UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to NMFS No:
2006/01045

May 9, 2006

Mr. Mitchell Nelson
USDA APHIS
6135 NE 80th Ave, Ste A-5
Portland, Oregon 97218-4033

Re: Reinitiation of Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Animal and Plant Health Inspection Service's Rangeland Grasshopper and Mormon Cricket Suppression Program for Eighteen Counties in Central and Eastern Oregon

Dear Mr. Nelson:

On March 13, 2006, the National Marine Fisheries Service (NMFS) received your request for written concurrence that the effects of implementing the Animal and Plant Health Inspection Service's (APHIS) Rangeland Grasshopper and Mormon Cricket Suppression Program, as proposed, pursuant to section 417 of the Plant Protection Act, is "not likely to adversely affect" (NLAA) species listed as threatened or endangered under the Endangered Species Act (ESA) or their designated critical habitat. The request included the information necessary to complete an essential fish habitat (EFH) assessment under the Magnuson-Steven Fishery Conservation and Management Act (MSA). This consultation is a reinitiation of a previous informal consultation, which concluded with a letter of concurrence dated June 15, 2004 (refer to NMFS No.: 2004/00559). Consultation is being reinitiated due to the September 2, 2005, designation of critical habitat (70 FR 52630) for several species addressed in the June 15, 2004 letter of concurrence. The critical habitat designation became effective on January 2, 2006.

This response to your letter was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402 and agency guidance for preparation of letters of concurrence,[1] and concludes that the action, as proposed, is NLAA Lower Columbia River (LCR) steelhead (*Oncorhynchus mykiss*), Middle Columbia River (MCR) steelhead, Snake River Basin (SRB) steelhead, Upper Columbia River (UCR) steelhead, LCR Chinook salmon (*O. tshawytscha*), Snake River (SR) fall-run Chinook salmon, SR spring/summer run Chinook salmon, UCR spring-run Chinook salmon, LCR coho salmon (*O. kisutch*), Columbia River chum salmon (*O. keta*), and SR sockeye salmon (*O. nerka*) or their designated critical habitats.

[1] Memorandum from D. Robert Lohn, Regional Administrator, to ESA Consultation Biologists (guidance on informal consultation and preparation of letters of concurrence) (January 30, 2006).

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This letter also transmits the results of our analysis of the effects of the proposed action on EFH pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation,[2] and concludes that the action, as proposed, is not likely to adversely affect EFH designated for Chinook salmon and coho salmon. Therefore, no conservation measures are provided at this time and no further response is necessary.

DESCRIPTION OF THE PROPOSED ACTION

The proposed action is intended to suppress outbreaks of grasshoppers and Mormon crickets on Federal, state, and privately-owned rangelands in eighteen counties of central and eastern Oregon, including Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Lake, Klamath, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler Counties. Malathion, carbaryl, and diflubenzuron insecticides will be used. The program is intended to reduce the economic impact of grasshopper and Mormon cricket infestations on rangeland.

The present consultation differs from the proposed action in the consultation completed June 15, 2004, in three aspects. The proposed ground application buffers beside perennial streams within HUC4 subbasins with listed species is now 300 feet instead of 500 feet; no-application buffers for intermittent streams have been added, and ground application of diflubenzuron has been included.

In response to a lawsuit against the Environmental Protection Agency (EPA), the United States District Court for the Western District of Washington ordered an injunction establishing buffers for pesticide application beside "salmon-supporting waters" in Washington, Oregon, and California.[3] On January 22, 2004, the court ordered buffers of 100 yards for aerial application and 20 yards for ground application of certain pesticides. Carbaryl, malathion, and diflubenzuron are included in the list, however APHIS has proposed buffers that are a minimum of four times that of the court order (¼ mile for aerial application and 300 feet for closest ground application).

The eighteen central and eastern Oregon counties covered by this consultation are surveyed annually to help predict where outbreaks of grasshoppers or Mormon crickets may occur. Treatments will only occur when these areas have infestations of grasshoppers or Mormon crickets at a level that is economically prudent to suppress with treatment. Annual suppression activities may begin as early as May 1, and continue through grasshopper season which ends by July 31 of the same year. This consultation covers suppression activities described by APHIS beginning on May 1, 2006, and will expire September 30, 2009.

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[2] Memorandum from William T. Hogarth, Acting Administrator for Fisheries, to Regional Administrators (national finding for use of Endangered Species Act section 7 consultation process to complete essential fish habitat consultations) (February 28, 2001).

[3] Washington Toxics Coalition, et al. v. EPA. Information and final ruling available at http://www.epa.gov/oppfead1/endanger/wtc/

APHIS proposes to suppress economically-damaging infestations of grasshoppers and Mormon crickets using conventional rates of application of malathion, carbaryl, and diflubenzuron or reduced agent area treatments (RAAT) with these insecticides. The RAAT strategy alternates treated and untreated swaths rather than treating the entire infested area. Four methods of insecticide dispersal are proposed by APHIS: (1) An ultra-low volume (ULV) liquid spray applied aerially; (2) applying diflubenzuron using a vehicle-mounted sprayer; (3) applying carbaryl bait aerially; and (4) applying carbaryl bait using ATVs with a vehicle-mounted spreader. All applicable Federal, state, tribal, and local environmental laws and regulations will be followed during suppression activities.

For conventional rates of application, APHIS proposes to use malathion at 0.62 pounds/acre (lbs/ac) of active ingredient for ULV spray, carbaryl at 0.5 lbs/ac of active ingredient for ULV spray, carbaryl at 0.5 lbs/ac of active ingredient for bait applications, and diflubenzuron at 0.016 lbs/acre of active ingredient for ULV spray.

The RAAT method would use malathion application at 0.31 lbs/ac of active ingredient for ULV spray, carbaryl at 0.25 lbs/ac of active ingredient for ULV spray, carbaryl at 0.20 lbs/ac of active ingredient for bait application, and diflubenzuron at 0.012 lbs/ac of active ingredient for ULV spray. In addition to the reduced concentrations, the RAAT method also affects a smaller area. The area of insecticide application will vary from 20% to 67% of the total treatment area. All malathion and carbaryl ULV sprays will be applied aerially, diflubenzuron ULV sprays and carbaryl bait may be applied aerially or by ATVs.

The following conservation measures will be implemented as part of the proposed action:

1. APHIS will contact NMFS' Eastern Oregon Habitat Branch (EOHB) prior to application to determine proximity of ESA-listed fish to area to be treated.
2. Perennial streams within HUC4 subbasins with listed species will have a ¼-mile no-application buffer for ULV aerial applications.
3. Intermittent streams within five miles of habitat occupied by listed species will have a 300-foot no-application buffer for ULV aerial applications[4].
4. Perennial streams within HUC4 subbasins with listed species will have a 500-foot no-application buffer for carbaryl bait aerial applications.
5. Intermittent streams within five miles of habitat occupied by listed species will have a 100-foot no-application buffer for carbaryl bait aerial applications.
6. Perennial streams within HUC4 subbasins with listed species will have a 300-foot no-application buffer for ground ULV and carbaryl bait applications.
7. Intermittent streams within five miles of habitat occupied by listed species will have a 100-foot no-application buffer for ground ULV and carbaryl bait applications.
8. All insecticides will be used in accordance with the label.

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[4] Conservation measures for intermittent streams in this document refer only to those streams identified at the 1:100,000 scale in the StreamNet Pacific NW Interactive Mapper (http://map.streamnet.org/snetmapper/viewer.htm) that do not contain water at the time of pesticide application. These streams will be identified cooperatively by APHIS and NMFS when NMFS is notified of proposed application.

9. Mixing, loading, and unloading will take place in areas where an accidental spill would not contaminate a water body.
10. Global Positioning System (GPS) coordinates or shape files if available, will provide pilot guidance on the parameters of the spray block. Ground flagging or markers should accompany GPS coordinates, when necessary, to delineate the project area and to omit areas from treatment.
11. Appropriate field personnel will utilize two-way communication equipment. Communication will be available for continuous contact between pilots and the contracting officer.
12. To minimize drift and volatilization, aerial applications will not be conducted when wind velocity exceeds 10 miles per hour, a temperature inversion is in place, rain is imminent, fog is present, or foliage is wet.
13. Weather conditions at the treatment area will be monitored by trained personnel before and during application. Operations will be suspended at any time that weather conditions could jeopardize the safe or effective placement of the spray on target areas.

ENDANGERED SPECIES ACT

In the request for concurrence, APHIS determined that the action, as proposed, is NLAA LCR steelhead, MCR steelhead, SRB steelhead, UCR steelhead, LCR Chinook salmon, SR fall-run Chinook salmon, SR spring/summer run Chinook salmon, UCR spring-run Chinook salmon, LCR coho salmon, Columbia River chum salmon, and SR sockeye salmon or their designated critical habitats (Table 1).

For purposes of the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (see, 50 CFR 402.02). The applicable standard to find that a proposed action is NLAA listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial (Lohn, 2006). Discountable effects cannot be reasonably expected to occur. Insignificant effects are so mild that the effect cannot be meaningfully measured, detected, or evaluated as take. Beneficial effects are contemporaneous positive effects without any adverse effect to the listed species or critical habitat, even if the long-term effects are beneficial.

Table 1. Federal Register notices for final rules that list threatened and endangered species, designate critical habitats, or apply protective regulations to listed species considered in this consultation. (Listing status: 'T' means listed as threatened under the ESA; 'E' means listed as endangered).

Species	Listing Status	Critical Habitat	Protective Regulations
Chinook salmon (*Oncorhynchus tshawytscha*)			
Lower Columbia River	T 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Columbia River spring-run	E 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	ESA section 9 applies
Snake River spring/summer run	T 6/28/05; 70 FR 37160	10/25/99; 64 FR 57399	6/28/05; 70 FR 37160
Snake River fall-run	T 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	6/28/05; 70 FR 37160
Chum salmon (*O. keta*)			
Columbia River	T 6/28/05; 70 FR 37160	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Coho salmon (*O. kisutch*)			
Lower Columbia River	T 6/28/05; 70 FR 37160	Not applicable	6/28/05; 70 FR 37160
Sockeye salmon (*O. nerka*)			
Snake River	E 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	ESA section 9 applies
Steelhead (*O. mykiss*)			
Lower Columbia River	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Middle Columbia River	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Upper Columbia River	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160
Snake River Basin	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160

The effects of the action, as proposed, are reasonably likely to include exposure of listed juveniles, prey, and critical habitat to low concentrations of malathion, carbaryl, and diflubenzuron. All of the effects associated with the proposed action will be limited to a day or two. The biological assessment includes GLEAMS modeling results for expected chemical concentrations in water for each chemical. A worst-case scenario was modeled separately for each chemical and included maximum aerial application rates with no buffer along a stream that is 0.76 meters (m) deep, 1.52 m wide, with a velocity of 3.60 m/second. The model predicted a concentration of diflubenzuron which would result in sublethal effects to *Daphnia* and no apparent effects to salmonids or other prey items, a concentration of carbaryl which would result in sublethal effects to invertebrates and may result in sublethal effects to salmonids, and a concentration of malathion which would result in lethal and sublethal effects to salmonids. However, the no-application buffers along perennial and intermittent streams in HUC4 subbasins with listed fish and other conservation measures will function to prevent harmful concentrations of diflubenzuron, carbaryl, and malathion from entering stream water.

The NMFS concludes that all effects of the action, as proposed, are insignificant and therefore are NLAA LCR steelhead, MCR steelhead, SRB steelhead, UCR steelhead, LCR Chinook salmon, SR fall-run Chinook salmon, SR spring/summer run Chinook salmon, UCR spring-run Chinook salmon, LCR coho salmon, Columbia River chum salmon, SR sockeye salmon and designated critical habitat. There is a chance that small amounts of insecticide will enter streams through drift during application or through overland flow during an extraordinary summer rain event. The concentrations of insecticides expected to enter streams are so small that the greatest effects would be slight changes in invertebrate prey behavior. Listed juveniles would not be directly affected, but changes in the ability of invertebrates to avoid predators could slightly

increase or decrease juvenile salmonid prey availability. A change in prey behavior and the corresponding change in availability to listed juvenile salmonids would be so small and slight that it could not be meaningfully measured.

Reinitiation of consultation is required and shall be requested by the APHIS, or by the NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or (3) a new species is listed or critical habitat designated that may be affected by the identified action [50 CFR 402.16]. This concludes the ESA portion of this consultation.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

In supplemental information provided following the request for ESA concurrence, the APHIS determined that the action, as proposed, is not likely to adversely affect EFH designated for Chinook and coho salmon.[5]

For purposes of MSA, "adverse effect" means any impact which reduces quality and/or quantity of EFH. Adverse effects may include direct (*e.g.,* contamination or physical disruption), indirect (*e.g.*, loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions [50 CFR 600.910(a)]. Avoidance and minimization measures are analyzed by NMFS as part the action, as proposed. However, NMFS will not consider proposed compensatory mitigation as part of the effects analysis, although completing sufficient compensatory mitigation for the effects of action may make the net effect of that action neutral or positive for EFH.

The effects of the action, as proposed, on EFH are the same as those described above in the ESA portion of this document and NMFS concurs with the findings in the EFH assessment.

Because the properties of EFH that are necessary for the spawning, breeding, feeding or growth to maturity of managed species in the action area are the same or similar to the biological requirements of ESA-listed species as analyzed above, and because the conservation measures that the APHIS included as part of the proposed action are adequate to avoid, minimize, or otherwise off set those adverse effects to designated EFH, NMFS has no conservation recommendations to make at this time and no reporting is necessary. This concludes the EFH portion of this consultation.

The APHIS is required to complete a supplemental EFH consultation with NMFS if it substantially revises its plans for this action in a manner that may adversely affect EFH or if new

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[5] Pacific Fishery Management Council, 1999, Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon. Pacific Fishery Management Council, Portland, Oregon (March 1999). http://www.pcouncil.org/salmon/salfmp/a14.html.

information becomes available that affects the basis for NMFS' EFH conservation recommendations [50 CFR 600.920(k)].

Please direct questions regarding this letter to Scott Hoefer, Fishery Biologist in the Eastern Oregon Habitat Branch of the Oregon State Habitat Office at 509.962.8911, ext. 225.

Sincerely,

Michael P. Tehan

for D. Robert Lohn
Regional Administrator

cc: Kevin Martin, USFS
Steve Ellis, USFS
Roger Williams, USFS
Jeff Walter, USFS
Leslie Weldon, USFS
Karen Shimamoto, USFS
Gary Larsen, USFS
David Henderson, BLM
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