BEFORE THE OREGON ENVIRONMENTAL QUALITY COMMISSION

Petition to Initiate Rulemaking and Take Other Actions to Protect Existing and Designated Uses of Fish and Wildlife From Point and Nonpoint Sources of Pesticides

I. Introduction

Northwest Environmental Advocates ("NWEA") hereby petitions the Oregon Environmental Quality Commission ("EQC" or "Commission") pursuant to OAR 340-011-0046 and 137-001-0070 to initiate rulemaking to adopt the Reasonable and Prudent Alternatives ("RPAs") set out in six Biological Opinions ("BiOps") completed between November 2008 and July 2012 by the National Marine Fisheries Service ("NMFS") for 28 insecticides, herbicides, and fungicides and one BiOp completed in September 1989 by the U.S. Fish and Wildlife Service ("USF&WS") for 41 pesticides (hereinafter collectively "listed pesticides") as required practices to implement Oregon's narrative criterion for toxic contaminants to protect designated uses and as antidegradation implementation methods to protect existing uses. These BiOps were completed by NMFS and USF&WS (together "the Services") to carry out their obligations under the federal Endangered Species Act ("ESA").

As set out below, there are many compelling reasons for the Commission to adopt the new rules, to revise its permits, and to seek actions by the Oregon Department of Agriculture and Board of Forestry, all of which are requested in this petition, to address the findings in these BiOps. First, Oregon is in jeopardy of losing federal funding if it does not ensure that it can meet water quality standards in coastal watersheds, including protection of beneficial uses from pesticides. Second, Oregon has authorized the discharge of pesticides to Oregon waters through a Clean Water Act ("CWA") National Pollutant Discharge Elimination System ("NPDES") general permit that fails to include restrictions needed to prevent the extinction of threatened[1] and endangered[2] species and enhance their recovery and thus amounts to a "take" under the ESA. Third, Oregon is legally authorized and required to adopt implementation methods and procedures to protect existing uses and the water quality to support them, interpret and apply its narrative criteria for toxics, and to protect designated uses. Fourth, inaction by Oregon, particularly in light of its permit authorizing discharges of pesticides at levels that will jeopardize the continued existence of threatened and endangered species, amounts to a "take" under the ESA subject to substantial civil and criminal penalties. Fifth, actions taken by the Commission consistent with this petition will implement the agency's Toxics Reduction Strategy whereas inaction will demonstrate the strategy is a paperwork exercise. Last, it is in Oregon's interest to protect threatened and endangered species from extinction and to prevent species whose populations are rapidly being extirpated and depleted but which are not yet listed under the ESA from moving closer to extinction.

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[1] A species is considered endangered when it is "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6).

[2] A species is considered threatened when it is "likely to become endangered within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20).

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II. Requested Actions

A. Proposed Rulemaking

As discussed below, federal law requires Oregon to adopt "implementation methods" for implementing the state's required antidegradation policy which includes, *inter alia*, protection of beneficial uses present any time since November 28, 1975 and the maintenance and protection of the level of water quality necessary to protect those uses. Federal law requires Oregon to have published methods for use of its narrative criteria for toxics in its permitting program. Federal law also requires Oregon to have a federally-approved plan to control pesticides to meet water quality standards and protect designated beneficial uses in coastal watersheds in order to continue to receive certain federal funds. For these and other reasons set out below, NWEA hereby petitions the Commission to adopt the rules set out in Section X of this petition to implement these requirements: (1) as new rule OAR 340-041-0004(10)(Antidegradation Policy); (2) as new rule OAR 340-041-0033(8) (Toxic Substances); (3) as new rule OAR 340-041-0033(9)(Toxic Substances); (4) as new rule OAR 340-041-0033(10) ; (5) as new rule OAR 340-041-0004(11)(Antidegradation Policy); and (6) as new rule OAR 340-04100034(Pesticides).

B. Directive to the Department to Amend the 2300A General Permit, Any Authorized Discharges Pursuant to that Permit, and Any Individual NPDES Permits Issued that Authorize the Discharge of the Listed Pesticides

As explained below in Section VI.B, the issuance of the 2300A NPDES General Permit by the Department of Environmental Quality ("DEQ" or "Department") for discharges of pesticides including but not limited to the listed pesticides, the issuance of coverage to applicants under the 2300A NPDES General Permit which authorizes such discharges, and the issuance of any individual NPDES permit to discharge pesticides including but not limited to the listed pesticides all constitute a violation of water quality standards and a take under the ESA if such discharges are not consistent with the RPAs. The discharge of the listed pesticides unlimited by the RPA restrictions should be interpreted by the Department as a violation of Oregon's existing water quality standards – for protection of existing and designated beneficial uses and the narrative criteria – but the Department has a history of not applying all components of its adopted standards, instead limiting regulatory actions to its numeric criteria. Therefore, the 2300A NPDES General Permit's limitation that a "discharge must not cause or contribute to the violation of water quality standards"[3] does not now have any practical association with the RPAs set out in NMFS' BiOps. In addition, because the permit's solution to any violation of this prohibition is corrective action under Condition No. 3 of Schedule A of the permit,[4] the prohibition is essentially meaningless. Specifically, Condition 3 only requires a review, evaluation, and revision of pest management measures. There is nothing in the permit or in the Department's procedures that establishes effluent limits under the 2300A General Permit that are consistent with the RPAs.

For these reasons, by this petition NWEA requests the Commission direct the Department to immediately re-open the 2300A General NPDES Permit and any individual NPDES permits the

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[3] DEQ, *2300A General Permit, Schedule A, Condition 1.a.*, available at http://www.deq.state.or.us/wq/ wqpermit/docs/general/npdes2300a/2300aPermit.pdf (last accessed July 30, 2012).

[4] *Id.*

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Department may have issued for the discharge of pesticides to explicitly incorporate the restrictions set out in the listed pesticide BiOps as well as the ESA consultation for the EPA Pesticide General Permit discussed in Section VI.B.1 below. We further request that in the interim period prior to the permit's revision, the Commission direct the Department to post on its website as guidance those same restrictions.

C. Petitions to the Oregon Department of Agriculture

In addition, pursuant to OAR 340-041-0061(11), NWEA petitions the Commission to petition the Oregon Department of Agriculture ("ODA") to (1) adopt the RPAs in the agency's Agricultural Water Quality Management Area Rules,[5] and to (2) adopt the RPAs by prohibiting the sale of the listed pesticides in the state, prohibiting the use of the listed pesticides in the state, and/or requiring additional regulations at the point of sale, through State regulation, or through State notification procedures for the listed pesticides.

1. *Petition to ODA to Adopt Reasonable and Prudent Alternatives in Basin Rules*

The Commission's rules require that

> If the department determines that the area plan and rules are not adequate to achieve and maintain water quality standards, the department will . . . request the Environmental Quality Commission (EQC) to petition ODA for a review of part or all of water quality management area plan and rules.[6]

Once the determination has been made that the plans and rules are not adequate, Department action is mandatory. Section VII.A.2 of this petition demonstrates that the ODA rules are inadequate. The Commission can, on the basis of this petition, make its own determination that ODA rules that contain no limitations on the use of any pesticides and ODA rules that contain no limitations on the use of the listed pesticides are not adequate to achieve and maintain water quality standards. However, if the Commission finds that its role is constrained to only take action upon the Department's determinations, this petition requests that the Commission direct the Department to make findings by a date certain as to whether the ODA basin rules control the use of pesticides sufficiently to meet water quality standards as defined by the minimum requirements of the BiOp RPAs. Otherwise, this petition requests that the Commission make the determination on the basis of the RPAs themselves, relying on the expertise of the federal wildlife agencies, and direct the Department to draft a petition for the Commission to submit to the ODA by a date certain.

2. *Petition to ODA to Implement the Reasonable and Prudent Alternatives by Prohibiting the Sale and/or Use of the Listed Pesticides in Oregon and/or Requiring Additional Regulations at Point of Sale*

With the exception of those listed pesticides that are subject to discharge under the DEQ 2300A NPDES General Permit, discussed below, the Commission and the Department have no direct

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[5] OAR 603-095-0010 – 603-095-3960.

[6] OAR 340-041-0061(11).

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method of ensuring that changes to state water quality standards will result in restrictions on the use of the listed pesticides. Therefore, this petition further requests that the Commission petition the ODA to obtain changes to the sale and/or labeling and request additional regulations at the point of sale that clarify the water quality standards restrictions that will be adopted by the Commission pursuant to this petition or that are independently required by the RPAs in the event that the Commission denies this petition in its entirety. Such point of sale requirements were set forth, for example, in *Center for Biological Diversity v. EPA*[7] where the U.S. District Court for the Northern District of California ordered the U.S. Environmental Protection Agency ("EPA"), *inter alia*, to develop and distribute a "shelf tag" to named retail establishments for 45 pesticides for the protection of species in the San Francisco area including the California tiger salamander.[8] In *Center for Biological Diversity v. Johnson*[9] EPA agreed to a court order to produce and distribute bilingual brochures about 66 pesticides and protection of the California red-legged frog.[10] In *Washington Toxics v. EPA*, the court required a point-of-sale notification for seven active ingredients in pesticides.[11] Copies of these point-of-sale notifications are set out in Appendix A.

D. Petition to the Board of Forestry

The Oregon Department of Forestry ("ODF") regulates the application of pesticides to forestlands.[12] ODF rules are required to be consistent with the Forest Practices Act which states that forest operations "shall be conducted in full compliance with the rules and standards of the Environmental Quality Commission relating to air and water pollution control."[13] The

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[7] *Center for Biological Diversity v. EPA*, No. C07-02794 (JCS) 2010 WL 2143658 (N.D.Cal., May 17, 2010) available at http://www.epa.gov/oppfead1/endanger/litstatus/cbd-epa-5-30-2007.pdf (last accessed July 30, 2012).

[8] *See* EPA, *Wildlife Hazards* [*shelf tag*], http://www.epa.gov/espp/litstatus/shelf-tag-final.pdf (last accessed July 30, 2012).

[9] *Center for Biological Diversity v. Johnson*, No. 02-1580-JSW (JL) (N.D.Cal., October 20, 2006) available at http://www.epa.gov/espp/litstatus/stipulated-injunction.pdf (last accessed July 30, 2012).

[10] EPA, *Frogs and Pesticide Hazards*, available at http://www.epa.gov/espp/litstatus/redleg-frog/rlf-brochure.pdf (last accessed July 30, 2012).

[11] *Washington Toxics v. EPA*, No. C01-132C, Order at 4-10 (W.D. Wash. Jan. 22, 2004). California Department of Pesticide Registration, *Endangered Species Project Point-of-Sale Requirements for Urban-Use Pesticides for Protection of Salmonids*, http://www.cdpr.ca.gov/docs/endspec/pointsale.htm (last accessed July 31, 2012). The active ingredients are: 2,4-D, carbaryl, diazinon, diuron, malathion, triclopyr BEE, and trifluralin.

[12] ORS § 527.724; OAR Division 620; ODF, *Pesticide Use in Oregon's Forests*, http://cms.oregon.gov/ODF/privateforests/Pages/pesticides.aspx (last accessed August 1, 2012).

[13] ORS § 527.724; *see also* ORS § 527.765(1)("The State Board of Forestry shall establish best management practices and other rules applying to forest practices as necessary to insure that to the maximum extent practicable nonpoint source discharges of pollutants resulting from forest operations on forestlands do not impair the achievement and maintenance of water

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Commission may petition the Board of Forestry for adoption of rules.[14] ODF regulations contain two primary sets of rules. The first states generally that use of chemicals on forestland is subject to the "hazardous waste laws administered by the Department of Environmental Quality."[15] The cross-reference to DEQ's rules includes only the Department's hazardous waste laws and omits entirely the water quality program including its water quality standards and DEQ's permitting program that applies to some pesticides, as discussed in Section VI.B.2 of this petition. Should the Commission engage in rulemaking to incorporate the pesticide BiOp RPAs into Oregon's water quality standards as requested by this petition, the result would apparently have no effect on forestry operators, despite state statutes that link water quality standards to forest practices.

The second set of restrictions is set out in specific rules that purport to "protect waters of the state . . . by [requiring operators to follow] requirements of the chemical product label and by meeting the additional protection measures listed in this rule."[16] As this petition will show, the federal labels do not provide adequate and full protection for threatened and endangered species in Oregon. The additional requirements of the rule include the following:

- protecting riparian vegetation from herbicides;[17]
- applying chemicals in weather conditions that comply with the rules and labels;[18]
- not applying chemicals by air within 60 feet and by ground within 10 feet, and not applying fungicides or non-biological insecticides by air within 300 feet, and applying by air all chemicals parallel to the edge of the water when applying them within 100 feet of significant wetlands; aquatic areas of Type F and D streams, large lakes, aquatic lakes with fish use, or standing water larger than one-quarter acre at the time of application;[19] and
- not applying fungicides or non-biological insecticides by air within 60 feet of aquatic areas of Type N (non-fish-bearing streams) containing flowing water at the time of

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quality standards established by the Environmental Quality Commission for the waters of the state.").

[14] ORS § 527.765(3)(c) (" If the petition for review of best management practices is made by the Environmental Quality Commission, the board shall not terminate the review without the concurrence of the commission, unless the board commences rulemaking in accordance with paragraph (e) of this subsection."); ORS § 527.765(3)(e)("If, pursuant to review, the board determines that best management practices should be reviewed, the board shall commence rulemaking proceedings for that purpose. Rules specifying the revised best management practices must be adopted not later than two years from the filing date of the petition for review unless the board, with concurrence of the Environmental Quality Commission, finds that special circumstances require additional time.").

[15] OAR 629-620-000(5).

[16] OAR 629-620-0400.

[17] OAR 629-620-0400(2).

[18] OAR 629-620-0400(3).

[19] OAR 629-620-0400(4), (5), (7) & (8).

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application.[20]

These additional restrictions established by the Board of Forestry are in some cases, depending on the geographic location of threatened and endangered species and the pesticides at issue, inadequate to meet the RPAs set out in the NMFS and USF&WS pesticide BiOps. Simply put, the ODF rules are based on incomplete and inaccurate information. For example, ODF states that "[c]urrent literature and ODF monitoring criteria indicate that thresholds of concern for human health and aquatic biota start at levels much higher than 1 p[art]p[er]b[illion]."[21] In contrast, NMFS found that the chlorpyrifos 96 hour LC50 – that is the dose at which 50 percent of the tested species are killed – for salmonids ranged as low as 0.8 µg/L, or 0.8 ppb.[22] A dose that kills half of salmonids is not adequately protective of the species under either the CWA or the ESA. In addition, the ODF rules fail to cross-reference DEQ's rules that require authorization under an NPDES permit for the discharge of some pesticides.

For the reasons set forth, this petition requests that the Commission petition the Board of Forestry pursuant to ORS § 183.390 and ORS § 527.765(3) to adopt the following changes, indicated by underlined text, to the Board's rule OAR 629-620-0000(5):

> Operations involving the use of chemicals and other petroleum products on forestland are also subject to the pesticide control laws administered by the Department of Agriculture, <u>water quality and</u> hazardous waste laws administered by the Department of Environmental Quality, hazard communication rules administered by the Occupational Safety and Health Division, the water use laws administered by the Water Resources Department<u>, and restrictions established by federal agencies to protect threatened and endangered species</u>. Maximum contaminant levels in drinking water for certain pesticides are established by the Health Division. <u>Operators shall follow the requirements set out in the DEQ rules at OAR 340-041-0034</u>.

III. The National Marine Fisheries Service Biological Opinions on the Effects of Insecticides, Herbicides and Fungicides on Pacific Northwest Salmon and Steelhead

On July 2, 2002, a federal District Court found the EPA in violation of Section 7 of the Endangered Species Act ("ESA") for failure to consult with NMFS to ensure that 54 pesticides registered by EPA under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") would not jeopardize the continued existence of threatened and endangered salmonid species listed under the ESA or result in the destruction or adverse modification of designated critical

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[20] OAR 629-620-0400(7)(b).

[21] ODF, *Executive Summary Oregon Department of Forestry Aerial Pesticide Application Project Final Report* 4 (March 2000) available at http://cms.oregon.gov/odf/privateforests/docs/chemappexecsum.pdf (last accessed August 1, 2012).

[22] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Chlorpyrifos, Diazinon, and Malathion* 269 (November 18, 2008) available at http://www.nmfs.noaa.gov/pr/pdfs/pesticide_biop.pdf (last accessed July 25, 2012).

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habitat[23] for those species.[24] Subsequently the Court granted injunctive relief prohibiting certain uses of those 54 pesticides to protect salmonids while the consultation process with NMFS proceeded and requiring point-of-sale notifications for urban uses of the pesticides.[25] In 2007, after being sued for failure to complete the required ESA consultations, NMFS entered into a consent decree with the plaintiffs agreeing to issue BiOps on 37 active ingredients of the pesticides EPA had determined "may affect" listed salmonids.[26] To date NMFS has completed six BiOps that cover 28 pesticides and 13 species found in Oregon waters. The resulting findings on jeopardy[27] and adverse modification[28] are as follows:

1. **BiOp No. 1 Insecticides:** chlorpyrifos, diazinon, and malathion.[29] Completed November 18, 2008, the BiOp found jeopardy and adverse modification of critical habitat for 13 species found in Oregon waters.[30, 31]

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[23] 16 U.S.C. § 1532(5)(A) ("Critical habitat" for a threatened or endangered species means the specific areas within the geographical areas occupied by the species which are essential to the conservation of the species and which may require special management considerations or protection and any areas outside the areas occupied at the time of ESA listing that are essential for the species' conservation).

[24] *Washington Toxics Coalition v. EPA*, No. C10-132C, slip op. at 20 (W.D. Wash. July 2, 2002), *aff'd*, 413 F.3d 1024 (9th Cir. 2005).

[25] *Washington Toxics*, No. C01-132C, Order at 4-10 (W.D. Wash. Jan. 22, 2004). One of the interim protective measures ordered by the Court was the implementation of buffer zones of 20 yards for ground application and 100 yards for aerial application of the listed pesticides, with certain exceptions. *Id.* at 4-5.

[26] *Northwest Coalition for Alternatives to Pesticides v. NMFS*, No. 07-1791-RSL (W.D. Wash. August 1, 2008).

[27] "Jeopardy" in this petition refers to an action that is "likely to jeopardize the continued existence of any endangered species or threatened species[.]" 16 U.S.C. § 1536(a)(2).

[28] "Adverse modification" in this petition refers to an action that is likely to "result in the destruction or adverse modification of habitat" of threatened or endangered species. 16 U.S.C. § 1536(a)(2).

[29] Oregon's Water Quality Pesticide Management Team (WQPMT), composed of staff from the Oregon Departments of Agriculture, Forestry, Human Services and Environmental Quality, identified chlorpyrifos and diazinon as "pesticides of concern" in 2009-2010, a designation of a "pesticide that approaches or exceeds an established benchmark concentration, indicating a possible risk to human or ecological life" in Oregon. *See* ODA, *Pesticides and Water Quality,* http://egov.oregon.gov/ODA/PEST/water_quality.shtml (last accessed July 28, 2012).

[30] NMFS, *supra* n. 22 at 391.

[31] The 13 salmon species found in Oregon waters include: Snake River Spring/Summer chinook, fall Chinook, steelhead, sockeye; Middle Columbia River steelhead,

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2. **BiOp No. 2 Insecticides:** carbaryl, carbofuran, and methomyl. Completed April 20, 2009, the BiOp found jeopardy for 10 species and adverse modification for 9 species for carbaryl and carbofuran and jeopardy and adverse modification for six species for methomyl.[32]

3. **BiOp No. 3 Insecticides**: methidathion, naled, phorate, and phosmet. Completed August 31, 2010 this BiOp found jeopardy for nine species and adverse modification for eight species for naled, jeopardy for eleven and adverse modification for eight species for photmet, jeopardy for six species and adverse modification for five species for phosmet, and jeopardy and adverse modification for one species.[33]

4. **BiOp No. 4 Herbicides:** 2,4-D and diuron, and the **Fungicide**: chlorothalonil. Completed June 30, 2011 this BiOp found jeopardy for 12 species and adverse modification for three species from 2,4-D, adverse modification for four species for dioron and two species for chlorothalonil.[34]

5. **BiOp No. 5 Herbicides**: oryzalin, pendimethalin, and trifluralin. Completed May 31, 2012 this BiOp found jeopardy and adverse modification for three species, jeopardy for six species and adverse modification for five species for pendimathalin, and jeopardy for six species and adverse modification for five species for trifluralin.[35]

Lower Columbia River chinook, coho, steelhead, and chum; Upper Willamette spring chinook; Oregon coast coho, Southern Oregon/Northern California Coast coho. Other threatened and endangered species, such as the salmonid bull trout, are under the jurisdiction of the USF&WS which has not completed BiOps for pesticides in Oregon waters.

[32] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Carbaryl, Carbofuran, and Methomyl* 488 (April 20, 2009) available at http://www.nmfs.noaa.gov/pr/pdfs/carbamate.pdf (last accessed July 25, 2012).

[33] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides Containing Azinphos methyl, Bensulide, Dimethoate, Disulfoton, Ethoprop, Fenamiphos, Naled, Methamidophos, Methidathion, Methyl parathion, Phorate and Phosmet* 772-775 (August 31, 2010) available at http://www.nmfs.noaa.gov/pr/pdfs/final_batch_3_opinion.pdf (last accessed July 25, 2012).

[34] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides 2,4-D, Triclopyr BEE, Diuron, Linuron, Captan, and Chlorothalonil* 773-774 (June 30, 2011) available at http://www.nmfs.noaa.gov/pr/pdfs/consultations/pesticide_opinion4.pdf (last accessed July 25, 2012).

[35] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Final Biological Opinion Environmental Protection Agency Registration of Pesticides Oryzalin, Pendimethalin, Trifluralin* 640-641(May 31, 2012) available at http://www.nmfs.noaa.gov/pr/pdfs/consultations/pesticides_batch5opinion.pdf (last accessed July 28, 2012).

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6. **BiOp No. 6 Herbicide**: thiobencarb. Completed July 2, 2012. This herbicide is only approved for use on rice in California. The BiOp found no jeopardy or adverse modification for the California populations affected. No Oregon species are affected.[36]

The RPAs for the five BiOps that affect salmon and steelhead in Oregon are set out in Appendix B. The Reasonable and Prudent Measures ("RMA"), Terms and Conditions, and Conservation Recommendations for these five BiOps are set out in Appendix C. A summary of the jeopardy and adverse modification findings for Oregon species is set out in Appendix D.

NMFS is scheduled to issue BiOp No. 7 on the insecticides propargite, fenbutatin-oxide, diflubenzuron (also a fungicide), 1,3-D, and lindane and BiOp No. 8 on the herbicides racemic metolachlor, bromoxynil, and prometryn by June 30, 2013. Finally, NMFS has completed an ESA consultation on the use of pesticides in EPA's Pesticide General Permit, discussed in Section VI.B.1 of this petition. The RPAs, RMAs, Terms and Conditions, and Conservation Recommendations for this permit are found in Appendix E.

IV. The U.S. Fish and Wildlife Service Biological Opinion on the Effects of Pesticides on Lost River Sucker, Shortnose Sucker, Modoc Sucker, Warner Sucker, Hutton Tui Chub, and Lahontan Cutthroat Trout

In 1989 the USF&WS finalized consultation on 112 pesticides for numerous species across the country including the following five species listed as threatened or endangered in Oregon: Lost river sucker, Shortnose sucker, Modoc sucker, Warner sucker, and Hutton tui chub.[37] In the intervening years additional species, such as the bull trout, have been listed by USF&WS for which this BiOp has not been updated. The 1989 BiOp found 40 pesticides cause jeopardy for the Shortnose and Lost River suckers and made an additional 19 findings of pesticides that may affect but are not likely to cause jeopardy to the species. It found 20 pesticides cause jeopardy for the Modoc sucker and 39 that may affect but are not likely to cause jeopardy. The BiOp found 27 pesticides jeopardize the Warner sucker and 31 may affect but are not likely to cause jeopardy. It concluded that 11 pesticides jeopardize the Hutton tui chub and three may affect but not jeopardize that species. And, the BiOp concluded that 28 pesticides may affect but are not likely to jeopardize the Lahontan cutthroat trout.

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[36] NMFS, *Biological Opinion National Marine Fisheries Service Endangered Species Act Section 7 Consultation on Environmental Protection Agency's Registration of Thiobencarb* (June 30, 2012) available at http://www.nmfs.noaa.gov/pr/consultation/opinions/biop_thiobencarb.pdf (last accessed July 30, 2012).

[37] Of the pesticides evaluated, USF&WS found the following caused jeopardy and required RPAs for species found in Oregon waters: azinphos-methyl, benomyl, bensulide, captan, carbaryl, carbofuran, carbophenothion, chlorothalonil, chloropyrifos, diazinon, dicofol, dicrotophos, dimethoate, disulfoton, endosulfan, ethion, ethoprop, ethyl parathion, fenamiphos, fensulfothion, fenvalerate, fonofos, malathion, mancozeb, methidathion, methomyl, mevinphos, naled, oxamyl, pendimethalin, permethrin, phorate, phosmet, profenofos, propachlor, propargite, pyrethrin, SSS-tributyl phosphorotrithioate, terbufos, trichlorfon, and trifluralin. USF&WS, *U.S. Fish and Wildlife Service Biological Opinion on Selected Pesticides* (June 14, 1898, revised September 14, 1989) available through National Service Center for Environmental Publications (NSCEP), http://www.epa.gov/nscep/index.html.

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As a consequence of these findings, USF&WS required RPAs for use of the named pesticides for the applicable species for which it found jeopardy. Three RPAs apply to Oregon species, two of which are application buffers and the third allows for use of granular or soil incorporation treatment methods as an alternative to the buffers in limited instances. The RPAs for the five species are set out in Appendix F to this petition.

Without repudiating the jeopardy findings and RPAs issued in the 1989 BiOp, USF&WS has explained the serious limitations of that 1989 BiOp, limitations the Commission should consider in granting the rulemaking and other actions requested by this petition. In a letter to EPA over a decade later concerning use of pesticides in the State of Texas, USF&WS noted the following limitations of its BiOp: (1) a majority of pesticides used "have had inadequate or no consultation," (2) "critical habitat has been insufficiently addressed," and (3) "no current mechanism exists for updating pesticide protection measures for recently listed species, critical habitat, or listed species that previously have undergone consultation."[38] USF&WS concluded that the 1989 BiOp is "outdated since [it] represent[s] consultations for only 19 Texas species and 125 pesticide active ingredients. Moreover, USF&WS stated that the RPAs set out in the 1989 BiOp are inadequate because "new information in the spray drift/runoff literature indicates that buffer zones and other protection measures provided in the 1989 Biological Opinion should be revised."[39] In short, the 1989 BiOp is underprotective.

USF&WS also sharply criticized EPA's use of a quotient model for assessing the risks of pesticides because the model

> cannot currently account for sublethal effects by pesticides on listed species such as endocrine disruption, abnormal behavioral changes, olfactory interference in anadromous fish spp., etc. Such sublethal effects from pesticide applications "may affect" listed species and therefore constitute harm as part of take as defined in the ESA. Since pesticide protection measures contained in the 1989 Biological Opinion have been based in part on use of the quotient model, the Service believes that: a) the biological opinion must be revised to provide more accurate protection measures for listed species, and b) the current process used by EPA for reaching "may affect" determinations for listed species must be re-evaluated including the role of mathematical models.[40]

In 2002, USF&WS raised many of the same concerns with regard to EPA's proposed re-registration of the pesticide atrazine.[41] USF&WS criticized EPA's risk assessment because it did not: (1) include sublethal effects of pesticides, (2) used inappropriate surrogate species to

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[38] Letter from David C. Frederick, Supervisor, USF&WS, to Gregg Cooke, Regional Administrator, EPA, *EPA's Noncompliance in Texas on National Pesticide Consultations* 2 (June 28, 2001)(on file with NWEA).

[39] *Id.*

[40] *Id.* at 3.

[41] Letter from Everett Wilson, Chief, Division of Environmental Quality, USF&WS to Kimberly Nesci Lowe, Chemical Review Manager, Information and Resources and Services Division, EPA, *USF&WS Comments on Ecological Risk Assessment of Atrazine for Re-Registration* (June 27, 2002)(on file with NWEA).

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evaluate effects on threatened and endangered species, (3) failed to consider the toxicological effects of "inert" ingredients and adjuvants (which increase pesticide effectiveness), (4) failed to consider the potential for bioaccumulation, and (5) failed to evaluate mixtures of chemicals including other pesticides, thereby underestimating the potential for ecological impacts.[42]

USF&WS specifically addressed the failure of EPA's atrazine evaluation to consider the pesticide's effects on amphibians, pointing out that EPA's risk ranges were "not based on risks to amphibians"[43] despite recent research specifically evaluating the risk to amphibians from that pesticide. Likewise, there was no evaluation of the risk of bioaccumulation in amphibians, despite recent studies demonstrating that effect.[44] The agency also noted that because amphibian larvae subsist on algae and other phytoplankton, adverse impacts to aquatic plants "could have adverse effects to amphibians. This is particularly important because of the dramatic decline in amphibian populations worldwide[.]"[45] Making an observation that is highly relevant to Oregon's water quality standards program, USF&WS also pointed out that

> Aquatic systems that have fish often lack amphibians and vice versa. In Murphy et al. (2000) several citations are listed for the predatory effects on amphibians by fish[.] The text states that "many anuran species cannot coexist with such predatory fish." Therefore, an aquatic community with amphibians is likely to be much different than an aquatic community with fish.[46]

While Oregon has created designated use maps for salmonids, Oregon has no information that it uses to protect non-salmonid aquatic life such as amphibians and reptiles. The assumption underlying Oregon's water quality program that protection of salmonids will result in protection of other sensitive species is simply incorrect, particularly with regard to species that are in a state of rapid decline.

V. Effects of Pesticides on Aquatic Life and Limitations of Existing Regulatory Programs in Oregon to Protect Aquatic and Aquatic-Dependent Species

Pesticides are poisons intended to kill insects, plants, microorganisms, and animals. Pesticides affect aquatic and aquatic-dependent life in two general ways, short-term acute effects and long-term chronic effects. The USF&WS notes that acute effects are both easily measured and severe: "[s]ignificant fish and bird kills have resulted from the legal application of pesticides, with millions of fish and birds estimated to die from pesticide exposure each year."[47] The latter effect, from longer-term low-level exposure, can lead to a wide range of reproductive, developmental, growth, and behavior problems that are more difficult to detect and require greater scientific

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42 *Id.* at 2-5.

43 *Id.* at 4.

44 *Id.* at 5.

45 *Id.* at 4.

46 *Id.*

47 USF&WS, *Pesticides and Wildlife, Environmental Contaminants Program*, http://www.fws.gov/contaminants/Issues/Pesticides.cfm (last accessed July 25, 2012).

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study. Many pesticides are endocrine disruptors which when absorbed into the body either mimic or block hormones and disrupt the body's normal functions. Some identified effects of endocrine disrupters in wildlife include: abnormal blood hormone levels, masculinization of females, feminization of males, intersex, deformities, abnormal and malformed reproductive organs, embryo mortality, skewed sex ratios, reduced fertility, altered sexual behavior, modified immune system, altered thyroid functions, brain and neurological problems, reproductive tissue cancers, and altered bone density and structure.[48] Fetuses and embryos, whose growth and development are highly controlled by the endocrine system, are especially vulnerable to exposure.[49] Female fish, amphibians, reptiles, birds can pass contaminants to their offspring prenatally in eggs.

A. EPA Has Failed to Incorporate Mandatory Reasonable and Prudent Alternatives Into its Pesticide Regulatory Program

Despite the fact that NMFS completed the first BiOp on the effects of pesticides on Pacific Northwest salmonids on November 18, 2008 and USF&WS completed its only BiOp on pesticides in 1989 – over three and a half years and 23 years respectively – EPA has taken no action to incorporate the RPAs into its FIFRA registrations. In the few instances where USF&WS has consulted with EPA under the ESA on pesticides, EPA has disregarded the agency's findings. As USF&WS pointed out with regard to the use of pesticides in Texas, "EPA is not in compliance with [the 1989 BiOp's] reasonable and prudent alternatives (RPAs) and reasonable and prudent measures (RPMs) . . . . RPAs and RPMs are nondiscretionary actions that must be implemented by EPA and any applicant to ensure compliance with the ESA."[50] The Service also explained that "[EPA's] standard practice . . . requires protection measures only in cases where habitat is known to be occupied by listed species and does not require surveys of potential habitat before application of potentially harmful pesticides. . . . The Service believes that application of pesticides in potential habitat of listed species without appropriately authorized surveys . . . exceeds the level of take anticipated by [the] biological opinion[ ]."[51]

EPA has similarly failed to incorporate the RPAs from the 1989 BiOp into its national re-registrations of pesticides. For example, the 1989 BiOp found that registered endosulfan uses potentially affected 130 listed species and jeopardized the survival and recovery of 41 aquatic species and two terrestrial species yet, according to USF&WS, EPA failed to adopt 9 of the 13 RPAs to avoid jeopardy.[52] Nonetheless, EPA re-registered endosulfan for use on a variety of

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[48] Tulane University, e.hormone; your gateway to the environment and hormones, *Endocrine Disruption Tutorial; Wildlife Effects*, http://e.hormone.tulane.edu/learning/wildlife-effects.html.

[49] *See, e.g.*, Bern H. *The Fragile Fetus* in *Chemically-induced Alterations in Sexual and Functional Development: The Wildlife/Human Connection*, Vol 21, 9-15 (T. Colborn and C. Clement eds., Princeton Scientific Publishing Co. 1992).

[50] Letter, *supra* n. 38 at 1.

[51] *Id.* at 4.

[52] Letter from Jamie Rappaport Clark, Director, Fish and Wildlife Service to Susan Wayland, Acting Assistant Administrator for Prevention, Pesticides and Toxic Substances, EPA, *Re: Re-Registration of endosulfan* (June 9, 2000)(on file with Center for Biological Diversity).

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fruits and vegetables in November 2002. EPA subsequently terminated all use of endosulfan in June 2010 as posting "unacceptable risks to agricultural workers and wildlife."[53]

As a result of EPA's inaction under FIFRA and the ESA, Oregon cannot rely on EPA to provide protection from pesticides for the threatened and endangered species in the state nor to protect designated and existing uses from those chemicals. This EPA inaction, taken together with the significant limitations of EPA's evaluations of pesticides on aquatic life in the context of the CWA and the findings and RPAs in the Services' BiOps, demonstrates the importance of Oregon's acting under its CWA authorities and augmenting the FIFRA-authorized labels on pesticides used in the state.

B. Limitations of Existing Clean Water Act Programs to Protect Aquatic Life

The CWA's water quality-based approach to protecting the designated use of aquatic life is based on states' setting water quality standards that are more often than not based on EPA's recommended criteria.[54] Compared to the literally thousands of registered pesticides, EPA's CWA recommended criteria include very few current-use pesticides. EPA has recommended criteria for a total of six current-use pesticides: acrolein, atrazine (acute only), carbaryl, chlorpyrifos, diazinon, and malathion (chronic only).[55] This very limited list of pesticides for which states adopt numeric criteria makes comparisons between monitored water quality and such benchmarks of acceptable pollution levels difficult. For example, in 1999 the U.S. Geological Survey ("USGS") found that aquatic life criteria values were frequently exceeded in U.S. streams.[56] However, in most instances the USGS was unable to compare water quality data to state or EPA aquatic life criteria because there were only six such criteria.[57] Moreover,

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[53] EPA, *EPA Action to Terminate Endosulfan*, http://www.epa.gov/pesticides/reregistration/endosulfan/endosulfa n-cancl-fs.html (last accessed July 27, 2012).

[54] Pursuant to section 304(a) of the CWA, EPA recommends numeric criteria for the states to formally adopt as part of their water quality standards for toxic pollutants listed in section 307(a)(1).

[55] EPA, *Office of Pesticide Programs' Aquatic Life Benchmarks, OPP Aquatic Life Benchmarks*, http://www.epa.gov/oppefed1/ecorisk_ders/aquatic_life_benchmark.htm#benchmarks (accessed July 26, 2012). EPA's website states that "[c]riteria are available for roughly 16 pesticides." *Id.* Of the eight actually listed on EPA's table, only the now-cancelled endosulfan is the subject of the pending ESA consultation for Oregon's 2004 criteria updates. EPA has also cancelled the FIFRA registration for lindane.

[56] Larson, S.J. et al, *Pesticides in Streams of the U.S. – Initial Results from the National Water-Quality Assessment Program ("NWQA")*, USGS Water-Resources Investigation Report 98-4222 (1999). *See also* USGS, *The Quality of Our Nation's Waters: Pesticides in the Nation's Streams and Ground Water, 1992–2001—A Summary* (March 2, 2006) available at http://water.usgs.gov/nawqa/pnsp/ (last accessed July 31, 2012).

[57] USGS used Canadian values where they were available but had no benchmarks for the majority of chemicals evaluated.

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despite the fact that pesticides are more often found in combinations of chemicals,[58] EPA's recommended criteria – that the Commission has adopted into Oregon's water quality standards as numeric criteria – are based solely on their effects as individual chemicals, not in combinations. In addition EPA's recommended criteria do not address some types of effects such as endocrine disruption and other sublethal effects, effects of degradate products when chemicals change in the environment, and seasonal high concentrations. Finally, EPA has not established any recommended criteria for the protection of aquatic-dependent wildlife, with the exception of a handful that apply only in the Great Lakes.[59] As a result, states such as Oregon have no numeric criteria for the protection of wildlife and rarely, if ever, use their narrative toxic criteria to provide that protection in regulatory actions.

C. ESA Consultations on the Effects of Pesticides on Oregon Threatened and Endangered Species Have Not Addressed Plummeting Populations of Amphibians and Reptiles in Oregon

Pesticides are known to have adverse effects on amphibians and reptiles.[60] Whereas NMFS is responsible for anadromous fish, such as salmon, steelhead, and marine animals, USF&WS is responsible for the protection of non-anadromous inland fish, aquatic invertebrates, mollusks, crustaceans, amphibians, reptiles and aquatic-dependent mammals and birds. To date, however, the USF&WS has completed no BiOps for the listed pesticides other than the 1989 consultation for the inland fish[61] described above. USF&WS did not complete consultation on EPA's pesticide discharge permit, discussed below. The consequence of this failure to consult is a gaping hole in our understanding of the effects of pesticides on the species under the jurisdiction of USF&WS that are known to be at risk of extinction but for which there are no ESA consultations or for which the 23-year old BiOp is likely out-of-date. There are now four inland fish that are federally-listed as endangered and six listed as threatened.[62] The 1989 BiOp did not

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[58] *See e.g.*, Larson, *supra* n. 56 (USGS found concentrations of two or more pesticides often exceeded benchmarks in the Willamette Basin. About 80 percent of samples from urban and mixed land use streams contained more than four pesticides and about 15 percent of all samples contained more than ten pesticides.).

[59] 40 C.F.R. Appendix D to Part 132—Great Lakes Water Quality Initiative Methodology for the Development of Wildlife Criteria; Table D-1, Tier I Great Lakes Wildlife Criteria (criteria for DDT and metabolites, mercury, PCBs, and 2,3,7,8-TCDD).

[60] *See, e.g.*, Willingham, E., *Embryonic exposure to low-dose pesticides: effects on growth rate in the hatchling red-eared slider turtle*, 64 Journal of Toxicology and Environmental Health (A) 257-272 (2001).

[61] The 1989 USF&WS BiOp also addressed two ESA-listed species in Oregon, the Borax Lake chub and the Foskett speckled dace, and found no pesticides likely to affect them. 1989 BiOp, *supra* n. 37 at III-5. Nor did the BiOp address bull trout which were listed as threatened species after 1989.

[62] Endangered status inland fish are: Modoc sucker, Shortnose sucker, Lost River sucker, and Borax Lake chub. Threatened status inland fish are: Warner sucker, Hutton tui chub, Lahontan cutthroat trout, Oregon chub, Foskett speckled dace, and Bull trout. USF&WS, *Federally Listed, Proposed, Candidate, Delisted Species, and Species of Concern Under the Jurisdiction of the Fish and Wildlife Service Which May Occur Within Oregon* 1, available at

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address the bull trout or the Oregon chub, both threatened species.

Another significant hole is the agency's identification of species for which ESA listing is warranted but for which listing has not yet occurred. This "warranted but precluded"[63] status is based on the agency's having higher priorities and applies to two "candidate" species, the Columbia spotted frog (Great Basin distinct population segment) and the Oregon spotted frog.[64] The Oregon Department of Fish & Wildlife (ODFW) has essentially concurred with this warranted-but-precluded status for these two frogs and includes yet two additional frogs found in Oregon: the Foothill yellow-legged frog and the Northern leopard frog. ODFW classifies all four of these as "sensitive–critical."[65] Likewise, ODFW lists two aquatic reptiles – the Western painted turtle and Western pond turtle – as "sensitive– critical."[66] ODFW defines "sensitive–critical" to mean species "imperiled with extirpation from a specific geographic area of the state because of small population sizes, habitat loss or degradation, and/or immediate threats. Critical species may decline to point of qualifying for threatened or endangered status if conservation actions are not taken."[67]

A recent petition filed with USF&WS by the Center for Biological Diversity seeks endangered status for the Foothill yellow-legged frog, the Western pond turtle, and the Cascades frog.[68] The petition notes that "populations of foothill yellow-legged frogs in greatest decline are all downwind of highly impacted (mostly agriculturalized) areas" and that

> historical pesticide use was a strong, significant variable in population declines for the foothill yellow-legged frog, especially so for organophosphates and carbamates. In particular, they found that sublethal exposure to the pesticide carbaryl likely inhibits the innate immune defense of foothill yellow-legged frogs

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http://www.fws.gov/oregonfwo/Species/Lists/Documents/OregonStateSpeciesList.PDF (last accessed July 27, 2012).

[63] *See* 16 U.S.C. § 1533(b)(3)(B)(iii); 50 C.F.R. § 424.14(b)(3); *see also* Kristina Alexander& Congressional Research Service, *Warranted but Precluded: What That MeansUnder the Endangered Species Act (ESA)* (April 20, 2010) available at http://www.scribd.com/doc/68803421/Warranted-but-Precluded-What-That-Means-Under-the-Endangered-Species-Act-ESA (last accessed July 29, 2012).

[64] *Id.* at 2.

[65] ODFW, *2008 ODFW Sensitive Species List, organized by category* 9 available at http://www.dfw.state.or.us/wildlife/diversity/species/docs/SSL_by_category.pdf (last accessed July 27, 2012).

[66] *Id.*

[67] *Id.* at 2.

[68] Center for Biological Diversity, *Before the Secretary of the Interior, Petition to list 53 Amphibians and Reptiles in the United States as Threatened or Endangered Species Under the Endangered Species Act* (July 11, 2012) available at http://www.biologicaldiversity.org/campaigns/amphibian_conservation/pdfs/Mega_herp_petition_7-9-2012.pdf (last accessed July 27, 2012).

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> and increase susceptibility to disease. Sparling and Fellers (2007) found that environmental concentrations of the pesticides chlorpyrifos, malathion and diazinon and their oxons can be harmful to populations of the frog. Sparling and Fellers (2009) established the chronic toxicity of chlorpyrifos and endosulfan, two of the insecticides most commonly used in the Central Valley and found in the mountains, which likely contributes to observed declines in the frog. Kerby (2007) examined the sublethal effects of four pesticides on foothill yellow-legged frogs and found significant alteration of behavior and development.[69]

USF&WS also lists as "species of concern" the following aquatic or aquatic-dependent species: one species of turtle, five species of frogs, five species of salamanders, 21 species of inland fish, and three species of snails.[70] ODFW's roughly corresponding list of "sensitive–vulnerable" species comports with this list although it is longer, with five additional species of salamanders for a total of 10 salamanders and two additional frogs for a total of six frogs.[71] ODFW defines its "sensitive– vulnerable" category as including species "facing one or more threats to their populations and/or habitats. Vulnerable species are not currently imperiled with extirpation from a specific geographic area or the state but could become so with continued or increased threats to populations and/or habitats."[72] Finally, the Oregon Biodiversity Information Center ("ORBIC") at Portland State University includes all of ODFW's sensitive species but adds an additional two toads, one salamander, one frog, one newt, and two turtles.[73] ORBIC ranks rare, threatened, and endangered species found in Oregon according to state and global priorities. Of a total of 24 non-ESA-listed species ranked, ORBIC identifies 14 as "critically imperiled" or "imperiled."[74]

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[69] *Id.* at 240-241.

[70] These species are: Northern Pacific pond turtle, Rocky Mountain tailed frog, Coastal tailed frog, Oregon slender salamander, Del Norte salamander, Larch Mountain salamander, Siskiyou Mountains salamander, Northern red-legged frog, Foothill yellow-legged frog, Cascades frog, the Southern torrent (seep) salamander, Goose Lake sucker, Jenny Creek sucker, Klamath largescale sucker, Malheur mottled sculpin, Margined sculpin, Slender sculpin, Alvord chub, Sheldon tui chub , Oregon Lakes tui chub, Catlow tui chub, Summer Basin tui chub, River lamprey, Pacific lamprey, Goose Lake lamprey, Pit roach, Westslope cutthroat trout, Coastal cutthroat trout, Great Basin redband trout, Catlow Valley redband trout, Umpqua chub, Millicoma dace, Newcomb's littorine snail, Columbia pebblesnail, and Minor Pacific sideband snail. USF&WS, *supra* n. 62 at 4.

[71] In addition to the USF&WS species of concern, ODFW lists as "sensitive–vulnerable" the following species: Cope's giant salamander, Columbia torrent salamander, Cascade torrent salamander, Larch, Clouded salamander, Black salamander, Rocky Mountain tailed frog, and Columbia spotted frog.

[72] ODFW, *supra* n. 65.

[73] Oregon Biodiversity Information Center, Portland State University, *Rare, Threatened, and Endangered Species of Oregon, Species Review Spreadsheets*, http://orbic.pdx.edu/documents/Terrestrial%20vertebrates.xlsx (last accessed July 27, 2012). These additional species are: Blotched tiger salamander, Western toad, Woodhouse's toad, Northern leopard frog, Crater Lake newt, Pacific pond turtle, and Painted turtle.

[74] *Id.*

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Appendix G discusses the population status of two frogs and two turtles found in Oregon waters that likely will eventually be listed as threatened or endangered: the Oregon spotted frog, the Columbia spotted frog, the Western pond turtle, and the Western painted turtle.

D. EPA Initiation of ESA Consultations on California Frogs and Salamanders

Because USF&WS has not developed BiOps for pesticides since 1989 and because it has not listed as threatened or endangered all the Oregon species for which it believes ESA-listing is warranted, Oregon cannot rest on the formal findings of the USF&WS to protect the reptiles, amphibians, inland fish, and other aquatic species that constitute Oregon's designated and existing beneficial uses that require protection under the CWA and Oregon's water quality standards. Oregon can, however, turn to the work done in California by EPA to address similar species, the California tiger salamander and the California red-legged frog.

To protect the threatened California tiger salamander, in 2010 a federal court vacated and enjoined EPA's authorization of any use of 45 pesticides[75] in (1) all areas within 200 feet of habitat if applied by ground, and (2) all areas within 400 feet of habitat if applied by air. The habitat for this purpose is defined as

> fresh-water (including natural or manmade (e.g., stock) ponds, slow-moving streams or pools within streams, vernal pools, and other ephemeral or permanent water bodies which typically support inundation during winter rains and hold water for a minimum of 12 weeks in a year of average rainfall, but only to the extent that any such ecological features are found within the eight counties specifically identified in the Complaint (and in this Stipulated Injunction) in either (1) critical habitat designated for the California tiger salamander by the FWS . . . or (2) in the [enumerated] sections of California[.][76]

Of the pesticides at issue in this case, EPA has completed 20 effects determinations. Of those 20, the registrations for two pesticides have been cancelled (azinphos-methyl and methamidophos) and one EPA determined was not likely to adversely affect the species (methoprene). EPA found that for the remainder of the pesticides – a total of 17 to date – at least some uses of the pesticides were likely to adversely affect the listed species. The USF&WS has not completed consultation on EPA's determinations and to NWEA's knowledge has not begun such action.

To protect the threatened California red-legged frog and other San Francisco Bay area species, a federal court signed a stipulated order in 2006 vacating and enjoining EPA's authorization of any

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[75] The pesticides vacated for use without restriction are as follows: acephate, aluminum phosphide, azinphos-methyl, bensulide, beta-cyfluthrin, bifenthrin, chlorophacinone, chlorothalonil, chlorpyrifos, cyfluthrin, cyhalothrin (lambda), cypermethrin, deltamethrin, dimethoate, diphacinone, disulfoton, endosulfan, esfenvalerate, ethoprop, fenpropathrin, fipronil, fluvalinate, imidacloprid, malathion, maneb, mancozeb, metam sodium, methamidophos, methidathion, methomyl, methoprene, methyl bromide, oryzalin, oxydemeton-methyl, oxyfluorfen, PCNB, phenothrin, phosmet, propargite, resmethrin, S-metolachlor, strychnine, tetramethrin, tralomethrin, and zeta-cypermethrin. *Center for Biological Diversity v. EPA*, No. C07-02794 (JCS), Order at 12-13 (N.D. Cal., May 17, 2010).

[76] *Id.* at 13.

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use of 66 pesticides in certain habitats in certain parts of 33 counties in California.[77] The injunction requires no-use buffers of areas within 60 feet from the edge of the aquatic breeding, non-breeding aquatic, or upland critical habitat and areas within 60 feet from the edge of all Aquatic Features or Upland Habitats for the California red-legged frog within 564 named sections of California and an aerial use buffer pertaining to the same areas of 200 feet.

Of the pesticides at issue in the San Francisco Bay area consultation, EPA has completed effects determinations on all pesticides and found that only four were not likely to adversely affect the species (Methoprene, Fenamiphos, Telone (1,3-dichloropropene), and Molinate). According to EPA, a total of 62 pesticides are likely to adversely affect the listed species in at least some use of the chemicals. In the same consultation, EPA found that 11 pesticides were likely to adversely affect the Delta smelt but one was not likely to affect (carbofuran). The USF&WS has not completed consultation on EPA's determinations and to NWEA's knowledge has not begun such action.

While NWEA has no specific data showing that the California red-legged frog and California tiger salamander have identical sensitivity to these pesticides as Oregon's candidate species, the Columbia spotted frog and the Oregon spotted frog, or Oregon's species of concern – the Northern Pacific pond turtle, Rocky Mountain tailed frog, Coastal tailed frog, Oregon slender, Del Norte salamander, Larch Mountain salamander, Siskiyou Mountains salamander, Northern red-legged frog, Foothill yellow-legged frog, Cascades frog, and Southern torrent (seep) salamander – the Commission should adopt a biologically-conservative approach to ensuring that these species of concern are protected under the CWA and that they do not eventually warrant listing as threatened or endangered species under the ESA. Without protective actions by regulatory agencies, populations such as of these species that are already highlighted as declining will continue to decline until more expensive and onerous actions are required to protect them from extinction. This petition requests that the Commission take action under the Clean Water Act to provide protection for these species as existing and designated uses rather than waiting until they are prospects for ESA-based regulation.

VI. The Clean Water Act Requires Oregon Action

A. Applicable Water Quality Standards

Water quality standards incorporate the following three elements: (1) designated beneficial uses,

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[77] The pesticides vacated for use without restriction are as follows: 2,4-D, diflubenzuron, methamidophos, phorate, acephate, dimethoate, methidathion, phosmet, alachlor, disulfoton, methomyl, prometryn, aldicarb, diuron, methoprene, pronamide, atrazine, endosulfan, methyl parathion, propanil, azinphos-methyl, EPTC, metolachlor, propargite, bensulide, esfenvalerate, molinate, rotenone, bromacil, fenamiphos, myclobutanil, simazine, captan, glyphosate, naled, strychnine, carbaryl, hexazinone, norflurazon, telone (1,3-dichlorpropene), chloropicrin, imazapyr, oryzalin, thiobencarb, chlorothalonil, iprodione, oxamyl, triclopyr, chlorpyrifos, linuron, oxydemeton-methyl, trifluralin, DCPA, malathion, oxyfluorfen, vinclozolin, DEF, mancozeb, paraquat dichloride, ziram, diazinon, maneb, pendimethalin, dicofol, metam sodium, and permethrinin. *Center for Biological Diversity v. Johnson*, No. 02-1580-JSW (JL), Order at 2-3 (N.D. Cal., October 20, 2006).

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(2) narrative and numeric criteria to protect those uses, and (3) an antidegradation policy.[78] (General policies, such as mixing zones, may also be included in water quality standards.[79]) Use designations are a required element of water quality standards.[80] A waterbody must fully support the designated uses.[81] In Oregon, the designated uses include "Fish & Aquatic Life" and "Fishing."[82] Salmonid fish use maps are set out by basin.[83]

In addition to meeting full support of designated uses, water quality must meet both numeric and narrative criteria. There are few numeric criteria for the protection of aquatic life, as discussed above, and of those aquatic life criteria, extremely few are for pesticides.[84] However, in addition to numeric criteria, Oregon's water quality standards include narrative criteria such as the following criteria to protect aquatic life from toxic contaminants:

> Toxic substances may not be introduced above natural background levels in waters of the state in amounts, concentrations, or combinations that may be harmful, may chemically change to harmful forms in the environment, or may accumulate in sediments or bioaccumulate in aquatic life or wildlife to levels that adversely affect public health, safety, or welfare or aquatic life, wildlife, or other designated beneficial uses.[85]
>
> * * *
>
> Notwithstanding the water quality standards contained in this Division, the highest and best practicable treatment and/or control of wastes, activities, and flows must in every case be provided so as to maintain dissolved oxygen and overall water quality at the highest possible levels and water temperatures, coliform bacteria concentrations, dissolved chemical substances, toxic materials,

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[78] 33 U.S.C. § 1313(c)(2), 1313(d)(4)(B); 40 C.F.R. Part 131, Subpart B; *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 114 S.Ct. 1900 (1994).

[79] 40 C.F.R. § 131.13.

[80] 40 C.F.R. §§ 131.6(a), 131.3(f).

[81] *See, e.g., Advance Notice of Proposed Rulemaking, Water Quality Standards Regulation*, 63 Fed. Reg. 36741 (July 7, 1998); 62 Fed.Reg. 41,162, 41169 (July 31, 1997)(EPA recognized a need to build in "an adequate margin of safety" to protect species, particularly if they are proposed for listing as threatened under the ESA. EPA sought to "fully support[] bull trout in setting numeric criteria.); *id.* at 41174 (temperature criteria could be revised upward if bull trout "would be fully supported"); *id.* at 41177 ("[o]ne of the fundamental principles of the CWA is . . . that it is necessary to control pollution at the source to fully protect the nation's waters."). 40 C.F.R. § 131.33(a)(3)(ii)("Any such [site specific] determination shall be made consistent with § 131.11, and shall be based on a finding that bull trout would be fully supported at the higher temperature criteria.").

[82] OAR Division 41, Tables 101A-340A.

[83] OAR Division 41, Figures 130A-340B.

[84] *See* OAR 340-041-0033(1), Tables 20 and 33A, 33B.

[85] OAR 340-041-0033(2).

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> radioactivity, turbidities, color, odor, and other deleterious factors at the lowest possible levels.[86]
>
> * * *
>
> The creation of tastes or odors or toxic or other conditions that are deleterious to fish or other aquatic life ... may not be allowed.[87]
>
> * * *
>
> The formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life ... may not be allowed.[88]

The lack of numeric criteria for the majority of current use pesticides highlights the importance of Oregon's fully implementing the narrative toxic criteria.

Finally, federal law requires states to include in their water quality standards an antidegradation policy that ensures, *inter alia*, that "[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."[89] "Existing uses" are defined as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."[90] In other words, if a use is existing but has not been designated, it must be protected. This existing use provision is referred to as Tier I of the antidegradation policy. According to EPA, "[Tier I is] the absolute floor of water quality" providing "a minimum level of protection" to all waters.[91] Oregon's version of Tier I is as follows:

> The purpose of the Antidegradation Policy is to guide decisions that affect water quality such that unnecessary further degradation from new or increased point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses.[92]

An example of a use that may be designated but not afforded CWA protection because the use has been locally extirpated and therefore is likely to be ignored by DEQ staff in regulatory matters is demonstrated by a map of the locations of the Oregon spotted frog. As seen in the map below, the yellow dots represent recorded sitings before 1990 whereas the green dots represent current sitings. The antidegradation policy's protection of existing uses requires the protection of

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[86] OAR 340-041-0007(1).

[87] OAR 340-041-0007(11).

[88] OAR 340-041-0007(12).

[89] 40 C.F.R. § 131.12(a)(1).

[90] 40 C.F.R. § 131.3(e).

[91] EPA, *Questions and Answers on: Antidegradation* 4 (August 1985) available at http://water.epa.gov/scitech/swguidance/standards/upload/2002_06_11_standards_handbook_handbookappxG.pdf (last accessed July 30, 2012).

[92] OAR 340-041-0004(1).

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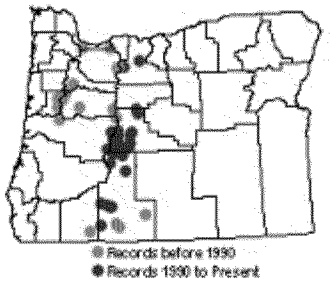
both the Oregon spotted frog and the water quality necessary to support that species in those locations from which it is now extirpated, including those areas on the map designated in yellow even though the frogs are no longer thought to inhabit those areas.



[93]

B. The State is Required to Have Published Methods for the Use of Narrative Criteria for Toxics

Narrative criteria supplement or fill the gaps left by numeric criteria: "EPA considers that the narrative criteria apply to all designated uses at all flows and are necessary to meet the statutory requirements of section 303(c)(2)(A) of the CWA."[94] To ensure that narrative criteria for toxics are attained, EPA regulations require that "[w]here a State adopts narrative criteria to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria."[95] EPA states that "[s]uch implementation procedures should address all mechanisms to be used by the State to ensure that narrative criteria are attained."[96] Here, Oregon has but rarely if ever uses narrative criteria to protect designated uses, such as salmonids, for those pesticides for which the state has no numeric criteria. The use of pesticides has not historically been treated as a point source.[97] However, as of September 30, 2011 Oregon

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[93] USF&WS, *Species Fact Sheet, Oregon spotted frog*, http://www.fws.gov/oregonfwo/Species/Data/OregonSpottedFrog/ (last accessed July 26, 2012).

[94] EPA, *Water Quality Standards Handbook, Second Edition, EPA-823-B-94-005a* at section 3.5.2 (August 1994), available at http://water.epa.gov/scitech/swguidance/standards/handbook/upload/hbk-ch3.pdf (last accessed July 30, 2012).

[95] 40 C.F.R. § 131.11(a)(2).

[96] EPA, *supra* n. 94 at 21 (internal citations omitted).

[97] In 2009 the U.S. Sixth Circuit Court of Appeals vacated EPA's 2006 Final Rule on Aquatic Pesticides, finding that point source discharges of biological pesticides, and chemical pesticides that leave a residue into waters of the U.S. were pollutants under the CWA. *National Cotton Council, et al. v. EPA*, 553 F.3d 927 (2009). As a consequence, as of October 31, 2011 such discharges require coverage under an NPDES permit.

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now regulates the discharge of some pesticides through its NPDES General Permit 2300A.[98] Even so, Oregon has not provided information on how it intends to use its narrative toxic criteria to regulate discharges of the listed pesticides into waters that are water quality limited as required by 40 C.F.R. § 131.11(a)(2). Granting this petition for rulemaking will provide a partial solution to Oregon's failure to meet federal methodology requirements for its narrative criteria.

1. *EPA's Pesticides General Permit*

EPA also has a newly-issued Pesticides General Permit[99] ("PGP") which in Oregon applies only to Indian Country.[100] Because EPA's PGP is a federal action, the agency completed ESA consultation on the permit with NMFS.[101] This consultation resulted in RPAs applicable to discharges allowed under the PGP.[102] The RPAs are set out in Appendix E. As a result of these RPAs, EPA's PGP restricts discharges of pesticides to "NMFS Listed Resources of Concern,"[103] prohibiting such discharges unless: (1) there has been a separate consultation that resulted in no jeopardy or adverse modification of habitat; (2) the "take" of the species is authorized through a habitat conservation plan; (3) the discharge is intended to address a Declared Pest Emergency Situation; (4) NMFS has approved the method of application; or (5) an agency has determined the discharge is not likely to adversely affect the species.[104] A map of the NMFS Listed Resources of Concern is in Appendix I. Where, as with the BiOps for the listed pesticides, there has been a separate ESA consultation (alternative No. 1 above), the PGP requires that the

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[98] Oregon's 2300A NPDES General Permit covers application of pesticides for the purpose of mosquito and other flying insect pest control, weed and algae control, nuisance animal control, forest canopy pest control, and something called "area-wide pest control."

[99] EPA, *Pesticide General Permit (PGP) for Discharges from the Application of Pesticides*, effective October 31, 2011, available at http://www.epa.gov/npdes/pubs/final_pgp.pdf (last accessed July 26, 2012). Excerpts from the PGP are found in Appendix H.

[100] EPA, *Endangered and Threatened Species and Critical Habitat Protection under EPA's Pesticide General Permit*, available at http://cfpub.epa.gov/npdes/pesticides/esa.cfm (last accessed July 26, 2012).

[101] NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion [of the U.S. Environmental Protection Agency's Proposed Pesticides General Permit]* (October 14, 2011) available at http://www.nmfs.noaa.gov/pr/pdfs/consultations/biop_epa_pgp2111014-1.pdf (last accessed August 1, 2012).

[102] *Id.* at 155-160.

[103] EPA, *NMFS Listed Resources of Concern* are set out in a map, available at http://www.epa.gov/npdes/pubs/pgp_or_map.pdf; a list of Oregon watersheds available at http://www.epa.gov/npdes/pubs/pgp_oregon_watersheds.pdf; a list of steelhead and salmon waters, available at http://www.epa.gov/npdes/pubs/pgp_oregon_waters.pdf; a list of eulachon waters, available at http://www.epa.gov/npdes/pubs/pgp_oregon_eulachon.pdf; and a list of green sturgeon waters, available at http://www.epa.gov/npdes/pubs/pgp_oregon_greensturgeon.pdf (last accessed July 31, 2012).

[104] EPA, *supra* n. 99 at 1-3 – 1-4.

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discharges be consistent "as modified with a reasonable and prudent alternative[.]"[105] The discharger may also seek NMFS' determination of eligibility or "self-certify" that its discharges are not likely to adversely affect NMFS Listed Resources of Concern by following the instructions in the PGP.[106] The NMFS Listed Resources of Concern covers a wide swath of Oregon watersheds, all basins fully or partially with the exception of the Powder, Malheur River, Owyhee, Malheur Lake, Goose & Summer Lakes, and Klamath.[107]

2. *Oregon's General Permit 2300A*

The NMFS BiOp for the PGP includes a discretionary conservation recommendation to EPA, noting that section 7(a)(1) of the ESA directs federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. The conservation recommendation states that

> EPA should work with States with the delegated authority to implement the NPDES program to develop their permits in a manner that is protective of endangered or threatened species or designated critical habitat and to create monitoring programs that evaluate whether these permits are successful in accomplishing that goal.[108]

NWEA is unaware of any effort by EPA to ensure that Oregon's 2300A pesticide general permit is consistent with the RPAs established to mitigate the jeopardy and adverse modification findings of the NMFS BiOp.

For discharges of pesticides to Oregon waters not in Indian Country and therefore not covered under EPA's PGP, authorization to discharge must be obtained through Oregon's 2300A General Permit. In addition to allowing the use of pesticides to kill mosquitos, weeds and algae, and nuisance animals by direct application to waters of the state, the 2300A General Permit also allows discharges of pesticides for "forest canopy pest control" and "area-wide pest control," both of which involve aerial pesticide applications over large areas which "will unavoidably be applied over and deposited in water."[109] The 2300A General Permit contains no restrictions on the use of the pesticides found by NMFS to cause jeopardy or adverse modification to threatened and endangered species found in Oregon waters.

Unlike EPA's PGP, the Oregon pesticide NPDES General Permit 2300A allows the discharge of some or all of the pesticides covered in the BiOps. There are no limitations on which pesticides

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[105] EPA, *PGP Appendix I, Endangered Species Procedures* I-2 (October 31, 2011) available at http://www.epa.gov/npdes/pubs/pgp_appi.pdf (last accessed July 30, 2012).

[106] *Id.* at I-3 – I-4.

[107] It should be noted that the USF&WS has not completed ESA consultations on either the PGP or the FIFRA labels so it is unknown what effect the identified pesticides may have on threatened and endangered species that are under its jurisdiction and which are present in the watersheds that are not covered by the NMFS "Listed Resources of Concern."

[108] NMFS, *supra* n. 101 at 164.

[109] DEQ, *supra* n. 3.

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can be used pursuant to the permit. For example, the herbicide 2,4-D, which NMFS concluded jeopardizes 12 of 13 species in Oregon waters and adversely modifies critical habitat for three species, could be allowed to be discharged for the purpose of killing weeds under Oregon's 2300A permit. The 2300A permit contains no specifications requiring that dischargers follow pesticide labels other than an exhortation that the permittee should "[u]se the optimal amount of pesticide consistent with the pesticide label directions to reduce the potential for development of pest resistence and to minimize the frequency of pesticide applications necessary to control the target pest."[110] Nor does DEQ's 2300A permit require compliance with the mandatory RPAs in the NMFS BiOps, the 1989 USF&WS BiOp, or the PGP BiOp. In other words, unlike EPA's PGP, Oregon's 2300A permit provides *zero* protections for threatened and endangered species.

The only relevant restrictions in the 2300A permit are two water quality-based effluent limitations that (1) the "discharge must not cause or contribute to the violation of water quality standards"[111] and (2) it must "comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rules (OAR) 340-041-0033 [water quality standards for toxics] and 307(a) of the federal Clean Water Act for toxic pollutants . . . even if the permit has not yet been modified to incorporate the requirement."[112] However, the state's failure to meet the federal requirement that it "provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments" leaves wholly undefined whether or how DEQ interprets the permit's effluent limitation, as discussed above. What precisely does Oregon mean when it states that the discharge of pesticides shall not cause or contribute to violations of water quality standards? Specifically, Oregon has not provided information on how it will regulate the discharge of the pesticides covered under the BiOps using its narrative criteria for toxics in the 2300A permit. Nor has it provided information on how it will regulate the discharges of those pesticides in any individual permit that it might choose to issue to a discharger that cannot conform to the requirements of the 2300A general permit and chooses to seek an individual NPDES permit.

As discussed below, however, discharges of the listed pesticides even when used in conformity with the FIFRA labels – the very action evaluated by NMFS in the pesticide BiOps – will cause jeopardy and/or adverse modification if not in conformity with the applicable RPAs. The NMFS findings of jeopardy and adverse modification set out in BiOp Nos. 1 - 5 and the USF&WS jeopardy findings in the 1989 BiOp are *prima facie* evidence that use of the listed pesticides in or near waters supporting the named species do not fully support the designated uses and are, therefore, a violation of Oregon water quality standards if the discharges or uses are not consistent with the RPAs. The finding of jeopardy means that the Services have determined that continuation of the use of these pesticides as the FIFRA labels currently allow will likely lead to extinction of the species. Extinction of the species is the elimination of the aquatic life and fishery as both an existing and a designated use and is prohibited under the Clean Water Act.

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[110] *Id.* at Schedule A, Condition 2.a.

[111] Oddly, if a discharger does cause or contribute to violations of water quality standards, "corrective action must be taken as required in Condition No. 3. below." *Id.* at Schedule A, Condition 1.a. Condition No. 3 merely requires the violator to review and make changes to its procedures and clean up any spills. *Id.* Also oddly, while the 2300A permit requires the discharger to have a Pesticide Discharge Management Plan and to keep the plan updated, the permit does not require the discharger to comply with that plan.

[112] DEQ, *supra* n. 3, Schedule F, Condition 6 Toxic Pollutants.

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In addition, DEQ's 2300A permit contains no protections for candidate or sensitive species identified by the Services or for sensitive species identified by ODFW. The permit does not require an applicant to survey a waterbody for species such as frogs, salamanders, and turtles that are declining precipitously in Oregon prior to DEQ's authorizing the discharge of pesticides, including directly and intentionally to waters of the state. Neither does the permit require DEQ to determine that the discharge will not directly or indirectly kill or injure such species. As a general NPDES permit, DEQ requires no public notice that an application has been made for authorization to discharge pursuant to the permit, no public comment is solicited, and no notice is given that discharges have been authorized.

In a recent instance in which DEQ issued an authorization to discharge the herbicide diquat dibromide to Fairview Lake to kill the native plant elodea canadensis, DEQ did not require the completion of a turtle survey in the lake and associated wetlands prior to authorizing the discharge despite its being known habitat for native turtles.[113] Diquat dibromide is known to suppress dissolved oxygen levels to lethal levels, to be toxic to very young fish,[114] and there is evidence that it is directly toxic to turtles. Limits on removal of vegetation established by local ordinances were ignored by the authorized discharger in part because DEQ failed to require dischargers to be in compliance with statewide land use goals and comprehensive plans as required by DEQ's regulations, thereby removing review and protection by other agencies.[115]

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[113] *See* Letter from Nina Bell, NWEA to Greg Geist, Northwest Region, DEQ *Application for Coverage Under General Permit NPDES No. 2300A by Fairview Lake Property Owners Association; Proposed Use of Fluridone on Fairview Lake and Upper Slough* (February 17, 2012) available at http://www.northwestenvironmentaladvocates.org/nweafiles/Fairview%20Lake%202%2017%202012.pdf; Letter from Nina Bell, NWEA to Dick Pedersen, Director, DEQ *Petition for Reconsideration of May 15, 2012 Letter Approving Coverage Under the NPDES General Permit 2300A for the Fairview Lake Property Owners Association* (June 20, 2012) available at http://www.northwestenvironmentaladvocates.org/nweafiles/Fairview%20Lake%20June%202012.pdf.

[114] The State of New York has a "Special Local Needs (SLN) registration that provides for more stringent use conditions than are in effect in other states or under the EPA-registered label" due to toxicity tests showing diquat's toxicity to young fish and lack of label precautions that would prevent lethal doses. The SLN restrictions set out by New York include, *inter alia*, a prohibition on use in waters less than three feet deep. *See* Memorandum from Steven J. Sanford, Bureau of Habitat, Division of Fish, Wildlife and Marine Resources, New York State Department of Environmental Conservation to Regional Supervisors of Natural Resources, *Natural Resource Guidance for the Review of Aquatic Herbicide Permit Applications* 12 (March 7, 2005) available at http://www.dec.ny.gov/docs/administration_pdf/aquaticherbicide2005.pdf (last accessed July 27, 2012). Diquat use in New York is limited to one annual treatment. 6 NYCRR 327.6(b)(6).

[115] OAR 340-018-0000. *See also*, Letter from Nina Bell, NWEA to Dick Pedersen, Director, DEQ *Addendum to Petition for Reconsideration of May 15, 2012 Letter Approving Coverage Under the NPDES General Permit 2300A for the Fairview Lake Property Owners Association* (July 17, 2012); Letter from Nina Bell, NWEA to Jeff Cogan, Chair, Multnomah County, *Violation of Requirement to Obtain an SEC Permit* (July 13, 2012)(available from NWEA).

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VII. Need for Commission Adoption of the Proposed New Rules for Pesticides

A. The State of Oregon Must Adopt Measures to Meet Water Quality Standards, Including Protection of Designated Uses, in Coastal Watersheds Under the Coastal Zone Act Reauthorization Amendments

1. *CZARA Requirements*

The Coastal Zone Act Reauthorization Amendments ("CZARA") control state funding from the federal government through section 319 of the Clean Water Act ("CWA") and section 306 of the Coastal Zone Management Act ("CZMA"). CZARA is jointly administered by EPA and the National Oceanic and Atmospheric Administration ("NOAA")(together the "federal agencies"). CZARA generally requires coastal states, such as Oregon, to develop and implement coastal nonpoint source pollution control programs that meet statutory criteria and federal guidance.[116]

Nonpoint source pollution is caused by precipitation runoff that moves over the ground, carrying away pollutants and depositing them into lakes, rivers, wetlands, and other waters. In CZARA, Congress required the federal agencies to withhold a percentage of CWA and CZMA grant funds[117] from states that fail to submit coastal nonpoint programs that meet applicable criteria and protect water quality.

This outcome is assured by, at a minimum, compliance with the section (g) management measures[118] developed by the federal agencies as well as such "additional management measures" as may be required to meet state water quality standards adopted under the CWA. Where compliance with EPA's 1993 guidance containing the (g) management measures is not expected to achieve and maintain water quality standards and protect designated uses, CZARA calls for the "implementation and continuing revision from time to time of additional management measures . . . that are necessary to achieve and maintain applicable water quality standards under section 1313 of Title 33 and protect designated uses."[119]

CZARA required states to submit their Coastal Nonpoint Programs to the federal agencies by July 1995[120] and the federal agencies to review and approve or disapprove such state programs within six months of submittal.[121] Notwithstanding these statutory requirements the federal

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[116] 16 U.S.C. § 1455b(a)(1).

[117] CWA section 319 funds are granted to DEQ, which uses them to support its own programs as well as to fund other agencies, such as the Oregon Department of Forestry, and landowner activities. CZMA section 306 funds are granted to the Oregon Department of Land Conservation and Development.

[118] As required by CZARA, 16 U.S.C. § 1455b(g), EPA issued *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* in January 1993.

[119] 16 U.S.C. § 1455b(b)(3).

[120] 16 U.S.C. § 1455b(a)(1).

[121] 16 U.S.C. § 1455b(c)(1).

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agencies established a program of issuing "conditional approval" to deficient state programs and indefinitely delayed the withholding of CWA and CZMA grant funds from such conditionally approved states.

2. *Oregon's CZARA Program*

In July 1995 Oregon submitted its Coastal Nonpoint Program to the federal agencies for review. On January 13, 1998, the federal agencies found many components of Oregon's Coastal Nonpoint Program to be deficient, identifying 40 conditions Oregon needed to meet to obtain full approval of its program, most of which were to be completed by January 13, 2001.[122] Over the years, Oregon consistently failed to demonstrate compliance with the (g) management measures with regard to pesticides. By 2003, the federal agencies were once again pointing out that the state's pesticide programs run by the Oregon Department of Agriculture ("ODA") fell short of CZARA requirements for, among other reasons, "[f]ew of the 1010 [agricultural water quality management] plans developed so far address pesticide management" and that Oregon had stated "no new rules for pesticides will be developed under the Agricultural Water Quality Management Program."[123] In fact, the agricultural water quality management *plans* are irrelevant from the perspective of CZARA approval of Oregon's agriculture program because they are not enforceable.[124] And, with extremely limited exceptions, ODA basin *rules* do not mention pesticides.[125, 126] The next year, the federal agencies gave up on Oregon's taking responsibility

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[122] *See* EPA & NOAA, *A Pollution Prevention and Control Program for Oregon's Coastal Waters: Supplemental Information in Response to the Federal Findings of January 1998* Table 1 (April 1999)(available from NWEA).

[123] EPA & NOAA, *Submittal of Additional Information on the State's Measures for Urban Sources in Response to Federal Findings of 1998* at 4-5 (June 24, 2003)(available from NWEA).

[124] *See* Letter from Nina Bell, NWEA to Michael Bussell, EPA & John King, NOAA, *Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon* 14-18 (April 24, 2012)(available from NWEA).

[125] The exceptions include the following ODA basin rules that mention pesticides: Coos & Coquille Basin OAR 603-095-1540(4) (a)(pesticide provisions limited to cranberry production); North Coast Basin OAR 603-095-0840(7)(a)(pesticides to be used in accordance with labels); Umatilla Basin OAR 603-095-0340(7)(b)(farm chemicals should be stored properly); Lower Willamette Basin OAR 603-095-3740(5)(a)(C)(riparian vegetation should filter pesticides in surface runoff). Rules available at http://www.oregon.gov/ODA/NRD/water_agplans.shtml.

[126] Even when DEQ has completed a Total Maximum Daily Load ("TMDL") for pesticides to establish pollutant reduction targets, ODA has not updated its rules, the only mandatory aspect of its program. For example, DEQ completed the Molalla-Pudding Subbasin TMDL in December 2008 in which it called for a percentage reduction of DDT, DDE, DDD, and dieldrin from agricultural nonpoint sources in the Little Pudding River of >99, 96, 95, and 92 percent respectively. DEQ, *Molalla-Pudding Subbasin TMDL Chapter 4 Pesticides* 4-48 (December 8, 2008), available at http://www.deq.state.or.us/WQ/TMDLs/docs/willamettebasin/MolallaPudding/MoPudChapter4Pesticides.pdf (last accessed July 30, 2012). Yet ODA has not updated its rules for this subbasin since 2002. OAR 603-095-1900.

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for pesticide restrictions and instead decided to rely upon the pesticide injunction issued in *Washington Toxics*. The federal agencies agreed on language to obliquely refer to the results of this case as "processes that may result in additional buffer protection requirements beyond those on existing labels in order to protect endangered species."[127]

This 2004 injunction remained in place through 2008 but as NMFS has issued each pesticide BiOp, the injunction ceases to have effect on the pesticides covered by the BiOp.[128] NMFS has issued six BiOps, rendering the injunction moot for 28 pesticides. To date, EPA has failed to implement any of the RPAs included in the BiOps. Therefore, with no court-ordered buffers remaining and no EPA-required buffers established as needed to protect salmonids in the RPAs, the current use of at least the 16 pesticides in Oregon for which NMFS found jeopardy or adverse modification are – by definition – not protective of the designated uses, as required by CZARA.

3. *Litigation on Oregon's CZARA Program Approval*

Northwest Environmental Advocates challenged the federal agencies' ability to issue conditional approvals under CZARA in *Northwest Environmental Advocates v. Locke, et al.*, Civil No. 09-0017-PK. The case was settled based on Oregon DEQ's commitment to carry out certain actions. One outcome of the settlement of that case was the federal agencies' agreement to publish on or before November 15, 2013 a proposed decision to approve or disapprove Oregon's program and on or before May 15, 2014 to issue a full and final approval or disapproval. Therefore, Oregon must have in place prior to November 15, 2013 sufficient management measures to "achieve and maintain applicable water quality standards under section 1313 of Title 33 and protect designated uses" or risk a proposed disapproval action. This includes management of pesticides to meet water quality standards.

4. *Oregon Cannot Rely on EPA Action to Address its CZARA Program Requirements for Pesticides*

NMFS has been issuing BiOps on an established list of pesticides pursuant to court order since November 2008. Upon the issuance of each BiOp, the court-ordered injunction in *Washington Toxics* establishing limitations on the use of those pesticides terminates. Each BiOp has included a number of determinations by NMFS of jeopardy and/or adverse modification for a number of species present in Oregon waters. A summary of these findings is set out in Appendix D. Accordingly, each BiOp has included RPAs to prevent jeopardy and adverse modification of critical habitat associated with use of those pesticides. However, upon the termination of the injunction with regard to individual pesticides, EPA has taken no action to implement the RPAs associated with the pesticides for each BiOp.[129] Therefore, as each BiOp has been published,

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[127] Email from Teena Reichgott, EPA Region X, to Allison Castellan, NOAA, et al., *Findings on OR add measures for forestry* (April 9, 2004)(available from NWEA).

[128] *Washington Toxics*, No. C01-132C (W.D. Wash. Jan. 22, 2004) at 12.

[129] On November 29, 2010, the Northwest Center for Alternatives to Pesticides ("NCAP") filed suit alleging EPA had taken no steps to implement the RPAs set out in the BiOps nor taken any alternative protective measures. *Northwest Center for Alternatives to Pesticides, et al. v. EPA*, CV-01919-TSZ, (W.D. Wash.) Complaint for Declaratory and Injunctive Relief at ¶¶ 10, 11. On May 25, 2011, the Intervenor Defendants in that case sought and received a stay pending a challenge to BiOp No. 1in the District of Maryland. The District of Maryland

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there has been a concurrent loss of protection for the designated uses of threatened and endangered salmonids. As a result, there is no regulatory mechanism in place to ensure that pesticide use in Oregon is consistent with the requirement of CZARA to "achieve and maintain applicable water quality standards under section 1313 of Title 33 and protect designated uses." As a further result, absent EPA action prior to November 15, 2013, the federal agencies will be in a position of having to find that Oregon's CZARA program fails to protect designated uses from pesticides and will have no apparent choice other than to issue a proposed disapproval of Oregon's program, resulting in mandatory withholding of federal funds through CWA and CZMA. Should the federal agencies instead issue a final approval of Oregon's program, such action would be arbitrary and capricious unless Oregon has put in place protections for designated uses and to meet water quality standards by the date of that action, not later than May 15, 2014.

B. Use of Listed Pesticides in Oregon Based on the FIFRA Labels Violates Oregon Water Quality Standards.

The Services' findings that certain pesticides will cause "jeopardy" is shorthand for the agencies' determinations that the continued use of the pesticides without restrictions is "likely to jeopardize the continued existence" of the enumerated endangered and threatened species.[130] The clause "jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."[131] The phrase "likely to destroy or adversely modify designated critical habitat" refers to a situation where designated critical habitat is lost or impaired such that it threatens a species' survival or impairs its *recovery* (i.e., even if there remains sufficient critical habitat for the species' survival).[132]

NMFS notes that it reached the conclusion that specified pesticides would cause jeopardy or adverse modification to specified species

> because measured and predicted concentrations of the three active ingredients in

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subsequently issued an opinion that the BiOp was not flawed. *Dow AgroSciences*, 821 F. Supp. 2d at 810-11 Order, No. 09-cv-824 (S.D. Maryland October 31, 2011). On June 20, 2012, the Washington District Court denied EPA's motion for an additional stay of six months in the *NCAP* case and subsequently established a briefing schedule that will be completed on January 18, 2013.

[130] Threatened and endangered salmonids under the jurisdiction of NMFS are as follows: Lower Columbia River Chinook salmon, Snake River fall-run Chinook salmon, Snake River spring/summer-run Chinook salmon, Upper Willamette River Chinook salmon, Columbia River chum salmon, Southern Oregon/Northern Coastal California coho salmon, Oregon Coast coho, Snake River sockeye salmon, Lower Columbia River steelhead, Middle Columbia River steelhead, Snake River Basin steelhead, Lower Columbia River coho salmon, and Upper Willamette River steelhead.

[131] 50 C.F.R. § 402.02.

[132] *Gifford Pinchot Task Force v. U. S. Fish and Wildlife Service*, 378 F.3d 1059, 1070 (9th Cir. 2004).

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> salmonid habitats, particularly in off-channel habitats, are likely to cause adverse effects to listed species including significant reductions in survival, reproduction, migration, and growth. Further, all but one population of listed Pacific salmonids are likely to suffer reductions in viability given the severity of expected changes in abundance and productivity associated with the proposed action. These adverse effects are expected to appreciably reduce the likelihood of both the survival and recovery of the listed Pacific salmonids. EPA's proposed registration of chlorpyrifos, diazinon, and malathion is likely to result in the destruction or adverse modification of critical habitat of these endangered and threatened species because of adverse effects on salmonid prey and water quality in freshwater rearing, spawning, migration, and foraging areas.[133]

The jeopardy and adverse modification findings include the degraded baseline of poor habitat quality for salmonids and impaired water quality. For example:

> Drift and runoff from areas of intensive urban and agricultural development will likely contain carbaryl, carbofuran, and methomyl in addition to other pesticides - particularly other AChE-inhibiting pesticides, chemical pollutants, and sediments that also degrade water quality. Depending on the available water flow, amount of shade from L[arge]W[oody]D[ebris] and intact riparian zones, and water temperature in aquatic habitats, the toxicity of carbaryl, carbofuran, and methomyl in tributary and stream waters may become more pronounced. Reductions in water quality may reduce the conservation value of designated habitats used for spawning, rearing, and migration. Furthermore restoration actions promoted in many of the salmonid recovery plans focus on increasing flood plain connectivity and creating new off-channel habitats. These actions are proposed in agricultural and urban flood plains that overlap with uses of the three insecticides. Water quality (as well as prey availability) may be degraded in these newly constructed habitats from the stressors of the action – effectively precluding intended benefits to rearing juvenile salmonids. We expect that proposed uses may contaminate these areas, thereby precluding habitat from its intended purpose in supporting the survival and recovery of listed Pacific salmonids.[134]

One aspect of the impacts of pesticides on salmonids is the role of water temperatures which are elevated across the State of Oregon and for which there are numerous findings of impairment as evidenced by the temperature listings on the CWA section 303(d) list and the majority of Total Maximum Daily Loads established by Oregon, which are for temperature.[135] NMFS found that in many cases increased temperatures exacerbate the impacts of pesticides in waterways.[136] These

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[133] NMFS BiOp No. 1, *supra* n. 22 at 392.

[134] NMFS BiOp No. 2, *supra* n. 32 at 480.

[135] *See, e.g.*, DEQ, *Oregon's Impaired Waters, 2004/2006 Water Quality Limited Waters*, http://www.deq.state.or.us/WQ/assessment/docs/MapI mpairedWater s.pdf; DEQ, *Oregon's TMDL Priorities and Schedule* (May 23, 2011) available at http://www.deq.state.or . us/wq/ assessment/docs/2010TMDL Priorities.pdf (last accessed July 24, 2012).

[136] *See, e.g.*, NMFS BiOp No. 1, *supra* n. 22 at 41 ("Exposure to elevated temperatures can enhance the toxicity of the stressors of the action.").

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water quality limited waters are precisely the concern that is addressed, in theory, by the narrative toxic criteria in Oregon's water quality standards quoted above.

While a finding of jeopardy or adverse modification is a *prima facie* demonstration that designated and existing uses are not supported and therefore use of the pesticides based on existing EPA-approved labels under FIFRA will violate water quality standards, it is not necessarily true that following the RPAs established by NMFS will not result in a violation of water quality standards. Instead, the RPAs merely ensure that jeopardy or adverse modification will not occur. While jeopardy is established at a point where pollution levels would "reduce appreciably the likelihood of both the survival and recovery of a listed species" fully supporting that use under the CWA may well require a higher level of protection and a lower level of pollution. While adoption of the RPAs will not entirely eliminate the impacts of the use of these pesticides, their adoption will be a step in the right direction.

1. *Violation of Designated Use Support*

Oregon's designated uses include the use of salmonids and aquatic life, which are the species for which the NMFS and USF&WS pesticide BiOps have concluded jeopardy or adverse modification of habitat as set out above. Therefore, to avoid violations of the requirement to fully support designated and existing uses of salmonids to meet water quality standards, Oregon must either (1) ban the use of the listed pesticides, (2) adopt the RPAs to ensure at a minimum that they do not cause jeopardy or adverse modification of critical habitat, or (3) adopt more stringent restrictions than the RPAs to ensure protection against jeopardy and full support of the uses. With regard to the last of these options, adoption of the RPAs is *not* the equivalent of providing full support for designated uses of ESA-listed salmonids as NMFS makes clear in each of the pesticide BiOps such as this statement concerning the FIFRA registration of seven pesticides:

> In the proposed RPA, NMFS does not attempt to ensure there is no take of listed species. NMFS believes take will occur, and has provided an incidental take statement exempting that take from the take prohibitions, so long as the action is conducted according to the RPA and reasonable and prudent measures (RPM). Avoiding take altogether would most likely entail canceling registration, or prohibiting use in watersheds inhabited by salmonids.[137]

The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.[138] Just as NMFS has not found that use of the pesticides with the RPAs will not prevent take, NMFS also has not concluded that the pesticides for which it has not found jeopardy or adverse modification are safe for salmonids and other aquatic life at the levels allowed by EPA's FIFRA registration levels. Rather, the agency has found that their use will not appreciably reduce the likelihood of both the survival and recovery of these listed Pacific salmonids. Not reducing the likelihood of survival and of recovery is not the same as providing full support for these designated uses. For these reasons, to meet the requirements of the Clean Water Act the Commission should instruct the Department to go further than the RPAs to create a greater assurance that the listed pesticides will not enter Oregon's waters and cause adverse effects to the listed species.

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[137] NMFS BiOp No. 3, *supra* n. 33 at 777.

[138] 16 U.S.C. § 1532(19).

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2. *Violation of Narrative Toxics Criteria*

For the purposes of considering the NMFS pesticide BiOps findings within the context of Oregon water quality standards, Oregon's toxic narrative criteria taken together contain the following relevant prohibitions:

- no amounts, concentrations, or combinations that may be harmful to aquatic life or wildlife
- no amounts, concentrations or combinations that may chemically change to harmful forms in the environment
- no amounts, concentrations or combinations that may accumulate in sediments
- no amounts, concentrations or combinations that may bioaccumulate in aquatic life or wildlife with adverse effects
- control of toxic materials at the lowest possible levels.
- no toxic conditions that are deleterious to fish or other aquatic life

The NMFS findings of jeopardy or adverse modification are a *prima facie* showing that use of the pesticides consistent with the label requirements may result in amounts and concentrations of pesticides that may be harmful and therefore constitute a violation of all or nearly all of Oregon's narrative criteria for toxic constituents set out above. For example, the RPAs specifically address the Oregon narrative criterion's prohibition against combinations of chemicals, pesticide degradates, and combinations of pesticides and deleterious conditions, such as the combination of pesticides and high water temperatures. In BiOp No. 1, for example, NMFS found that its RPAs accounted for the following effects of pesticide operators' following the FIFRA labels:

> (1) the action will result in exposure to other chemical stressors that may increase the risk of the action to listed species including unspecified inert ingredients, adjuvants, and tank mixes; (2) exposure to chemical mixtures containing chlorpyrifos, diazinon, and malathion and other cholinesterase-inhibiting compounds result in additive and synergistic responses; (3) exposure to other chemicals and physical stressors (e.g., temperature) in the baseline habitat will likely intensify response to chlorpyrifos, diazinon, and malathion.[139]

Therefore, adoption of the RPAs will address many of the elements of the narrative criteria.

3. *Violation of Tier I of the Antidegradation Policy*

Finally, because the antidegradation policy requires protection of existing uses and all of the ESA-listed salmonids are existing as well as designated uses, allowing the application of these pesticides as allowed on the FIFRA labels may not protect the existing uses or the water quality to support them. This is contrary to the clear intent and language of the antidegradation policy and to EPA's interpretation of its requirements:

> No activity is allowable under the antidegradation policy which would partially or completely eliminate any existing use whether or not that use is designated in a State's water quality standards. The aquatic protection use is a broad category requiring further explanation. Non-aberrational resident species must be protected, even if not prevalent in number or importance. Water quality should be such that

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[139] NMFS BiOp No. 1, *supra* n. 22 at 392.

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> it results in no mortality and no significant growth or reproductive impairment of resident species. *Any lowering of water quality below this full level of protection is not allowed.*[140]

The Services' findings of jeopardy and adverse modification demonstrate that use of the pesticides as allowed on FIFRA labels may and likely will result in failure to protect existing uses are required by Tier I of the antidegradation policy.

C. Inaction by Oregon Amounts to Authorizing Illegal "Take" Under the Endangered Species Act

Protections for threatened and for endangered species may be the same or may differ based on the status of the species. The ESA makes it illegal for any person subject to the jurisdiction of the United States to take any species of fish or wildlife that is listed as *endangered* without specific authorization.[141] "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."[142] "Harass" is defined as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering.[143] "Harm" is defined as an act that actually kills or injures a protected species. Harm can arise from significant habitat modification or degradation where it actually kills or injures protected species by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering.[144] Violating the take prohibitions may result in civil or criminal penalties.

While section 7 of the ESA precludes any federal agency from funding, permitting, or carrying out any activity that will *jeopardize* the continued existence of *threatened* species, this restriction is not necessarily enough to prevent *harm* to species or to *recover* threatened species. Therefore, when the activities of state and local governments and private citizens harm threatened species, section 4(d) of the ESA requires that harm be minimized so it does not lead to extinction. Section 4(d) requires NMFS to issue regulations for threatened species deemed "necessary and advisable to provide for the conservation of the species." These 4(d) rules for threatened species may apply to any or all of the ESA section 9 protections that automatically prohibit take of species listed as endangered. The 4(d) rule for 14 species of threatened salmon and steelhead in Oregon and Washington prohibits illegal take of these species without specific written

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[140] EPA, *Water Quality Standards Handbook, Second Edition, EPA-823-B-94-005a* at section 4.4.2 (August 1994), available at http://water.epa.gov/scitech/swguidance/standards/handbook/upload/hbk-ch4.pdf (last accessed July 30, 2012)(emphasis added).

[141] 16 U.S.C. § 1538(a)(1).

[142] 50 C.F.R. § 10.12. As the U.S. Supreme Court observed, "The action agency is technically free to disregard the Biological Opinion and proceed with its proposed action, but it does so at its own peril (and that of its employees), for "any person" who knowingly "takes" an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment." *Bennett v. Spear*, 520 U.S. at 170 (citations omitted).

[143] 50 C.F.R. § 17.3.

[144] 50 C.F.R. § 222.102.

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authorization.[145] While applying the take prohibition to threatened species,[146] the 4(d) rule also sets out programs and activities, or criteria for future programs or activities, for which NMFS will not apply the take prohibitions. For the Oregon species, the 4(d) rule sets out 13 limits.[147] Use of pesticides is not among the categories of activities for which the 4(d) rule grants protection to states, local governments, and citizens against the take provisions.[148]

In order to avoid take, NMFS recommends that governmental entities, such as the State of Oregon

1. Identify the program or activity (for state and local governments, this may include activities it funds, authorizes, or carries out);
2. Evaluate whether the program or activity is likely to take or harm listed fish;
3. If the program or activity is not likely to take or harm listed fish, then there is no need to modify the activity, or to contact NMFS;
4. If, however, after reviewing the program or activity, it seems likely it will take or harm listed fish, or there is uncertainty about whether take or harm may occur, the acting agency, entity, or individual should contact NMFS to seek more information on evaluating the activity's impacts and determining ways to avoid harming the fish and violating the ESA.[149]

NMFS has issued take guidance that sets out the types of activities that are likely to injure or kill threatened salmon and steelhead.[150] While the activities listed in the guidance will not necessarily harm these species they are the most likely to and therefore to violate the 4(d) rule. Among the activities likely to cause harm, and therefore constitute a "take" are:

> Discharging pollutants, such as oil, toxic chemicals, radioactivity, carcinogens, mutagens, teratogens, or organic nutrient-laden water (including sewage water) into a listed species' habitat.
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> Removing, poisoning, or contaminating plants, fish, wildlife, or other biota that the listed species requires for feeding, sheltering, or other essential behavioral

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[145] 65 Fed. Reg. 42422 (July 10, 2000).

[146] 50 C.F.R. § 223.203(a).

[147] 50 C.F.R. § 223.203(b).

[148] *Id.*

[149] NMFS Southwest Regional Office, *Evaluating Potential ESA Take Liability, A Citizen's Guide to the 4(d) Rule for Threatened Salmon and Steelhead on the West Coast* (June 20, 2000) http://swr.nmfs.noaa.gov/fmd/citguide.htm#Evaluating%20Potential%20ESA%20Take%20Liability (last accessed July 24, 2012).

[150] *Id.* at *Take Guidance*, http://swr.nmfs.noaa.gov/fmd/citguide.htm#Take%20Guidance (last accessed July 24, 2012).

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patterns.[151]

NMFS specifically addressed the use of pesticides in its 4(d) rule:

> [C]oncentrations of pesticides may affect salmon behavior and reproduction. Current EPA label requirements were developed without information about some of these subtle but real impacts on aquatic species such as salmon. And they were not developed with the intent of protecting or recovering threatened salmon. Where new information indicates that label requirements do not adequately protect salmon, NMFS will work with EPA through the section 7 consultation process to develop more protective use restrictions, and thereby provide the best possible guidance to all users. Similarly, where water quality standards or state authorizations lead to pollution levels that may cause take, NMFS intends to work with the state water quality agencies and EPA to bring those standards (or permitting programs) to a point that does protect salmon.[152]

As set out in this petition, EPA has failed to work to incorporate the results of the pesticide BiOps into FIFRA label requirements and the section 7 consultation on EPA's PGP limits only the discharge of pesticides into Oregon waters in Indian Country.

EPA's inaction highlights the affirmative obligations of the State of Oregon to avoid take. The Commission should therefore identify for the Department the programs and activities that regulate or could regulate the use of the listed pesticides. In this petition NWEA has identified (1) the establishment of water quality standards by the Commission, (2) the issuance of the 2300A NPDES General Permit by the Department, (3) the coverage under the 2300A NPDES General Permit authorized by the Department to individual applicants, and the (4) issuance of any individual NPDES permit to applicants to discharge pesticides. Each of these programs or activities that allow the discharge of the listed pesticides limited only by the FIFRA labels is a violation of water quality standards and a take under the ESA. This petition has also identified the inadequate EPA-approved, federally-registered label used by the Oregon Department of Agriculture as allowing violations of water quality standards and take by applicators of the listed pesticides. And this petition has identified inadequate rules of the Oregon Department of Forestry that also allow take by applicators of the listed pesticides. NMFS has expressed its willingness to work with the state to bring its regulatory programs into conformance with its 4(d) rule:

> Many activities that may kill or injure salmonids are regulated by state and/or Federal processes, such as fill and removal authorities, NPDES or other water quality permitting, pesticide use, and the like. For those types of activities, NMFS would not intend to concentrate enforcement efforts on those who operate in conformity with current permits. Rather, if the regulatory program does not provide adequate salmonid protection, NMFS intends to work with the responsible agency to make necessary changes in the program.[153]

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151 *Id.*

152 65 Fed. Reg. 42400, 42473 (July 10, 2000).

153 *Id.*

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Therefore, NWEA requests by this petition that the Commission initiate a collaborative effort with NMFS through rulemaking to conform Oregon's water quality standards, the 2300A NPDES General Permit, and pesticide labels used in Oregon to the results of the consultations on the listed pesticides and EPA's PGP permit. By taking the actions requested in this petition, the Commission will provide a minimum level of protection to the designated and existing uses and help to prevent take of threatened and listed salmonids, thereby helping to insulate state and local governments and private citizens from violating take prohibitions.

VIII. Commission Authority

A. Commission Action is Authorized by State Statutes

The Commission has authority to adopt water quality standards and implementing rules pursuant to ORS 468.020, 468B.010, 468B.020, 468B.048, 468B.050, and 468B.110.

B. Commission Action To Regulate Pesticides is Not Precluded by FIFRA

FIFRA specifically allows for State regulation of pesticides.[154] Oregon is prohibited from adding regulations that affect the physical pesticide label.[155] This prohibition does not, however, prevent Oregon from prohibiting the sale of pesticides in the state, prohibit the use of pesticides in the state, or requiring additional regulations at the point of sale, through State regulation, or through State notification procedures.

IX. Commission Action Consistent with This Petition Will Support State Policies

A. Granting This Petition Will Support the Agency's Toxics Reduction Strategy

1. *The Draft Toxics Reduction Strategy*

One of the Department of Environmental Quality's strategic directions is to "protect Oregonians from toxic pollutants."[156] According to DEQ, "[g]iven that toxic chemicals and pollutants readily move from one environmental media to another, DEQ determined that a more integrated and strategic approach was needed to most efficiently and effectively reduce toxics in the environment." Started in 2009, DEQ completed a draft of its Toxics Reduction Strategy

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[154] 16 U.S.C. § 136v(a)("A State may regulate the sale or use of any federally registered pesticide or device in the State, but only if and to the extent the regulation does not permit any sale or use prohibited by this subchapter.").

[155] 16 U.S.C. § 136v(b).

[156] DEQ, *Draft DEQ Toxics Reduction Strategy: Summary of Actions*, November 2011, at 1, available at http://www.deq.state.or .us/toxics/docs/Tox icsReductionDra ftAction Summary.pdf (last accessed July 30, 2012).

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("Strategy") in December 2011.[157] The Strategy includes a Focus List[158] of priority toxic chemicals and 25 actions[159] to reduce and assess toxics in Oregon. The Focus List was developed on the basis of chemicals that were found on three or more program priority lists used by at least two DEQ divisions.[160] The Focus List contains 15 "current use pesticides" that include: diazinon, trifluralin, atrazine, chlorpyrifos, hexachlorocyclohexane (HCH), gamma- (lindane), pentachlorophenol, permethrin, carbaryl, malathion, pendimethalin, 2,4-D, chlorothalonil, diuron, glyphosate, and propoxur (baygon).[161] Of these current use pesticides on the Focus List, this Petition specifically addresses the following 10 pesticides: chlorpyrifos, diazinon, malathion, carbaryl, 2,4-D, diuron, chlorothalonil, pendimethalin, permethrin, and trifluralin and generally addresses the remainder.

After establishing the Focus List, DEQ posed an initial set of two screening questions to identify recommended actions: (1) How effective would the action be in reducing Focus List chemicals in the environment or people? and (2) How practically implementable is the action?[162] According to DEQ, the overarching theme of the Strategy is "the involvement of multiple agencies and organizations to ensure effective implementation" and "sharing the costs of implementing an action."[163]

The Strategy organizes its recommendations for action into four categories, described as

- Improving integration and prioritization of toxics reduction activities
- Enhancing effective existing toxics reduction efforts
- Addressing identified toxics reduction needs
- Assessing and characterizing toxics in Oregon[164]

Specifically for current use pesticides, DEQ's draft recommended actions include the following two recommended actions:

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[157] DEQ, *Reducing Toxics in Oregon*, http://www.deq.state.or.us/toxics/#Reduction (last accessed July 25, 2012).

[158] DEQ, *Initial DEQ Toxics Focus List 2010-2011*, available at http://www.deq.state.or.us/toxics/docs/ToxicsFocusList2010-2011.pdf (last accessed July 25, 2012).

[159] DEQ, *Draft DEQ Toxics Reduction Strategy: Descriptions of Actions*, November 2011, available at http://www.deq.state.or.us/toxics/docs/ToxicsReductionDraftActionDescriptions.pdf (last accessed July 25, 2012).

[160] DEQ, *supra* n. 157 at 1.

[161] Of these current use pesticides, NMFS and the U.S. Fish and Wildlife Service are in the process of completing their biological opinions of Oregon's aquatic life criteria adopted in 2004 that include lindane and pentachlorophenol.

[162] DEQ, *supra* n. 157 at 2.

[163] *Id.* at 3.

[164] *Id.* at 3-4.

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> I-3 Use existing rural planning and resource management programs to reduce loadings of Focus List toxics into Oregon waterbodies through natural resource agency collaboration
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> * * *
>
> E-2 Expand Pesticides Stewardship Partnerships and related technical assistance programs to encompass more watersheds, land use diversity, water media (e.g., groundwater), and additional assistance and outreach tools[165]

The Department's description of Action No. I-3 comments that

> there are multiple current use pesticides on the Focus List that have also been designated as priorities by the inter-agency Water Quality Pesticide Management Team (Departments of Agriculture, Forestry, Environmental Quality, and Health) based on monitoring data. Water quality criteria don't exist for many of these current use pesticides, and although they are (and will be) addressed through the Pesticide Stewardship Partnership program in limited geographic areas, these pesticides could also be addressed through Agricultural Water Quality Management Program and Forest Practices Act related work by identifying them as priorities to further improve water quality.[166]

It also comments that "[t]his recommended action builds on well-established rural water quality management programs, and attempts to optimize efficiencies of state and federal agency resources by addressing multiple pollutants through these existing programs."[167]

The Department's comments regarding Action No. E-2 note that it proposes to expand existing

> Pesticide Stewardship Partnerships (PSPs) [that are] designed to use surface water monitoring data to focus pesticide best management practices and technical assistance in areas where elevated stream concentrations of pesticides have been found.[168]

But it also notes that

> The primary barrier to implementing an expansion of the Pesticide Stewardship Partnership program is identifying and securing an adequate and stable source of funding. Currently, the monitoring is supported by federal water quality grant funds disbursed on an annual basis.[169]

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165 *Id.* at 6.

166 *Id.* at 3.

167 *Id.*

168 *Id.* at 7.

169 *Id.*

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Many other recommended actions of the Strategy are expected to apply to all Focus List chemicals. Of these, the low assigned priority Action No. E-7, described as "Assess opportunities to improve management of Focus List chemicals through use of existing state product or chemical reporting, notification, registration, and licensing mechanisms"[170] could address current use pesticides. Relevant descriptions by the Department of this action item include:

> agencies administering these programs, as well as other interested stakeholders, work together to assess how well current reporting, licensing, notification and registrations systems are addressing the objectives of the programs relative to Focus List chemicals.
>
> * * *
>
> Based on the results of these evaluations, changes to the programs may be recommended to improve the management of Focus List chemicals and increase program efficiencies.
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> * * *
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> The state systems designed to generate data on, and ensure management of, products and chemicals before or during use provide an opportunity to proactively influence activities that can reduce Focus List chemicals in the environment at the source. By evaluating how well all of these systems are achieving objectives related to Focus List chemicals, agencies can determine how to build on existing efforts to improve effectiveness and efficiencies. The Focus List and the data generated on these chemicals can help to narrow the scope of the assessment of the programs, thereby ensuring that any recommended improvements yield the most effective results from an environmental and human health perspective.[171]

2. *This Petition Supports the Goals of the Strategy*

If the Commission accepts this petition, it will strongly enhance the goals that ostensibly drive the Strategy. The initial screening questions ask whether an action would be effective in reducing chemicals in the environment and whether the action is "practically implementable." Adopting the RPAs would help address the gap that DEQ identifies with regard to current use pesticides in Action I-3 that "criteria don't exist for many of the[m]." Adopting the RPAs as water quality standards would establish regulatory requirements for other agencies, such as the Departments of Agriculture and Forestry, and DEQ's own programs, which are required to meet state water quality standards, thereby optimizing efficiencies and providing a far more effective mechanism than mere appeals to pesticide users for voluntary reductions or use of limiting practices. The Commission's petitioning the ODA would meet the Strategy's overarching theme of involving multiple agencies and sharing the costs of implementation.

Granting the petition has significant benefits over the recommended Action No. E-2 because, as DEQ points out, this Action is heavily dependent upon monitoring of toxics, an activity for

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[170] *Id.* at 14.

[171] *Id.* at 14-15.

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which all agencies combined have wholly inadequate funding. Moreover, DEQ does not point out that the Action is only triggered by findings of "elevated stream concentrations of pesticides" which means that the agencies only move into action *after* the damage to the designated and existing uses has started. It is far more protective of the uses and administratively efficient to prevent the pesticides from entering the water. Any program that builds exclusively on finding scarce monitoring funds is not based on prevention, which is the only way to provide full protection of uses, particularly those that are threatened or endangered.

Finally, Action No. E-7 addresses notification and registration but it is wholly a bureaucratic exercise of evaluating how well the state's systems are working and has no action component whatsoever. There is no need to assess whether the state regulatory system is working other than to compare the labels used in Oregon and the limits placed on pesticide dischargers under the NPDES General Permit 2300A with the RPAs set out in the BiOps. That comparison is stark and the state programs fail. This Strategy has been three years in the making and its likely next steps will be more plans and meetings with little or no action. The Commission's adoption of the rulemaking requested in this petition will move the State into a posture of actually taking action to reduce pesticides with known effects on threatened and endangered species, pesticides already identified by Oregon, EPA, and/or the Services as posing harm to designated and existing uses.

B. Oregon Policy on Protection of Sensitive Species Not Yet Listed as Threatened and Endangered

Proactive action by the Commission to protect species not yet listed as threatened or endangered under federal law is supported by state policies. As ODFW notes

> It is Oregon's policy "to prevent the serious depletion of any indigenous species" (ORS 496.012). The Oregon administrative rules for threatened and endangered species (OAR 635-100-0100 to 0130) are intended to help implement this policy. In accordance with these rules, species can be classified as "threatened" (any native species likely to become endangered within the foreseeable future throughout any significant part of its range within the state) or "endangered" (any native species determined to be in danger of extinction). *However, recovering species when their populations are severely depleted can be difficult and expensive*. In addition, designation of such species can be socially and economically divisive.[172]

Accordingly, the purpose of the Sensitive Species List is to "prevent species from declining to the point of qualifying as threatened or endangered" and to provide a "positive, proactive approach to species conservation" by "[i]mplementation of appropriate conservation measures to address the threats may prevent them from declining to the point of qualifying for threatened or endangered status" and "serv[ing] as an early warning system for biologists, land managers, policy makers, and the public . . . [to] ensure that conservation actions are prioritized, cost-efficient, and effective."[173]

The evaluations by EPA and the USF&WS for species in California that are similar to those species in Oregon for which ESA listing is warranted but precluded, which ODFW has

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[172] ODFW, *supra* n. 65 at 1 (emphasis added).

[173] *Id.*

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determined are "sensitive–critical," and which USF&WS and ODFW have determined to be species of concern and/or "sensitive–vulnerable" are the basis for Commission action under the Clean Water Act to provide protection for species before they are locally extirpated and/or become close to extinction. This petition requests rulemaking to protect all aquatic and aquatic-dependent species, not just those at the brink of extinction.

X. The Proposed Rulemaking

While the restrictions set out in the BiOp RPAs are not necessarily the equivalent of meeting water quality standards and fully protecting existing and designated uses because, for example, NMFS concluded there would be "take" even with the RPA buffers in its first BiOp and USF&WS has pointed out the inadequacies of its 23-year old BiOp, use of the RPAs would constitute significant movement towards meeting Oregon's water quality standards.

Accordingly, NWEA hereby petitions the Commission to adopt the following rule as a supplement to Oregon's antidegradation policy, as new rule OAR 340-041-0004(10) (Antidegradation Policy):

> OAR 340-041-0004(10) (Antidegradation Policy) To prevent further degradation of water quality and to provide protection to all existing beneficial uses, the use of pesticides authorized under the federal Insecticide, Fungicide, and Rodenticide or Clean Water Acts for which either the National Marine Fisheries Service or the U.S. Fish and Wildlife Service have finalized consultation under the federal Endangered Species must conform at a minimum to the reasonable and prudent alternatives set out in the Biological Opinions published by those federal agencies as they pertain to preventing jeopardy or adverse modification of critical habitat for species present in Oregon waters and as set out in OAR 340-041-0034.

For the protection of designated uses that may not be existing uses, NWEA petitions the Commission to adopt the following proposed new rule OAR 340-041-0033(8) (Toxic Substances):

> OAR 340-041-0033(8)(Toxic Substances) To provide support to all designated beneficial uses, the use of pesticides authorized under the Federal Insecticide, Fungicide, and Rodenticide or Clean Water Acts for which either the National Marine Fisheries Service or the U.S. Fish and Wildlife Service have finalized consultation under the federal Endangered Species Act, must conform at a minimum to the reasonable and prudent alternatives set out in the Biological Opinions published by those federal agencies as they pertain to preventing jeopardy or adverse modification of critical habitat for species present in Oregon waters and as set out in OAR 340-041-0034.

To ensure that the 2300A NPDES General Permit protects beneficial uses from pesticides, NWEA petitions the Commission to adopt the following requirements as new rule OAR 340-041-0033(9)(Toxic Substances):

> OAR 340-041-0033(9)(Toxic Substances) To provide support to all designated and existing beneficial uses, no authorization to discharge pesticides into waters of the state will be granted pursuant to an NPDES permit without an applicant's first having completed a Department-approved survey of fish, amphibians, and aquatic-dependent reptiles and the Department's having made findings that no

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> federally-listed threatened, endangered, candidate, or sensitive species or species on Oregon's Sensitive Species List are present or have been present since November 28, 1975.

In order to incorporate into Oregon's water quality standards any RPAs associated with NMFS BiOp Nos. 7 and 8 and any future BiOps issued by the Services concerning the effect of pesticides on Oregon's aquatic and aquatic-dependent species, NWEA petitions the Commission to adopt the following requirements as new rule OAR 340-041-0033(10)(Toxic Substances):

> OAR 340-041-0033(10)(Toxic Substances) To provide support to all designated and existing beneficial uses, the Department will propose additions to this division based on any reasonable and prudent alternatives in any biological opinion issued by the National Marine Fisheries Service or the U.S. Fish and Wildlife Service pursuant to the Endangered Species Act that pertain to the effects of pesticides on species present in Oregon within six months of publication of such opinions.

To provide protection for aquatic and aquatic-dependent species including those listed by federal agencies as threatened, endangered, candidate, or sensitive species and species on Oregon's Sensitive Species List, NWEA petitions for a supplement to Oregon's antidegradation policy that incorporates the default pesticide buffers used by the federal district court in *Washington Toxics*,[174] as new rule OAR 340-041-0004(11) (Antidegradation Policy):

> OAR 340-041-0004(11)(Antidegradation Policy) Except as provided in OAR 340-041-0004(10), to provide support for all existing beneficial uses and to implement the policies set out in ORS 496.012 to prevent the serious depletion of aquatic-dependent species indigenous to Oregon, no pesticides may be applied on the ground within 60 feet or applied aerially within 300 feet of any water body of the state.

To ensure that the RPAs are explicitly set out in Oregon water quality standards such that they apply to all other agencies that regulate activities that affect water quality within the state and to pesticide applications within the state, and to ensure that the RPAs are readily available to pesticide applicators, NWEA petitions for new rule new rule OAR 340-041-0034(Pesticides) that establishes those RPAs as water quality standards and implementation methods. Where, in lieu of RPAs established as restrictions, the National Marine Fisheries Service established performance-based requirements to allow EPA to establish a suite of risk reduction measures for certain pesticides, and because EPA has failed to establish those measures, the rule language below adopts the default buffers used by the federal court in *Washington Toxics*[175] and allows for use of any future EPA-promulgated measures as well as for the Department to consult with NMFS to establish its own measures consistent with the RPAs of the relevant BiOps.

> OAR 340-041-0034(Pesticides) (1) Salmonid habitats for the purpose of this section are defined as freshwaters, estuarine habitats, and nearshore marine

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[174] EPA, *Availability of Court Orders in Washington Toxics Coalition v. EPA Litigation*, http://www.epa.gov/fedrgstr/EPA-PEST/2004/February/Day-17/p3364.htm (last accessed August 2, 2012), *citing* 69 Fed. Reg. 7478 (Feb. 17, 2004).

[175] *Id.*

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habitats including bays within the ranges of threatened and endangered species including migratory corridors. The freshwater habitats include intermittent streams and other temporally connected habitats to salmonid-bearing waters. Freshwater habitats also include all known types of off-channel habitats as well as drainages, ditches, and other manmade conveyances to salmonid habitats that lack salmonid exclusion devices.

(2) For the pesticides chlorpyrifos, diazinon, and malathion, the following restrictions apply:

(a) Apply the following no-application buffers:

(A) Where ground applications are permitted, do not apply pesticide products within 500 feet of salmonid habitats.

(B) Where aerial applications are permitted, do not apply pesticide products within 1,000 feet of salmonid habitats.

(b) Do not apply when wind speeds are greater than or equal to 10 mph as measured using an anemometer immediately prior to application. When applying pesticide products, commence applications on the side nearest the aquatic habitat and proceed away from the aquatic habitat.

(c) For agricultural uses, provide a 20 feet minimum strip of non-crop vegetation (on which no pesticides shall be applied) on the downhill side of the application site immediately adjacent to any surface waters that have a connection to salmonid-bearing waters. This includes drainage systems that have salmonid exclusion devices, but drain to salmonid-bearing waters.

(d) Do not apply pesticide products when soil moisture is at field capacity, or when a storm event likely to produce runoff from the treated area is forecasted by the National Weather Service to occur within 48 hours following application.

(e) Report all incidents of fish mortality that occur within four days of application and within the vicinity of the treatment area to EPA Office of Pesticide Programs (703-305-7695).

(3) For the pesticides carbaryl, carbofuran, and methomyl the following restrictions apply:

(a) Do not apply pesticide products within specified buffers of salmonid habitats (See Table A). Buffers only apply to those salmonid habitats where NMFS concluded jeopardy or the destruction or adverse modification of designated critical habitat for listed Pacific salmonids present in Oregon waters. Buffers also only apply when water exists in the stream or habitat and shall be measured from the water's edge of salmonid habitat, including off-channel habitat, to the point of deposition (below spray nozzle).

(b) Do not apply when wind speeds are greater than or equal to 10 mph as measured using an anemometer immediately prior to application. Because wind conditions may change during application of pesticide products, commence applications on the side nearest the aquatic habitat and proceed away from the aquatic habitat.

(c) For all uses, do not apply pesticide products when soil moisture is at field capacity, or when a storm event likely to produce runoff from the treated area is forecasted by NOAA/NWS (National Weather Service), to occur within 48 hours following application.

(d) Report all incidents of fish mortality that occur within four days of application and within the vicinity of the treatment area to EPA OPP (703-305-7695).

(4) For the pesticides methidathion, naled, phorate, and phosmet the following restrictions apply:

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(a) Follow the restrictions in 2(a) and (c) of this section or apply risk reduction measures to meet the requirements of the biological opinion for these pesticides:
(A) If such measures have been established by the U.S. Environmental Protection Agency and approved by the National Marine Fisheries Service, or
(B) If such measures have been established by the Department, in consultation with and approval from the National Marine Fisheries Services, consistent with the terms of the biological opinion for these pesticides.
(b) Do not apply when wind speeds are greater than or equal to 10 mph.
(c) For all uses do not apply pesticide products when soil moisture is at field capacity, or when a storm event likely to produce runoff from the treated area is forecasted by to occur within 48 hours following application by NOAA/NWS (National Weather Service) or other similar forecasting service.
(d) Report all incidents of fish mortality that occur within the vicinity of the treatment area, including areas downstream and downwind, in the four days following application of and of these active ingredients to EPA OPP (703-305-7695).
(5) For the pesticides 2,4-D, diuron, and chlorothalonil the following restrictions apply:
(a) Broadcast spray applications of pesticide products containing 2,4-D, diuron, and chlorothalonil shall only be broadcast applied when there is minimal potential for drift to listed salmonid-bearing waters. Do not apply when wind speeds are below 2 mph or exceed 10 mph, except when winds in excess of 10 mph will carry drift away from salmonid-bearing waters.
(b) Do not apply pesticide products containing 2,4-D, diuron, or chlorothalonil when soil is saturated, or when a precipitation event, likely to produce direct runoff to salmonid bearing waters from the treated area, is forecasted by NOAA/NWS (National Weather Service) or other similar forecasting service within 48 hours following application.
(c) 2,4-D BEE specific requirements: Do not apply pesticide products containing 2,4-D butoxyethyl ester directly to any surface waters accessible to listed salmonids.
(d) 2,4-D specific requirements designed to protect native riparian vegetation and designated critical habitat, applicable for species listed in Table B:
(A) Do not apply 2,4-D directly to native riparian vegetation except as part of a native riparian vegetation restoration project. Control of invasive plants within the riparian habitat shall be by individual plant treatments for woody species, and spot treatment of less than 1/10 acre for herbaceous species.
(B) Apply the following no-application buffers:
(i) Where ground applications are permitted, do not apply within 60 feet of salmonid habitats,
(ii) Where aerial applications are permitted, do not apply pesticide products within 300 feet of salmonid habitats, or:
(iii) Use risk reduction measures to meet the requirements of the biological opinion for these pesticides if such measures are established by the U.S. Environmental Protection Agency and approved by the National Marine Fisheries Service, or
(iv) The Department, in consultation with and approval from the National Marine Fisheries Services, establishes such risk reduction measures consistent with the terms of the biological opinion for these pesticides.
(e) Diuron-specific requirements within areas designated critical as habitat for the threatened and endangered species in Table B.

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(A) Do not apply diuron directly to native riparian vegetation.
(B) Do not apply diuron to intermittently flooded low lying sites, marshes,swamps, and bogs that may be seasonally connected to habitats that contain listed salmonids.
(C) Apply the following no-application buffers:
(i) Where ground applications are permitted, do not apply within 60 feet of salmonid habitats,
(ii) Where aerial applications are permitted, do not apply pesticide products within 300 feet of salmonid habitats, or:
(iii) Use risk reduction measures to meet the requirements of the biological opinion for these pesticides if such measures are established by the U.S. Environmental Protection Agency and approved by the National Marine Fisheries Service, or
(iv) The Department, in consultation with and approval from the National Marine Fisheries Services, establishes such risk reduction measures consistent with the terms of the biological opinion for these pesticides.
(f) Chlorothalonil-specific requirements within areas designated as critical habitat for the specified for the threatened and endangered species in Table B.
(A) Apply the following no-application buffers:
(i) Where ground applications are permitted, do not apply within 60 feet of salmonid habitats,
(ii) Where aerial applications are permitted, do not apply pesticide products within 300 feet of salmonid habitats, or:
(iii) Use risk reduction measures to meet the requirements of the biological opinion for these pesticides if such measures are established by the U.S. Environmental Protection Agency and approved by the National Marine Fisheries Service, or
(iv) The Department, in consultation with and approval from the National Marine Fisheries Services, establishes such risk reduction measures consistent with the terms of the biological opinion for these pesticides.
(B) Application to conifers will be limited to the following uses: conifer nursery beds; Christmas tree and bough production plantations; tree seed orchards; and landscape situations (ornamental or specimen trees in a residential or commercial landscape).
(g) Report all incidents of fish mortality that occur within the vicinity of the treatment area, including areas downstream and downwind, and in the four days following application of these active ingredients to EPA's Office of Pesticide Programs.
(6) For the pesticides oryzalin, pendimethalin, and trifluralin the following restrictions apply as required by Table B:
(a) Concentrations of active ingredients in salmon-bearing waters shall at no time exceed the following thresholds: oryzalin 10 µg/L, pendimathlin 1 µg/L, trifluralin 1 µg/L.
(A) Pesticide products containing pendimethalin or trifluralin shall not be applied aerially within 300 feet of salmon-bearing waters. This restriction does not apply to granular products, for which an applicator must control any off-target deposition of granular product to ensure it does not enter salmon-bearing waters.
(B) Pesticide products containing oryzalin or pendimethalin shall be watered in or soil incorporated when applied to the ground within 300 feet of salmon-bearing waters. Application of these products in anticipation of rainfall meets the

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watering-in requirement. This element does not apply to trifluralin, as existing labels already require watering-in or soil incorporation of trifluralin.
(C) Either a 10 foot vegetated filter strip which cannot be treated with these active ingredients or a 20 foot no-treatment zone shall be maintained between salmon-bearing waters and use sites where oryzalin, pendimethalin, or trifluralin are applied. This restriction applies to ground applications.
(b) All incidents of fish mortality occurring within the vicinity of the treatment area in the four days following application of any pesticide products containing oryzalin, pendimethalin or trifluralin, shall be reported to EPA's Office of Pesticide Programs. "Vicinity" includes areas within one mile adjacent to, downwind of, or downstream of the application area which might reasonably be affected by the application.

Tables A and B for OAR 340-041-0034 are set out in Appendix J. Appendix K includes Other Persons Known to the Petitioner to be Interested in the Rule.

XI. Conclusion

Protection of fish, aquatic life and wildlife are paramount interests of the State of Oregon and key beneficial uses to be protected under the federal Clean Water Act. Pesticides are poisonous to aquatic life and wildlife. Because of known adverse effects of pesticides, since 1989 the USF&WS has established mandatory restrictions on certain pesticides in certain areas, since 2004 a federal court order has similarly restricted specified pesticides, since 2008 NMFS has established mandatory restrictions on a subset of those pesticides, and in 2011 NMFS established restrictions on discharges of pesticides into waters on Indian country in Oregon. Despite the scientific analysis underlying these restrictions and the existence of these mitigation measures established by the federal fish and wildlife agencies, neither EPA nor the State of Oregon has taken steps to incorporate those measures into water quality protection programs.

The Services are not regulatory agencies. They depend upon EPA and the States to incorporate their mandatory restrictions into regulatory programs and regulatory actions to ensure protection of designated and existing uses, including but not limited to threatened and endangered species. In taking action the Commission does not need to develop the expertise that is housed at these preeminent fish and wildlife agencies. The Commission need only adopt the analysis and mitigation measures that these federal agencies have already established, bringing them into Oregon's Clean Water Act regulatory programs to provide the protections promised by that federal law.

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Signed this day, the 9th day of August, 2012.

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