FINDING OF NO SIGNIFICANT IMPACT

for
WDFW's Statewide Lake and Stream Rehabilitation Program
As funded by the US Fish and Wildlife Service's Wildlife and Sport Fish Restoration Program

The U.S. Fish and Wildlife Service (Service) proposes to fund a grant (WA F-125-D) from the Federal Aid in Sportfish Restoration Program to the Washington Department of Fish and Wildlife (WDFW) for its lake and stream rehabilitation activities, part of WDFW's programs to provide inland angling opportunities. The program applies rotenone, an organic compound federally registered for such use, to waters that are incapable of sustaining productive fisheries due to competition between sport fish and other species. Rotenone kills all fishes in the treatment areas, allowing subsequent restocking and management for specific fish populations. The Service's grants to WDFW cover a portion of WDFW's entire program; only the grant-funded portion is included in this determination. The Service has evaluated the Washington Department of Fish and Wildlife's program in a programmatic environmental assessment that is the basis of this finding.

The Washington Fish and Wildlife Commission and WDFW are authorized by Washington administrative law to rehabilitate lakes and streams by applying rotenone to enable management that meets fishery objectives. WDFW staff implement approved projects consistent with policy direction adopted by the Commission. That policy explicitly recognizes treatment with rotenone as "...a valuable and cost effective management tool for providing quality fishing opportunities and protecting native fishes..." The policy further directs that all lake and stream rehabilitation projects will be in accordance with state water quality requirements; the Washington Pesticide Control Act; the State Environmental Policy Act; the federal Clean Water Act; all chemical pesticide labeling restrictions and chemical materials safety data sheet requirements; and will avoid negative impacts to state or federally listed threatened, endangered, candidate, or sensitive species.

In practice, the Washington Department of Fish and Wildlife achieves part of its mandated fish management objectives with funding administered by the Service through grants. Approval of grants, including those for the application of rotenone as a fish management tool, is a federal action that requires review under the National Environmental Policy Act. The Service's environmental assessment is a programmatic treatment of the scope of activities that the WDFW considers likely to be proposed for federal grant funding through the Sport Fish Restoration Program.

Proposed Alternative
The selected alternative (Alternative B: Treatments in standing and flowing waters) includes the use of both rotenone and potassium permanganate in both standing and flowing waters. Rotenone is a federally registered piscicide and potassium permanganate's federal registration allows its use to oxidize and detoxify rotenone-treated water where necessary to prevent toxic outflow from a treatment area. The use of potassium permanganate is uncommon in WDFW projects, but where it is necessary downstream from a treatment area, WDFW follows the guidelines of the American Fisheries Society (Archer 2001) for application rates, field methods, and equipment to safely and effectively neutralize field applications of rotenone. Under the National Pollution Discharge Elimination System permit issued to the WDFW for fish management, potassium permanganate is the only chemical permitted to neutralize rotenone treated waters when necessary to prevent damage to non-targeted organisms and maintain water quality outside the area intended for rotenone treatments. It has no deleterious effects at the concentrations normally associated with the neutralizing

process. See the Service's environmental assessment, Section 4: Environmental Consequences.

This alternative streamlines annual NEPA project-level review, conducting a comprehensive evaluation, including a cumulative impacts analysis in a programmatic manner. WDFW will continue internal and public review processes under Washington's State Environmental Policy Act (SEPA). All proposed projects submitted under this grant will be reviewed according to the requirements of Endangered Species Act (ESA) section 7 and will be taken to informal or formal consultation with the federal listing agencies (the Service and NOAA Fisheries) if required by identified project-specific effects. Similarly, all projects proposed in this grant will be evaluated for compliance with Section 106 of the National Historic Preservation Act. If these other compliance processes suggest that the NEPA analysis is incomplete, it will be re-evaluated at that time. The programmatic assessment of the WDFW's federally-funded chemical rehabilitation program defines significant impacts; project characteristics that do not lead to significant impacts; project characteristics that are outside the scope of the review; sets project sideboards to ensure meaningful analysis despite lack of site specificity, and describes WDFW commitments for monitoring and public engagement that are requirements of the federal grant. In application, any proposed work that meets the specified criteria, defined as projects expected to have no significant impacts, would need no further NEPA review unless required by new information.

Other alternatives analyzed

The Service analyzed two other alternatives in addition to the proposed alternative that has been selected for implementation. The no-action alternative (Alternative A) also includes the use of both rotenone and potassium permanganate in both standing and flowing waters. This alternative would have continued the current process of NEPA review of proposed projects on a case-by-case basis, limiting full analysis of impacts from the program. WDFW would continue internal and SEPA public review processes. All proposed projects would have been reviewed according to the requirements of ESA section 7 and taken to informal or formal consultation with the federal listing agencies (the Service and NOAA Fisheries) if required by identified project effects. Similarly, all proposed projects would have been evaluated for compliance with Section 106 of the National Historic Preservation Act. Some projects would have been categorically excluded from further review if their impact levels warrant; others may have required separate environmental assessments or environmental impact statements of their potential effects. While it is likely that a similar suite of actual projects would be funded, there would be no comprehensive evaluation at the federal level of cumulative impacts due to the piecemeal annual consideration of projects.

The other alternative considered (Alternative C: No live outflow of toxic water from the impact area) for selection is almost identical to the selected alternative (Alternative B), but excluded the use of potassium permanganate to neutralize rotenone that flows beyond the designated treatment area; therefore only projects with no outflow past the area intended to be treated would have been considered for programmatic coverage under the NEPA.

The selected alternative (Alternative B) was chosen because it will best meet the identified purposes and needs of both the Service and WDFW and presents a streamlined NEPA review process and comprehensive evaluation, including a cumulative impacts analysis.

WDFW's mitigation and minimization measures

The WDFW incorporates an extensive chain of evaluations and safeguards into its projects, through agency policies and processes, Washington's SEPA requirements, and compliance with several federal acts. Maintaining these safeguards will be a condition of all grants subsequent to adoption of this finding of no significant impact. At the onset, WDFW Area or District Fish Biologists identify waters which do not meet fishery goals established in

adopted management plans or agency guidelines. The biologists consider a suite of potential management alternatives for reducing the abundance and effects of the competing species. If treatment with piscicides is determined to be the preferred alternative, the lake or stream is added to an annual list of proposed rotenone treatments. When lakes and streams have been identified as candidate waters for rehabilitation, the local fish biologist proposes the projects through the WDFW Regional Fish Program Manager to the WDFW Regional Wildlife, Habitat, and Enforcement Program staff for review. WDFW staff assess potential impacts to species and habitats in the treatment area, as well as potential conflicts with ongoing fish and wildlife management initiatives.

Staff review proposals for possible impacts to State Endangered, Threatened, or Sensitive species as well as federally listed or candidate species. Under WDFW policy, waters will not be treated in ways which would cause significant negative impacts to fish or wildlife which are state or federally listed as Threatened, Endangered, Sensitive or Candidate Species. Determinations are made whether a proposed project would cause "significant negative impacts" to such species, through WDFW internal review, SEPA public review and decisions by the Director of WDFW.

The fish biologist determines land ownerships and whether surface water withdrawal rights are present for that water body. Letters are mailed to landowners and any water right holders announcing WDFW's intent to treat the water with piscicides. Meeting dates are set to inform tribes, agencies, landowners, water right holders, and the general public of the lake management plans and proposals for rehabilitation. WDFW's routine public outreach on proposed projects includes public meetings near the waters being considered for treatment and a public meeting in western Washington, all announced through local and other news releases; individual contacts with all landowners and water right holders on waters selected for treatment; extensive public disclosure and solicitation of comments through the SEPA review process; notification of anglers using waters being considered for treatment; postings on the agency web site; postings at the selected treatment site; and other venues and processes.

The general public, interested parties, and affected state, tribal, and federal agencies review proposed rehabilitations through the SEPA process, where each project is included in an annual addendum to state environmental impact statements issued in 1976, 1992, and 2002, along with lake and stream management plans and pre-treatment evaluations of the physical and biological aspects of waters proposed for treatment. A 30-day public comment period follows, after which a determination of significance according to SEPA standards is made after considering comments received.

Subsequent to a determination of non-significance, the proposals, along with any modifications based on SEPA comments, are reviewed and approved by the WDFW Fish Program Assistant Director and the Director of the WDFW. Notification of residents and businesses by mail, email, posting of flyers, and publication in the legal section of local newspapers are required as a condition of WDFW's National Pollution Discharge Elimination System (NPDES) permit issued by the Washington Department of Ecology under delegated authority from the US Environmental Protection Agency (EPA). The EPA label for rotenone restricts human consumption of fish, swimming, irrigation or any other precautions relevant to public or private water use during and subsequent to the treatments. In addition to direct mailings and news releases, WDFW staff post signs along public property and boat access areas to warn potential water users.

Rotenone is applied according to EPA label restrictions, Washington pesticide use rules, Washington Fish and Wildlife Commission policy, conditions of the NPDES permit, and any provisions mandated by the funding source. Water quality parameters, including pH,

temperature, alkalinity, and organic demand are monitored immediately pre-treatment and post-treatment as required by the NPDES permit. Monitoring for rotenone toxicity, residual inert ingredients from liquid rotenone products, and changes in zooplankton and aquatic macroinvertebrate populations is also required by the permit and is done pre- and post-treatment. All results have been within ranges anticipated in the permit.

WDFW continually monitors current and emerging information concerning application techniques, human health issues, new products and formulations, ecological consequences, legal requirements, and other pertinent aspects of science and management. Staff responsible for the rehabilitation program actively engage in workshops and seminars, review professional society publications, routinely monitor internet sites, and consult with knowledgeable professionals relative to piscicidal issues and use. WDFW is committed to this active engagement regardless of the alternative selected.

WDFW is the sole user of rotenone for fish management in the State of Washington. The Washington Department of Ecology has issued NPDES/Waste Discharge Individual Permit No. WA0041009 to WDFW for the use of rotenone in fishery resource management, and does not issue permits to any other individuals for such use. The role of WDFW as the primary manager of fish and wildlife in Washington, and as the sole user of piscicidal chemicals, allows the agency to strictly and carefully review, apply, and monitor the effects and benefits of rotenone treatments in the State.

Expected environmental, social, and economic effects

The environmental assessment of WDFW's grant funded rotenone applications considered environmental health, aesthetics, human health, and other concerns such as temporary loss of angling opportunities in treated waters. The environmental health impacts evaluation included soils, sediments, ground water, surface water quality, air quality, and impacts to non-target taxa from invertebrates to mammals. In all cases, no significant impacts were identified within the described scope of project sideboards. Aesthetic considerations included odors and carcasses of dead fish, and post-treatment bacterial blooms. Again, no significant impacts were identified for projects that meet the evaluation criteria. Special attention was paid to effects to human heath, due to publicity regarding a proposed link between exposure to rotenone and the onset of Parkinson's disease-like symptoms. The WDFW addressed the risk of rotenone relative to Parkinson's Disease and other effects during exposure by agency staff during mixing, loading, and application of rotenone formulations during lake and stream treatments. Only the applicators are likely to be in the proximity of more than one treatment project, and they are protected by mandatory training, agency prescribed procedures and mandatory protective apparel and gear. Detailed review of new information on rotenone use as a piscicide showed that the Parkinson's disease connection was not a concern when applicators used appropriate personal protective equipment, nor was its use a public health concern (see the environmental assessment, pp 36 through 39).

WDFW has treated an average of about 10 lakes per year since inception of their F-125-D federal assistance grant in 2002. WDFW's grant funded rotenone applications have all been in eastern Washington. Eastern Washington contains about 3,000 lakes that provide angling and could be candidates for the application of rotenone if their productivity for recreational fishing were to be impaired. Both the annual increment and collective total treated during the life of this grant are small in comparison to the universe of waters managed for angling in that area. The environmental effects, fish management benefits, and human health implications of grant-funded rotenone application reflect the same general relationship.

Fisheries and fishery management are dynamic; management is largely reactive to the condition of fisheries and public expectations, bounded by a variety of biological and other constraints. WDFW's use of rotenone is specifically in response to fish community dynamics that result in unmet angling potential: typically overpopulation and stunting, loss of game fish survival and growth due to competition with other species, or other ecological imbalances. While WDFW treats a small number of ponds and lake each year to restore angling quality, fish community changes are constantly in progress in the untreated waters. Some of those develop conditions that warrant rotenone application, as the agency treats others. Grant-funded rotenone application benefits fish management in the treated waters, but most waters are not treated, because they do not develop the conditions for which treatment is the appropriate response. The baseline of recently treated waters, waters under successful management, and potential candidates for treatment changes little from year to year.

Potential environmental effects of rotenone use are limited by the small number of waters treated in any year, and also by the explicit annual administrative safeguards that are built into WDFW's internal screening of candidate waters and comprehensive discussion in the State Environmental Policy Act public disclosure and review process, and in federal review of all projects for Endangered Species Act, NHPA, and NEPA determinations. No waters that provide tribal subsistence fisheries are treated. No projects are taken to the WDFW Director for final approval without all of these steps being completed with positive outcomes.

No aspect of these projects releases greenhouse gases or in any other way contributes to global climate change. Climate changes that increase water temperatures and reduce effective moisture through changes in the timing, extent, and melting of annual snowfall in eastern Washington may affect WDFW's fishery management. Depending on the extent of these effects some waters may become unsuitable for trout management and more suited for warmwater species. While the spatial distribution, and perhaps the number of waters potentially considered for treatment may change, there likely will continue to be a long term need for this management approach.

The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988. Plants are unaffected by contact with rotenone. By the nature of the projects to be funded, wetland habitats and floodplains are not affected by the application of rotenone or any of the activities preceding or immediately following application. Projects do not disturb wetland habitats or physically alter floodplains.

Significant effects on the human environment:
No significant positive or negative effects to the human environment are expected for all the reasons summarized above: the extensively researched and understood environmental consequences of the chemicals used; the correspondingly extensive safeguards in developing and carrying out projects; and the relatively small increment of projects each year. See Chapter 4 of the environmental assessment, Environmental Consequences, for the detailed analyses.

Coordination with interested or affected parties.
WDFW routinely notifies more than 400 state, federal, and local agencies; tribes; non-governmental organizations; and individuals each year of its intended applications of rotenone under its chemical rehabilitation program and offers several avenues for public comment via processes stipulated by the SEPA. The same list of more than 400 potentially interested parties was notified of Service environmental assessment of the federal grant-funded portion of WDFW's program and invited to comment on the assessment and on selection of the proper alternative. From those 400 notifications two responses were

received: the Washington Department of Ecology (the agency that issues WDFW's NPDES permit) requested a copy for their files; and one respondent representing a city in western Washington suggested selection of the no action alternative, giving no rationale for that selection. That respondent was offered opportunity for additional comment but did not do so. Both respondents will be notified of Service's decision through copies of this finding.

Determination

For the reasons presented above and based on the analyses in the programmatic environmental assessment, it is the Service's determination that the proposal does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of section 102(2)(c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required. An environmental assessment has been prepared in support of this finding and is available upon request to the US Fish and Wildlife Service, Wildlife and Sport Fish Restoration Program, 911 NE 11th Avenue, Portland, OR 97232.

References:

USFWS, 2008. Programmatic Environmental Assessment for WDFW Statewide Lake and Stream Rehabilitation Program As Funded by the USFWS's Wildlife and Sport Fish Restoration Program. U.S. Fish and Wildlife Service, Wildlife and Sport Fish Restoration Program, Portland, OR. September 2008.

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Date