This decision is consistent with the National Newberry Volcanic Monument Plan (EA page 65), and with Executive Orders 11988 and 11990 for protection of wetlands and floodplains (EA pages 47, 48). There are no fish runs or essential fish habitat (EFH - Magnuson-Stevens Act) which could be affected by any of the alternatives and no consultation was required (EA page 47). No significant adverse effects are anticipated to any other ecologically sensitive or critical areas (EA pages 36-68).

(4) The effects of implementation of this decision are not highly controversial and there has been no scientific information that indicates substantial controversy about the effects disclosed in the Sunriver Vector Control Project EA (EA, pages 36-68).

(5) Based on previous similar actions in the area and the input from resource professionals that worked on this project, the probable effects of this decision on the human environment, as described in the EA on pages 36-68, are well known and do not involve unique or unknown risks. Activities approved in this decision notice are similar to activities that have ongoing in the project area for over 15 years (EA pages 13, 41, 49, 62).

(6) This action does not establish a precedent for future actions with significant effects, nor does it represent a decision in principle about a future consideration.

(7) This decision is made with consideration of past, present and reasonably foreseeable future actions on National Forest land and other ownerships within potentially affected areas which could have a cumulatively significant effect on the quality of the human environment. Each resource section effects analysis contained in the Sunriver Vector Control Project EA discusses cumulative effects; none were found to be significant (EA, pages 36-68).

(8) The project is not ground-disturbing, therefore no effect to cultural resources (EA, page 17).

(9) The effects on threatened, endangered, sensitive, candidate and other specially designated species and their habitats are discussed in the Biological Evaluations located in Appendix B, C, and D and are summarized in the EA on pages 38-63. There would be no effect/impact on any endangered, threatened, candidate, or sensitive species that may inhabit the project area. Should any new information about endangered or threatened species become available they will receive full protection under the Endangered Species Act and consultation with the United States Fish and Wildlife Service will commence immediately, if necessary.

(10) This decision is in compliance with relevant federal, state and local laws, regulations and requirements designed for the protection of the environment. Effects from this action meet or exceed state water quality standards (EA, pages 36-68).

## **Other Findings**

The analysis considered the goals, objectives and direction contained in (1) 1990 Record of Decision for Deschutes National Forest Land and Resource Management Plan (Forest Plan) and Final Environmental Impact Statement as amended by the Revised Continuation of Interim Management Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales (Eastside Screens); (2) 1994 Newberry National Volcanic Monument (NNVM) Record of Decision for the Final Environmental Impact Statement and NNVM Comprehensive Management Plan; (3) 1996 Record of Decision for the Final Environmental Impact Statement for the Upper Deschutes Wild and Scenic River and the accompanying Upper Deschutes Wild and Scenic River and State Scenic Waterway Comprehensive Management Plan; and (4) 1995 Decision Notice and Finding of No Significant Impact for the Inland Native Fish Strategy Environmental Assessment. INFISH replaced the Riparian Screen of the Eastside Screens (EA pages 8-10, 64-67). The selected alternative is consistent with all management direction listed above.



This decision is in compliance with Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”. No minority or low-income populations would be disproportionately affected under any alternative (EA, page 67).

### **Administrative Review or Appeal Opportunities**

This decision is not subject to administrative review (appeal) pursuant to 36 CFR Part 215.12. No comments expressing concerns or only supportive comments were received during the 30 day comment period for the proposed action analyzed and documented in the EA.

### **Implementation Date**

Implementation of the proposed action may occur immediately after publication of this Decision Notice in *The Bulletin*, pursuant to CFR 215.9.

### **Contact Person**

For further information, contact Tom Walker at the Bend/Fort Rock Ranger District, 1230 NE Third, Bend, Oregon, 97701, (phone 541-383-4787) or Mark Macfarlane (phone 541-383-4769). An electronic version of the final EA can be accessed and viewed on the Deschutes National Forest website at <http://www.fs.fed.us/r6/centraloregon/projects/units/index.shtml>.

/s/PHIL CRUZ  
District Ranger  
Bend/Ft. Rock Ranger District

Date: February 7, 2007