March 20, 2014

Via Electronic Mail Only

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Office of Ocean and Coastal Resource Management
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National Oceanic and Atmospheric Administration
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Re: Comments on EPA's and NOAA's proposal to find that Oregon has failed to submit an approvable coastal nonpoint pollution control program.

Dear Ms. Gore:

Thank you for the opportunity to comment on the U.S. Environmental Protection Agency's and the National Oceanic and Atmospheric Administration's proposal to find that Oregon has failed to submit an approvable coastal nonpoint pollution control program. These comments are submitted on behalf of Northwest Environmental Advocates in response to the request for public comment published in the Federal Register. *See* 78 Fed. Reg. 77104 (December 20, 2013). Please include these comments in the administrative record for this matter. Please also note that by letters dated March 18 and 19, 2014, the Washington Forest Law Center sent you two DVD disks with numerous documents to be included in the administrative record for this matter. Finally, please inform the [redacted] and Northwest Environmental Advocates in writing of any subsequent action you take related to Oregon's coastal nonpoint pollution control program.

As requested in EPA's and NOAA's December 20, 2013 proposed finding on Oregon's coastal nonpoint program, these comments focus on the inability of Oregon's forestry and agricultural programs to protect water quality and beneficial uses from nonpoint sources of pollution. In explaining the deficiencies in those programs Northwest Environmental Advocates also explains structural deficiencies in Oregon's nonpoint source pollution control program more generally because those deficiencies extend to, and undermine, Oregon's forestry, agricultural, onsite sewage disposal, and new development programs. NWEA agrees with EPA and NOAA that all of those programs fail to meet CZARA standards and so cannot be approved. In any

event, NWEA has focused its comments in this regard because EPA and NOAA requested just that in the December 20, 2013 Federal Register notice and because on page 2 of the Proposed Finding document of the same date EPA and NOAA stated that they "will provide another opportunity for public comment" before issuing a final approval of Oregon's coastal nonpoint pollution control program. Northwest Environmental Advocates is relying on that future opportunity to comment on all elements of Oregon's program and so has provided more limited comments here. Before issuing any final approval EPA and NOAA must provide a full opportunity for all to comment on all components of Oregon's coastal nonpoint pollution control program, especially any component that EPA and NOAA conditionally approved after issuing the original 1998 findings on Oregon's program.

I. Background.

A. The Coastal Zone Act Reauthorization Amendments of 1990.

In the Coastal Zone Act Reauthorization Amendments of 1990, 16 U.S.C. § 1455b ("CZARA"), Congress incentivized states to eliminate nonpoint source pollution by requiring EPA and NOAA to withhold a percentage of Clean Water Act ("CWA") and Coastal Zone Management Act ("CZMA") grant funds from states that fail to submit coastal nonpoint programs that protect water quality. 16 U.S.C. § 1455b(a)(2). CZARA generally requires states that have federally-approved coastal zone management plans to develop and implement a coastal nonpoint pollution control program ("CNPCP") that meets statutory criteria and federal guidance. 16 U.S.C. § 1455b(a)(1). CZARA's purpose is to compel coastal states "to develop and implement management measures for nonpoint source pollution to restore and protect coastal waters, working in close conjunction with other State and local authorities." *Id*. The State programs must be coordinated closely with water quality plans developed under the Clean Water Act and Coastal Zone Management Act. 16 U.S.C. § 1455b(a)(2).

CZARA sets forth requirements for the contents of the State programs. *See generally* 16 U.S.C. §1455b(b) & (g). CZARA requires each state program to conform to federal guidance developed under subsection (g) of the Act. Subsection (g)(1) requires the agencies to publish and periodically revise guidance specifying management measures for sources of nonpoint pollution in coastal waters, while subsection (g)(2) provides a list of criteria the management measures must meet. Under CZARA's mandate, EPA developed management measures for six major nonpoint pollution sources, including agricultural runoff, urban runoff, silvicultural runoff, hydromodification and dams, shoreline erosion, and marinas. CZARA also requires states to develop and implement "additional management measures" where necessary to achieve and maintain applicable water quality standards, including the protection of designated uses. States must also provide technical assistance to localities, allow public participation in all stages of program development, coordinate with all applicable state agencies, and modify the state coastal zone boundary if necessary. 16 U.S.C. §1455b(b)(4)-(7).

The statute sets forth the requirements for program submission, approval, and implementation. 16 U.S.C. § 1455b(c). Subsection (1) requires EPA and NOAA to jointly review the program within six months of submittal by the State. 16 U.S.C. § 1455b(c)(1). EPA and NOAA shall approve a state's program if those agencies determine that the portions of the

program under their respective authorities meet the requirements of the Act. *Id*. If the State program is approved, "the State shall implement the program" through changes to the State's Clean Water Act section 319 and Coastal Zone Management Act section 306 plans. 16 U.S.C. § 1455b(c)(2).

Subsections (c)(3) and (c)(4) of CZARA set forth provisions for withholding financial assistance in the event a State fails to submit an approvable program. Under (c)(3), "[i]f the Secretary finds that a coastal State has failed to submit an approvable program as required by this section, the Secretary shall withhold for each fiscal year until such a program is submitted a portion of grants otherwise available to the State" under CZMA section 306. The penalty for fiscal year 1999 and thereafter is 30 percent. Subsection (c)(4) is similar: for states that have failed to submit an approvable program, "…the Administrator [of the EPA] shall withhold from grants available to the State under [Clean Water Act section 319], for each fiscal year until such a program is submitted, an amount equal to a percentage of the grants awarded to the State for the preceding fiscal year under that section…." 16 U.S.C. § 1455b(c)(4). For fiscal year 1999 and each fiscal year thereafter EPA must withhold 30 percent of the amount awarded for fiscal year 1998 or other preceding fiscal year. 16 U.S.C. § 1455b(c)(4)(D). Under both statutes the agencies must make amounts withheld under CZARA available to coastal States having approved programs.

B. <u>Oregon's water quality standards.</u>

Water quality standards are defined as the designated beneficial uses of a water body, in combination with the numeric and narrative criteria to protect those uses and an antidegradation policy. 40 C.F.R. § 131.6. The Clean Water Act requires numeric criteria adopted in water quality standards to protect the "most sensitive use." 40 C.F.R. § 131.11(a)(1). However, since that is not always possible, the task of evaluating whether standards have been met also requires an assessment of the impacts to designated beneficial uses. In *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 114 S. Ct. 1900, 1912 (1994), the U.S. Supreme Court underscored the importance of protecting beneficial uses as a "complementary requirement" that "enables the States to ensure that each activity – even if not foreseen by the criteria – will be consistent with the specific uses and attributes of a particular body of water." The Supreme Court explained that numeric criteria "cannot reasonably be expected to anticipate all the water quality issues arising from every activity which can affect the State's hundreds of individual water bodies." *Id*.

EPA regulations implementing section 303(d) of the Clean Water Act reflect the independent importance of each component of a state's water quality standards:

> For the purposes of listing waters under §130.7(b), the term "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements.

40 C.F.R. § 130.7(b)(3). When EPA adopted these regulations it clearly stated the expectations it had of states:

> In today's final action the term "applicable standard" for the purposes of listing waters under section 303(d) is defined in § 130.7(b)(3) as those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses and antidegradation requirements. In the case of a pollutant for which a numeric criterion has not been developed, a State should interpret its narrative criteria by applying a proposed state numeric criterion, an explicit State policy or regulation (such as applying a translator procedure developed pursuant to section 303(c)(2)(B) to derive numeric criteria for priority toxic pollutants), EPA national water quality criteria guidance developed under section 304(a) of the Act and supplemented with other relevant information, or by otherwise calculating on a case-by-case basis the ambient concentration of the pollutant that corresponds to attainment of the narrative criterion. Today's definition is consistent with EPA's Water Quality Standards regulation at 40 CFR part 131. EPA may disapprove a list that is based on a State interpretation of a narrative criterion that EPA finds unacceptable.

EPA, Final Rule: Surface Water Toxics Control Program and Water Quality Planning and Management Program, 57 Fed. Reg. 33040, 33045 (July 24, 1992).

Oregon's water quality standards for the five basins that comprise Oregon's coastal area include statewide narrative and numeric criteria,[1] an antidegradation policy,[2] and basin-specific rules including designated beneficial uses.[3] The purpose of Oregon's antidegradation policy is "to protect, maintain, and enhance existing surface water quality to ensure the full protection of all existing beneficial uses" and it expressly recognizes that the numeric and narrative standards "are intended to supplement" that policy. OAR 340-041-0004(1). "Existing uses" are defined by federal regulations 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." 40 C.F.R. § 131.3(e).

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[1] Oregon's statewide numeric and narrative water quality standards are set out at OAR 340-041-0001 through 340-041-0061.

[2] Oregon's antidegradation policy is set out at OAR 340-041-0004.

[3] Designated beneficial uses for the Umpqua River Basin are established by OAR 340-041-0320 (citing Table 320A and Figures 320A and 320B) and basin-specific criteria applicable to that basin are set out at OAR 340-041-0326. Designated beneficial uses for the South Coast Basin are established by OAR 340-041-0300 (citing Table 300A and Figures 300A and 300B) and basin-specific criteria applicable to that basin are at OAR 340-041-0305. Designated beneficial uses for the Rogue River Basin are established by OAR 340-041-0271 (citing Table 271A and Figures 271A and 271B) and basin-specific criteria applicable to that basin are at OAR 340-041-0275. Designated beneficial uses for the North Coast Basin are established by OAR 340-041-0230 (citing to Table 230A and Figures 230A and 230B) and basin-specific criteria applicable to that basin are at OAR 340-041-0235. And designated beneficial uses for the MidCoast Basin are established at OAR 340-041-0220 (citing Table 220 A and Figures 220A and 220B) and basin-specific criteria and applicable to that basin at OAR 340-041-0225. In addition, the TMDLs established by Oregon DEQ and approved by EPA are listed at OAR 340-041-0324 for the Umpqua River Basin; at OAR 340-041-0304 for the South Coast Basin; at OAR 340-041-0274 for the Rogue River Basin; at OAR 340-041-0234 for the North Coast Basin; and at OAR 340-041-0224 for the MidCoast Basin.

The statewide narrative criteria then clearly state that "the highest and best practicable treatment and/or control of wastes, activities, and flows *must in every case be provided* so as to maintain … overall water quality *at the highest possible levels*[.]" OAR 340-041-0007(1) (emphasis added).

"Fish and aquatic life," "fishing," and "aesthetic quality," all are listed as designated beneficial uses in all waters in all five coastal basins. Oregon's narrative criteria, numeric criteria, and antidegradation policy therefore must protect and support those designated beneficial uses along with all existing uses and the level of water quality necessary to protect them. 40 C.F.R. § 131.12(a)(1). And in theory at least they should. The statewide narrative criteria clearly prohibit the "development of fungi or other growths having a deleterious effect on stream bottoms [or] fish or other aquatic life"; the "creation of tastes or odors *or toxic or other conditions* that are deleterious to fish or other aquatic life"; and the "formation of appreciable bottom or sludge deposits or the formation of any organic or inorganic deposits deleterious to fish or other aquatic life[.]" OAR 340-041-0007(9), (10) (emphasis added), and (11). Oregon's biocriteria is emphatic: "*Waters of the State must be of sufficient quality to support aquatic species without detrimental changes in the resident biological communities*." OAR 340-041-0011 (emphasis added). Oregon's CNPCP therefore must ensure that land and water uses in Oregon's coastal areas attain and maintain those water quality standards, including the full support of all designated and "existing" aquatic species including all fish and amphibians.

Where they have been approved by EPA, Total Maximum Daily Loads ("TMDLs") for temperature and other pollutants in Oregon further refine how water quality standards apply to specific pollution sources including nonpoint sources of pollution generated by activities such as logging and farming. Oregon's coastal watershed temperature TMDLs have calculated wasteload allocations for point sources and load allocations for nonpoint sources that allocate portions of the 0.3˚C Human Use Allowance, which allows an increment of 0.3˚C warming over applicable temperature criteria. These load allocations supersede any other allowable increment set out in the water quality standards for nonpoint sources once a TMDL has been approved by EPA. *In nearly all of the temperature TMDLs, DEQ has allocated none of that increment of heating to nonpoint sources including forestry*.[4] Consequently, nonpoint sources of pollution subject to those TMDLs are given a load allocation of zero, meaning they are not permitted to increase temperatures in the covered waters *at all*.[5]

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[4] *See* South Coast Basin/Coquille Sub-basin/Upper South Fork Coquille Watershed TMDL at 10; North Coast Basin/North Coast Sub-basin TMDLs at 55; North Coast Basin/Wilson-Trask-Nestucca Sub-basin/Nestucca Bay Watershed TMDL at 40; North Coast Basin/Tillamook Bay Watershed TMDL at 45; Rogue Basin TMDL at 2-36 (0.04˚C for all nonpoint sources together but noting that "[m]ost streams simulated have no assimilative capacity, which translates into a zero heat load allocation for nonpoint sources."); Rogue Basin/Applegate Sub-basin TMDL at 3; Rogue Basin /Illinois Sub-basin/Lower Sucker Creek TMDL at 29; Rogue Basin /Illinois Sub-basin/Upper Sucker Creek TMDL (using "effective shade targets"); Rogue Basin /Lower Rogue Sub-basin/Lobster Creek Watershed TMDL at 24; Rogue Basin/Middle Rogue Sub-basin/Bear Creek Watershed TMDL at 51 (allocating 0.05˚C to all nonpoint sources cumulatively); Umpqua Basin/Little River Watershed/Little River TMDL at 23.

[5] There are a few exceptions but they do not apply to current activities, including logging. For example, the 0.1˚C load allocation to nonpoint sources in the Umpqua River Basin TMDL states that the exception only applies "for anthropogenic heat loads in landscapes that are not likely to achieve a natural condition." Umpqua River Basin TMDL at 3-4. That likely refers to urbanized landscapes and things such as levees, as opposed to forestlands which

It is worth noting that some of Oregon's current temperature standards are not protective of designated uses. In its regional temperature guidance EPA recommended numeric temperature criteria for the protection of cold-water fishes.[6] Oregon's statewide numeric temperature criteria, which it adopted to protect designated beneficial uses, correspond to those EPA recommendations as follows: salmon and steelhead spawning 13.0°C; core cold water habitat 16.0°C; salmon and trout rearing and migration 18.0°C; migration corridors 20.0°C. However, as explained in more detail in Section VI.A., graphs of Natural Thermal Potential ("NTP") temperatures in some Oregon temperature TMDLs have superseded the otherwise applicable numeric criteria—essentially changing the applicable numeric water quality standard—even though EPA has not reviewed and approved the superseding NTP criteria under Section 303(c) of the Clean Water Act and even though NMFS has not consulted on them under section 7 of the Endangered Species Act. Unfortunately, NTP temperatures in coastal watersheds range up to 32.5°C (90.5° F), clearly exceeding EPA recommendations and Oregon's state-wide numeric temperature criteria. According to EPA's regional temperature guidance, such temperatures would not provide full support for cold-water salmonids.

Were the TMDLs to have used the numeric criteria rather than creating superseding criteria based on modeled NTP temperatures, or were those superseding temperatures to have been evaluated for their protectiveness of designated uses pursuant to Section 303(c) of the CWA and EPA's implementing regulations at 40 C.F.R. § 131.11, the TMDL targets established for nonpoint sources on modeled streams would allow for the same or a lower impact on water quality. Therefore, under no scenario could nonpoint sources of logging and farming be allowed to contribute any anthropogenic inputs of heat to Oregon's coastal streams.

C. <u>EPA and NOAA guidance on the need for management measures and additional management measures for the control of nonpoint source pollution.</u>

Management measures in conformity with the federal guidance are the minimum required of all nonpoint sources, unless excluded, in coastal watersheds. *See e.g.*, Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance (Jan. 1993) at 10 (hereinafter "Program Guidance"). Because the management measures are imprecise, in order to gain program approval, a state's coastal nonpoint program must "describe the process the state will use to *select practices* that will result in the effective implementation of the (g) guidance management measures." *Id*. at 13 (emphasis added); *see also id.* at 17 ("Describe a process to identify practices to achieve the management measures.").

To ensure that the management measures and chosen practices are, in fact, implemented, states are also required to "[i]dentify enforceable policies and mechanisms to ensure that each management measure identified in the coastal nonpoint program is implemented[.]" *Id*. at 17.

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can be restored to natural conditions. Similarly, the Rogue Basin TMDL allocates 0.04˚C to nonpoint sources collectively but also states that "[m]ost streams simulated have no assimilative capacity, which translates into a zero heat load allocation for nonpoint sources." Rogue Basin TMDL at 2-36.

[6] EPA, Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, EPA 910-B-03-002 (April 2003) at 20, 26.

Further federal guidance elaborates on the requirement for such enforceable measures. *See* Memorandum from Peyton Robertson, NOAA, and Dove Weitman, EPA, to State Coastal Nonpoint Program Coordinators, Re: Enforceable Policies and Mechanisms for State Coastal Nonpoint Source Programs (Jan. 23, 2001). In summary, the federal guidance allows states to use voluntary or incentive-based programs, backed by existing state enforcement authorities, if the following is provided:

- A legal opinion from the attorney general or an attorney representing the agency with jurisdiction for enforcement that such authorities can be used to prevent nonpoint pollution and *require management measure implementation*, as necessary;

- A description of the voluntary or incentive-based programs, including the *methods for tracking and evaluating those programs*, the States will use to encourage implementation of the management measures; and

- A description of the mechanism of process that links the implementing agency with the enforcement agency and *a commitment to use the existing enforcement authorities where necessary*.

Id. at 1 (emphasis added).

Because the statute does not assume that the management measures are sufficient to meet state water quality standards, the guidance for implementing the management measures requires "any necessary monitoring techniques to accompany the measures to assess over time the success of the measures in reducing pollution loads and improving water quality." Program Guidance at 6; *see also id.* at 17 ("Describe state activities to monitor the effectiveness of the (g) measures[.]").

For the same reason, the Program Guidance discusses the need for *additional* management measures. *See id*. at 17-23. The guidance mirrors the statute in requiring that states demonstrate the use of additional management measures when needed to meet water quality standards and protect designated uses. *Id.* at vi. The guidance notes that states are required to provide "[a] description of the state-developed additional management measures to be implemented[.]" *Id.* Likewise, it describes the need for state programs to "be closely coordinated" with existing plans and programs developed pursuant to section 303 of the Clean Water Act, which includes 303(d), that part of the statute that requires states to develop Total Maximum Daily Loads, which further interpret the water quality standards as they apply to specific pollution sources such that their cumulative effect of pollution controls will attain and maintain the standards. *See id.* at 4. The state programs must provide for the implementation of additional management measures for "land uses which, individually or cumulatively, may cause or contribute significantly to a degradation" of impaired or threatened waters and are also required for areas identified as "critical coastal areas." *Id*.

This latter requirement includes that states must:

1. identify coastal waters that are not attaining or maintaining applicable water quality standards or protecting designated uses, or that are threatened by reasonably foreseeable increases in pollution loadings from new or expanding sources;

2. identify land uses that individually or cumulatively cause or threaten water quality impairments in those coastal waters;

3. identify critical coastal areas;

4. develop a process for determining whether additional measures are necessary to attain or maintain water quality standards in the waters identified above;

5. describe the additional management measures the state will apply to the identified land uses and critical coastal areas; and,

6. develop a program to ensure implementation of the additional management measures within the time frame described in section IV.D.

Id. at 18. With regard to selecting the additional management measures required for critical areas or more generally, the guidance asserts that:

> states are expected to provide the following information on the additional management measures that will be implemented:
>
> a. a discussion of the measure and the land uses and pollutants it is designed to address;
>
> b. evidence of the anticipated effectiveness of the measure in reducing nonpoint pollution to meet water quality standards; and,
>
> c. a process for evaluating the effectiveness of the measures once they are implemented, and a schedule for revising such measures, as necessary, to meet water quality standards

Id. at 23.

Finally, the federal agencies expect the implementation of both the management measures and the additional management measures in a reasonable period of time. *See, e.g., id.* at 17 (states must "[i]nclude a schedule for each nonpoint source category or subcategory with milestones for achieving full implementation of the management measures within three years[.]"); *id*. at 36 ("State coastal nonpoint programs must also include a schedule and milestones for implementation of additional measures.")

D. Oregon's repeated failures to submit an approvable CNPCP.

Oregon has repeatedly submitted a coastal nonpoint program that EPA and NOAA have repeatedly refused to approve, in large part because it did not include adequate regulation of forest practices in the form of additional management measures. Oregon originally submitted its CNPCP to EPA and NOAA in July 1995. The plan was entitled *Pollution Prevention and Control Program for Oregon's Coastal Waters* and it designated as the coastal zone most of the land west of the coast range crest. Forestry is the most significant use of land in that area and Oregon's forest practices regulations have been one of the focal points of Oregon's CNPCP.

On January 13, 1998, EPA and NOAA approved Oregon's program subject to certain conditions "that will need to be met for Oregon to receive final approval of its program."[7] EPA and NOAA found nearly every element of Oregon's plan to be inadequate. Most relevant, the agencies found that "additional management measures [for forest practices] are necessary to attain and maintain water quality standards and fully protect beneficial uses." 1998 Finding III. As a condition of final approval, the agencies required Oregon to "identify and begin applying additional management measures where water quality impairments and degradation of beneficial uses attributable to forestry exist despite implementation of the (g) measures." 1998 Finding X.

In addition, EPA and NOAA stated:

> Although Oregon has the basic legal and programmatic tools to implement a forestry program in conformity with [CZARA], these tools are inadequate to ensure that water quality standards are attained and maintained and beneficial uses protected. This conclusion is based on best available information, including the most recent 303(d) listings for Oregon waters, which indicate water quality impairments from forestry. Related to these water quality impairments, Oregon has a number of aquatic species, in particular anadromous salmonids, that are endangered, threatened, or otherwise seriously at risk, due in part to forestry activities that impair coastal water quality and beneficial uses, including salmon spawning, rearing, and migration habitat…. Thus, Oregon will need to adopt additional management measures for forestry in areas adjacent to coastal waters not attaining or maintaining applicable water quality standards for protecting beneficial uses, or that are threatened by reasonably foreseeable increases in pollutant loadings from new or expanding forestry operations[.]

EPA and NOAA concluded their 1998 findings by requiring Oregon to resubmit a coastal program with regulations for forestry operations that had additional management measures.

In October 2002 and March 2003, after receiving an extension for the program submission, Oregon resubmitted its CNPCP. Once again EPA and NOAA rejected Oregon's program, citing Oregon's failure to provide sufficient additional management measures for forestry operations. In November 2007, Oregon again submitted to EPA and NOAA a document that attempted to demonstrate compliance with the requirement that it provide additional

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[7] EPA and NOAA, Findings for the Oregon Coastal Nonpoint Program, 1998.

management measures for forestry, but once again EPA and NOAA found that Oregon's program still did not satisfy the conditions for additional management measures for forestry. In its 2008 response to Oregon's documents submitted in 2007, EPA and NOAA stated:

> Based on Oregon's recent submittal and our understanding of Oregon's Forestry Program, EPA and NOAA still believe that Oregon lacks adequate management measures under the Oregon Forest Practices Act (FPA) rules for protecting water quality and the degradation of beneficial uses from forestry activities. EPA and NOAA's primary concerns, stated in the 1998 conditional findings and reiterated in the 2004 interim decision document, remain. Oregon still lacks adequate measures for protecting riparian areas of medium, small and non-fish bearing streams, high risk landslide areas, and for addressing the impacts of legacy roads. A broad body of science continues to demonstrate that the FPA rules do not adequately protect water quality.

EPA and NOAA have extensively reviewed Oregon's attempts at regulating logging operations and both agencies have repeatedly concluded that Oregon's efforts fail to protect water quality and designated beneficial uses.

Notwithstanding those findings, EPA and NOAA have never withheld any CZMA Section 306 grant funds or any CWA Section 319 grant funds from the State of Oregon despite the clear statutory mandate to do so. Instead, between 1998 and 2008 NOAA awarded Oregon approximately $18,360,000 in CZMA section 306 funds and EPA awarded Oregon approximately $30,730,151 in CWA section 319 funds. The Agencies' illegal decisions not to withhold grant funds unfortunately contributed to Oregon's delay in meeting all conditions for final approval of its CNPCP. In a September 20, 2006, email to Robert Baumgartner, Amanda Punton, then an Oregon state official associated with the Oregon Coastal Nonpoint Program, summed it up nicely:

> We have not made any effort in the past year or so to seek approval of outstanding management measures. Koto [Kishida, Oregon DEQ] has contacted me a few times, and I think I have responded to her questions and requests, but I then do not hear back from her. (This is not meant as a criticism.) When discussing this topic with the feds I plan on saying that we have lost our motivation to pursue full program approval for three reasons: 1) we do not see how our current efforts to develop and implement strategies that address nonpoint pollution would benefit from full program approval; 2) there is no longer any consequence of not having full program approval; and 3) our last efforts to work with the feds on finding workable solutions to meeting management measures were not fruitful.

E. <u>Oregon's repudiation of commitments it made during settlement of *Northwest Environmental Advocates v. Locke*.</u>

Given Oregon's delay and the resulting impacts on coastal water quality and designated uses, on January 6, 2009, Northwest Environmental Advocates sued the Secretary of Commerce, the Administrator of the U.S. Environmental Protection Agency, and the Administrator of the

National Oceanic and Atmospheric Administration in U.S. District Court for alleged violations of CZARA and the Administrative Procedure Act, 5 U.S.C. §§ 551 *et seq*. *See Northwest Environmental Advocates v. Locke, et al.*, Civil No. 09-0017-PK (District of Oregon). The lawsuit alleged NOAA and EPA violated those laws by not making a final decision approving or disapproving Oregon's CNPCP and by not withholding CZMA Section 306 grant funds and CWA Section 319 grant funds from Oregon even though Oregon had failed to submit an approvable CNPCP.

During discussions to settle that litigation, and to resolve the outstanding condition on its CNPCP for additional management measures for forestry, Oregon proposed to develop so-called "Implementation Ready TMDLs" that would include the development and issuance of enforceable load allocations for significant nonpoint sources, implementation plans, and identify "safe harbor" Best Management Practices (BMPs) to meet those load allocations throughout Oregon's CNPCP management area. Oregon essentially proposed an approach that would allow it to identify watershed-specific pollution sources and then impose watershed-specific practices—forest practices rules and practices for other significant nonpoint sources—to address those problems. On May 12, 2010, EPA and NOAA sent a letter to the State of Oregon that encouraged the Oregon Department of Environmental Quality ("ODEQ") to resolve the related outstanding condition on its CNPCP by implementing this Oregon Coastal TMDL Approach.

On July 2, 2010, the Oregon Attorney General sent a legal opinion to EPA and NOAA that described the Oregon Coastal TMDL Approach as a new process by which ODEQ would assign enforceable and specific load allocations to individual property owners—including forestland owners—adjacent to a water body as opposed to the general load allocation for the nonpoint source pollution sectors as has typically been done in previous Oregon TMDLs. The July 2, 2010, legal opinion concluded that "DEQ is authorized to establish its own implementation requirements to the extent required by the CWA and to the extent that controls adopted by the [Oregon Board of Forestry] under the [Oregon Forest Practices Act] are deemed by DEQ to be inadequate to implement the TMDL…. DEQ may legally conclude, and in some cases likely must conclude, that implementation of its safe harbor BMPs is required." The July 2, 2010, legal opinion confirmed that ODEQ has the authority to develop and enforce the Oregon Coastal TMDL Approach.

By later dated July 26, 2010, ODEQ committed to implement the Oregon Coastal TMDL Approach "in the coastal basins beginning with the Mid-Coast Basin and then in the subsequent coastal basin[s]." In its July 26, 2010 letter, and in Attachment A to that letter, ODEQ committed to developing Oregon Coastal TMDLs that will "specifically identify significant nonpoint sources, including significant forestry sources," and ODEQ committed to establishing enforceable load allocations in the TMDLs, and to developing safe harbor BMPs for the load allocations established for those sources, as well as to issuing implementation orders to significant sources, including significant forestry nonpoint sources that have received load allocations through the Oregon Coastal TMDL Approach. Further, Attachment A to the July 26, 2010, letter stated that ODEQ will approve or disapprove TMDL Implementation Plans "based on the plans ability to meet the load allocations or [Oregon Board of Forestry] basin specific rule[s]" and that ODEQ "would reserve its authority to impose BMPs under ORS 468B.110 to the extent necessary to comply with Sections 303 and 309 of the CWA."

Oregon's July 26, 2010 commitment to implement the Oregon Coastal TMDL Approach, and its subsequent commitment to complete Oregon Coastal TMDLs for the Coos, Rogue, Umpqua, Sixes and Chetco, Coquille, and North Coast basins by 2012,[8] demonstrates that even Oregon has agreed that much more needs to be done to address and control nonpoint source pollution from forest practices in Oregon's coastal watersheds. Unfortunately ODEQ has since abandoned the Oregon Coastal TMDL Approach. By later dated July 1, 2013, DEQ submitted to EPA and NOAA yet another inadequate plan for meeting the outstanding conditions on its CNPCP. In that letter ODEQ expressly acknowledges that "the specifics of our plan diverges [sic] from the commitments in the original settlement agreement[.]" It is now clear that Oregon has abandoned its pilot demonstration of the Oregon Coastal TMDL Approach in the Mid-Coast basin. In doing so Oregon has demonstrated yet again that it is incapable of implementing a program to control nonpoint sources of pollution resulting from logging operations in Oregon's coastal watersheds. EPA and NOAA are therefore perfectly correct to disapprove Oregon's CNPCP and to begin immediately withholding CWA and CZMA grant funds, as required by statute and the settlement agreement in *Northwest Environmental Advocates v. Locke*.

II. Oregon's forest practices program does not meet CZARA requirements.

Northwest Environmental Advocates fully agrees with EPA's and NOAA's proposed decision to find that Oregon has failed to develop and implement additional management measures for forestry and so has failed to submit an approvable program under CZARA. Proposed Finding at 7-12. As previously noted, Oregon appears to have abandoned the "implementation-ready" or "Oregon Coastal TMDL" approach it committed to in settlement of *Northwest Environmental Advocates v. Locke*. See July 1, 2013 letter from ODEQ to EPA and NOAA and the April 3, 2012 Letter from Northwest Environmental Advocates to Michael Bussell, EPA Region 10, and John King, NOAA, which expressed concerns about Oregon DEQ honoring CZARA settlement commitments. Additionally, as explained in detail in this section, Oregon's voluntary and regulatory forest practices programs do not sufficiently protect water quality or designated beneficial uses, including fish and amphibians. Oregon's forest practices program simply does not prevent or eliminate adverse water quality impacts from nonpoint source pollution resulting from logging activities in Oregon's coastal areas.

Oregon regulates forest practices through the Oregon Forest Practices Act, Oregon Revised Statutes § 527.610 *et seq*. Pursuant to 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 quality standards established by the Environmental Quality Commission for the waters of the state. Such best management practices shall consist of forest practices rules adopted to prevent or reduce pollution of waters of the state. Factors to be considered by the board in establishing best management practices shall include, where applicable, but not be limited to:

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[8] See July 15, 2011, email from Eugene Foster, ODEQ, to Nina Bell, NWEA.

(a) Beneficial uses of waters potentially impacted;
(b) The effects of past forest practices on beneficial uses of water;
(c) Appropriate practices employed by other forest managers;
(d) Technical, economic and institutional feasibility; and
(e) Natural variations in geomorphology and hydrology.

Unfortunately in Oregon, existing laws, as well as their implementing regulations and policies, are simply not adequate to protect water quality and designated beneficial uses.

A. General Concerns.

One problem with Oregon's forest practices program is that it improperly equates compliance with forest practices regulations with compliance with water quality standards. *See* ORS § 527.770 (entitled "Good faith compliance with best management practices not violation of water quality standards"). But one cannot draw conclusions about water quality from BMP compliance rates, nor can one evaluate water quality in a particular stream reach by reviewing the extent to which a given logging operation complies with the forest practices regulations. Oregon's practice of deeming logging operations to be in compliance with water quality standards simply because the operation complies with the Oregon Forest Practices Act is a legal trick to insulate logging companies, the Oregon Department of Forestry ("ODF"), and the Oregon Board of Forestry ("Board") from well-founded claims that logging operations in Oregon pollute streams and harm aquatic species. We applaud EPA and NOAA for refusing to be tricked and for recognizing that just because Oregon says that its forest practices regulations protect water quality does not make it so.

The Oregon Board of Forestry also appears to have incorrectly interpreted the phrase "to the maximum extent practicable" to mean "to the maximum extent politically acceptable." Presumably the Board's confusion results from its obligation to consider "technical, economic, and institutional feasibility" in establishing forest practices best management practices; it appears the Board has repeatedly concluded that those considerations *override* its obligation to adopt rules that protect water quality to the maximum extent practicable. ORS § 527.765(1). But the Board's obligation to consider certain factors does not, and cannot, override its obligations to adopt forest practices "necessary to insure that to the maximum extent practicable" nonpoint source pollution from forestry operations does not impair the achievement and maintenance of water quality standards. Unfortunately, in large part because of political pressure, and as explained in more detail throughout this section, the Board of Forestry has refused to adopt forest practices regulations that ensure compliance with "the water quality standards established by the Environmental Quality Commission for waters of the state." Moreover, to the extent that ODEQ has authority to override ODF's inadequate forest practices, it has failed to use that authority.

The listing of Oregon coast coho under the federal Endangered Species Act ("ESA") highlights the need to modify forest practices so they do not further degrade coho habitat and further impair essential coho life functions. *See* 63 Fed. Reg. 42,587 (1998) (listing Oregon coast coho as threatened). It is undeniable that logging helped precipitate the decline of Oregon coast coho and that reforms are urgently needed to stop the downward spiral of the species. *See*,

e.g., 60 Fed. Reg. 38,011, 38,024 (July 25, 1995) (proposed Oregon coast coho listing). Despite extensive scientific reviews of forest practices generally, and Oregon forest practices in particular, all of which document the need for substantial improvements to protect salmon, the Board continues to maintain a regulatory program for forestry on private lands, and continues to manage Oregon State Forests in the coastal watersheds, to the detriment of Oregon coast coho and coastal water and habitat quality.

Comparing the State of Oregon's approach to the State of Washington's approach is instructive. To address concerns that forest practices on state and private lands in Washington were harming or harassing ESA-listed aquatic species (salmon, bull trout, etc.) in violation of the federal ESA, 16 U.S.C. § 1531 *et seq.*, Washington sought and received approval for at least two different Habitat Conservation Plans ("HCP") as allowed by ESA section 10, 16 U.S.C. § 1539. The Washington Department of Natural Resources ("DNR") Trust Lands Habitat Conservation Plan is a comprehensive forest management program for approximately two million acres of DNR-managed trust lands in Washington State. Washington took an even bigger step when it developed and obtained federal approval for the Washington Forest Practices Habitat Conservation Plan, a second HCP that applies an aquatic species conservation strategy to logging on approximately 9.3 million acres of private lands in Washington State. Both HCPs include an aquatic species conservation strategy designed to reduce or eliminate impacts to listed aquatic species by better managing logging roads, riparian areas, logging on steep and unstable slopes, and other areas where logging can adversely impact water quality and aquatic species.

Perhaps most notably, under both HCPs landowners and land managers, including Washington DNR, must implement a comprehensive road maintenance and abandonment program ("RMAP") to fix habitat-blocking culverts and to disconnect logging roads from streams where possible on a worst-first basis. Recognizing that even Washington's new forest practices rules included elevated risk for aquatic species, the Washington Forest Practices HCP also includes a comprehensive adaptive management program—funded to the tune of millions of dollars per year—which is designed to study logging-caused impacts to streams, water quality, and aquatic species so that Washington can continue changing its rules in harmony with developments in the best available science. Unlike Oregon's lip service to the idea of adaptive management, Washington actually funds numerous significant studies and attempts to adapt its practices in response to their outcomes.

The provisions in these two Washington HCPs are uniformly more protective of water quality and aquatic species than logging practices on both state and private lands in Oregon's coastal area. These HCPs, of course, may still fall short of fully complying with CZARA: CZARA requires state CNPCPs "to achieve and maintain water quality standards and protect designated uses," Proposed Finding at 1, and the HCPs themselves and relevant expert opinion clearly acknowledge that their implementation will incidentally take (harm or harass) ESA-listed aquatic species, which necessarily involves violations of Washington's water quality standards.[9] In any event, these two HCPs demonstrate that Oregon's logging practices on state and private

[9] See the comments of Timothy Abbe, Chris Frissell, Dale McCullough, Chris Mendoza, David Montgomery, Jonathan J. Rhodes, Cleve Steward, and the Pacific Rivers Council, all of which are being submitted into the administrative record for this matter.

lands in its coastal watersheds are deficient, and significantly so. Moreover, Washington's decision to develop and implement the DNR Trust Lands HCP is important because it demonstrates that state land managers can undertake programmatic changes to protect aquatic species without running afoul of obligations to trust beneficiaries. Viewed in this context, Oregon's refusal to upgrade its forest practices regulations and management of state forest lands notwithstanding longstanding concerns from EPA and NOAA, and notwithstanding the listing of Oregon coast coho in part because of logging, is absolutely remarkable.

B. Riparian Buffers and Logging on Steep and Unstable Slopes.

The best scientific information available, in fact, demonstrates that Oregon's rules for logging roads, riparian buffers, and logging on steep and unstable slopes fail to protect water quality in Oregon forests. As explained extensively in the Declaration of Christopher A. Frissell, Ph.D., which is being submitted in support of this comment letter, and which is hereby incorporated by reference, the Oregon Forest Practices Act ("FPA") and related implementing regulations do not sufficiently protect streams, rivers, lakes, wetlands, and other Oregon coastal waters from nonpoint source pollution caused by logging activities.

Dr. Frissell agrees with EPA's and NOAA's proposed determination that "the State's existing measures for riparian areas around medium, small, and non-fish bearing streams do not adequately protect water quality and designated uses[.]" Frissell Declaration at 7 ¶ 13 (citing the December 20, 2013, Proposed Federal Finding at 8). He specifically concludes that the best available science demonstrates "the inadequacy of Oregon's forest practices rules on private lands, particularly with regard to temperature protection, large wood recruitment, and erosion and sediment delivery." *Id.*

Dr. Frissell extensively reviewed Oregon's riparian rules and their resulting impacts to water quality and aquatic species. Frissell Declaration at 7-37. He concludes "that the Oregon Forest Practices Rules fail to protect summer maximum stream temperatures in perennial streams, whether fish-bearing or not" *id.* at 13 ¶ 23; *see also id.* at 17 ¶ 31. Dr. Frissell also examined the rules' effectiveness at preventing sedimentation of streams. Frissell Declaration at 17-24. On that issue he concluded:

> Oregon forest practices rules for state and private forest land intended to protect medium and small Type F streams, and all Type N streams, are inadequate to protect streams from sediment delivery associated with the inevitable ground disturbance caused by logging, which is exacerbated to a limited extent by indirect and delayed effects of logging, including windthrow.

Frissell Declaration at 23 ¶ 43.

Dr. Frissell also examined riparian buffer effectiveness with respect to large woody debris recruitment and the maintenance of channel morphology and instream habitat suitable for aquatic species. Frissell Declaration at 24-27. Yet again he concluded:

> Current Oregon forest practices rules for small Type N streams lead inexorably to severe if not complete depletion of large wood recruitment to those streams. Such depletion of wood debris harms headwater amphibian habitats (Olson et al. 2007, Welsh 2011), reduces stream system capacity for sediment retention (May and Gresswell 2003), reduces long-term water storage, which results in flashier, larger delivery pulses of sediment to downstream fish-bearing waters, and reduces shallow alluvial aquifer flow storage that can help buffer low and peak flows in downstream, fish-bearing waters (Poole and Berman 2001, Wondzell 2011).

Frissell Declaration at 27 ¶ 50.

Dr. Frissell further concluded that Oregon's riparian buffers do not sufficiently filter nutrient pollution generated by logging activities, Frissell Declaration at 27-35, concluding:

> In my professional opinion nonpoint source nutrient pollution generated by logging is contributing to widespread water quality impairment in Oregon's coastal areas. Specifically, increased nitrogen and phosphorus from upland logging is delivered to streams and wetlands by surface and subsurface flows that are not adequately filtered through unlogged riparian forest buffers. Elevated nutrient levels drive biological processes that cause violations of water quality standards for dissolved oxygen, nutrients, and water clarity and chlorophyll concentration in lakes, rivers, and estuaries in the coastal zone. Oregon Forest Practices Rules for all stream types are grossly inadequate in width and management prescription to effectively filter N [Nitrogen] and P [Phosphorous] mobilized from upland logging, roads, and fertilization of tree plantations.

Frissell Declaration at 34-35 ¶ 65.

Dr. Frissell arrived at similar conclusions after evaluating impacts to small headwater streams, after evaluating the Oregon forest practices rules' effectiveness at preventing landslides, debris flows, and resulting water quality impairments, and after evaluating the Oregon forest practices rules governing applications of forest chemicals. Frissell Declaration at 35-37, 48-51, and 51-55. In all three instances, Dr. Frissell concluded that Oregon's rules fail to ensure the attainment and maintenance of Oregon's water quality standards, including full support of its designated beneficial uses.

Dr. Frissell's declaration reiterates long-standing concerns that are well-grounded in the available scientific literature. Standing alone, Dr. Frissell's declaration amply demonstrates that Oregon forest practices regulations for private lands in Oregon's coastal area do not protect water quality and designated beneficial uses. But there is ample additional evidence to support his conclusions.[10]

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[10] See, *e.g.*, Brazier and Brown 1973.

Logging near streams destabilizes soils and hillslopes, generating accelerated sediment delivery and increased sedimentation. Statistically significant increases in suspended sediment occur following the clearcut harvest of stream side areas.[11] Clearcut streams also show chronic sediment delivery and deposition with depths of fine sediment several centimeters thick.[12] In fact, the length of the unbuffered riparian zone in otherwise clearcut basins is a good predictor of sediment yield that is independent of road area.[13]

Unfortunately Oregon does not require riparian buffers along streams that do not have fish in them. OAR 629-640-0200(2). Oregon's rules for large and medium Type N streams only require retention of understory vegetation within 10 feet of the stream, trees within 20 feet of the high water level, and all trees leaning over the channel unless harvest activities require their removal. Operators must also retain live conifers along large and medium Type N streams. For small, perennial Type N streams, the rules only require retention of understory vegetation and conifers less than six inches in diameter within 10 feet of the high water level. The rules generally do not protect non-perennial, or intermittent, streams, which Oregon's rules state will be determined "by the State Forester based on a reasonable expectation that the stream will have summer surface flow after July 15," nor is there any required riparian management area for seeps and springs. And nothing in the rules prevents pre-harvest thinning along any Type N stream. Finally, an operator may have all Type N prescriptions waived by seeking alternative measures primarily on the basis that there are insufficient conifers in the riparian area.

These protections are inadequate to prevent erosion of sediment from clearcuts from entering and impairing these streams as well as being carried farther downstream. Riparian buffers function as filters of surface water flow from upland areas and provide effective limits on ground disturbance, both of which are important processes that prevent chronic sediment delivery to streams.[14] Riparian buffers are generally effective at preventing direct physical disturbance and sediment and slash delivery to streams if they include limits on yarding practices.[15] If riparian buffers are not required for non-fish bearing streams, they become a source of excess sediment to perennial, fish-bearing channel networks as sediment is transported downstream.[16] Thus, the effectiveness of the overall system of riparian management zones in maintaining sufficiently low turbidity is diminished at a watershed scale due to inadequate buffers in headwater basins.[17] Rhodes (2005: 23) summarized, "it has long been recognized that full protection of the area of vegetation within 200 to >300 ft of the edge of all stream types is one of the most important and effective ways to limit sediment delivery from upslope

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[11] Keim and Schoenholtz 1999, Jackson et al. 2001, Zegre et al. 2008.

[12] Jackson et al. 2001, Rashin et al. 2006.

[13] Lewis et al. 2001.

[14] Gomi et al. 2005.

[15] Keim and Schoenholtz 1999, Rashin et al. 1999, 2006, Jackson et al. 2001.

[16] Rashin et al. 1999, Gomi et al. 2005.

[17] Rashin et al. 2006.

disturbances, as numerous independent assessments have repeatedly concluded, Anderson et al. (1993), USFS et al. (1993), Henjum et al. (1994), Rhodes et al. (1994), Erman et al. (1996), Moyle et al., 1996; USFS and USBLM (1997), Beschta et al. (2004), Karr et al. (2004)."

Clearcutting riparian areas around streams also increases the probability of debris flows and sediment delivery to streams due to the accumulation of slash debris. In western Washington, Jackson et al. (2001) showed that 94 percent of the length of headwater streams was covered or buried by up to 2.3 meters of slash debris after being clearcut. Many landslides in clearcut units occur adjacent to streams and incipient drainages loaded with slash debris.[18] Small, mobile slash debris introduced into stream channels creates jams that are more susceptible to catastrophic failure than larger debris accumulations.[19]

Logging high-risk sites also significantly increases the risk of landslides and debris flows. Clearcut areas are more prone to slope failure than forested areas.[20] For example, the frequency of debris torrents in clearcuts increased 4-9 times relative to the frequency in forested areas.[21] Relative to intact forests, debris flows in cleared forests are more frequent after a 20 percent increase in rainfall intensity.[22] Slumps and slump-earthflows can be reactivated or accelerated after being harvested.[23]

Mass wasting events often deliver sediment to streams. Landslides in clearcuts are more likely to deliver to streams, and to impair water quality with episodic and chronic sedimentation, than landslides in forested areas.[24] Debris flows in clearcuts travel farther than debris flows in forested environments,[25] which increases the likelihood of delivery to streams.

Sediment delivery to streams via mass wasting events drastically alters aquatic habitat. Where landslides reach coho streams, they can cause mortalities and/or impaired behavioral functioning of coho salmon. The delivery of sediment to salmon-bearing reaches can smother salmon eggs, affect salmon migration, and severely degrade spawning and rearing habitat.[26]

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[18] Gresswell et al. 1979.

[19] MacDonald & Ritland 1989.

[20] Gresswell et al. 1979, Pentec 1991, Benda et al. 1998, Robison et al. 1999, Montgomery et al. 2000, Guthrie 2002, May 2002.

[21] Swanson & Lienkaemper 1978.

[22] Franklin et al. 2000.

[23] Swanston 1981, Ziemer 1984, Benda et al. 1988, Swanston et al. 1988.

[24] Johnson et al. 2000; Guthrie 2002; Benda et al. 1998.

[25] Ketcheson and Froelich 1978.

[26] Spence et al. 1996.

Turbidity can affect foraging by juvenile coho by reducing the distance within which they can detect prey.[27] Debris flows elevate turbidity downstream and negatively affect aquatic species.[28]

Increased erosion and corresponding increases in sediment delivery and sedimentation contribute to channel simplification, including losses in the depth, frequency, and quality of pools and off-channel habitat critical for fish rearing. Increased sedimentation also contributes to increased levels of fine sediment, which greatly reduces salmonid survival from egg-to-fry life stages. Elevated sediment delivery also increases turbidity that can impair salmonid sight-feeding and cause gill damage—both factors that can contribute to indirect mortality.[29]

As noted in the Kilchis Watershed Analysis:

> The negative effects of increased sediment generation include: fine sediment deposition in spawning gravels that can smother salmonid eggs, reduce[d] intergravel oxygen, increased turbidity in the water column that can interfere with sight-feeding by salmonids, direct burial of macroinvertebrate insects and their habitat, and bed aggradation throughout the stream network including accumulation of sediment in low gradient channels causing bank erosion and impairing navigation (TBNEP, 1998b).

Increases in sediment delivery can further harm coho by contributing to increases in width/depth ratios in sensitive streams,[30] which inevitably increases summer water temperatures even in the absence of the loss of shade.[31]

Overall, sedimentation often fills rearing pools, silts spawning beds, and decreases channel stability. Accelerated sedimentation increases fine sediments in spawning gravels, which reduces the survival rates of emerging salmon fry. Sedimentation also reduces the available rearing space for juvenile salmon due to increased cobble embeddedness. Increased turbidity impairs salmon sight feeding and damages gills. When sediment fills pools and creates broader, shallower channels, salmon feeding and rearing can be disrupted, vital over-wintering habitat can be lost, and stream temperature problems can be exacerbated.

While much attention is focused on the effects of logging on fish-bearing streams and Oregon coast coho, the proposed finding by EPA and NOAA that Oregon's forest practices are inadequate to protect designated uses are equally pertinent to non-fish-bearing, or "Type N," streams for which Oregon's forest practices provide much less protection, including almost no protection from temperature impacts of logging, less protection for smaller Type N streams, and

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27 *Id.* at 102.

28 Cederholm & Lestelle, 1974: xiii.

29 Rhodes et al., 1994; Lloyd et al., 1987; Newcombe and Jensen, 1996; Wood, 1997.

30 Richards, 1982; Rhodes et al., 1994.

31 Beschta et al., 1987; McCullough, 1999.

no protection at all for seeps, springs, and intermittent streams. These defects, and their impacts on species that depend upon non-fish streams, were set out in a letter from NWEA to EPA and NOAA which we hereby incorporate by reference. Letter from Nina Bell, NWEA, to Dan Opalski, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; Protection of the Designated Use of Amphibians in Non-Fish-Bearing ("Type N") Streams Through the MidCoast Implementation Ready TMDL (October 5, 2012).

That letter explained Oregon's forest practices that pertain to Type N streams, its voluntary protection attributes, and the vast geographic scope of Type N streams in the coastal stream network. *Id*. at 2-4. It pointed out that many of the region's amphibians rely upon headwater streams, including intermittent streams, and specifically addressed two species that live in Type N streams and their population status: the Southern torrent salamander, *Rhyacotriton variegatus*, and the Coastal tailed frog, *Ascaphus truei. Id.* at 4-17. The letter discussed the ways in which logging has been shown to affect stream temperatures and stream microclimates, and to eliminate amphibian habitat, especially seeps, springs, and small non-fish-bearing streams with predictable outcomes on amphibian populations. *Id*. at 17-25. Finally, the letter contrasts Oregon's Type N logging regulations with those of Washington State, some of which were designed specifically to provide some protection to amphibians, particularly tailed frogs. *Id*. at 25-26.

Unfortunately, as described in the Declaration of Dr. Christopher Frissell, Oregon's rules do not prescribe riparian buffers for fish-bearing and non-fish bearing streams that are sufficient to prevent adverse impacts to water quality from logging activities. The riparian buffers in Oregon's rules do not sufficiently prevent the warming of streams that accompanies loss of canopy cover near streams and throughout a basin. They do not sufficiently filter nutrients and sediment from surface waters draining through the riparian buffer. And they do not protect streams from debris flows and landslides, among other things. The science is overwhelming: Oregon's riparian buffer and steep slope logging rules are insufficient to protect water quality and all designated beneficial uses.

C. <u>Logging and forest roads.</u>

The construction, use, maintenance, and existence of logging roads also detrimentally affects stream health and aquatic habitat by increasing sediment delivery and stream turbidity.[32] In the western United States, roads are the primary source of sediment from forest management activities.[33] Much forestry-related sediment is delivered episodically via stormwater runoff or road-related landslides. Roads, road construction and logging all cumulatively elevate peak flows, erosion, sediment delivery, turbidity, and sedimentation.[34]

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[32] Furniss et al., 1992; Trombulak and Frissell, 2000; Gucinski et al., 2001.

[33] Megahan and Ketcheson, 1996.

[34] Meehan, 1991; Rhodes et al., 1994; UFSF and USBLM, 1997a; Beschta et al., 2004.

Roads located on steep slopes or next to streams pose the greatest risk of sediment delivery and adverse impacts to stream habitats. Moreover, "the single greatest factor affecting generation of sediment from road surfaces is the amount of traffic."[35] The greater the disturbance area and the closer to streams, the greater the risk of sediment delivery.

The starting point for EPA's and NOAA's review of Oregon's road standards should be the plethora of scientific studies and information documenting that best management practices ("BMPs") alone are not adequate or effective at protecting water quality and beneficial uses. As discussed by Endicott, BMPs are "largely procedural, describing the steps to be taken in determining how a site will be managed," but they lack "practical in-stream criteria for regulation of sedimentation from forestry activities."[36] The selection and implementation of BMPs are often "defined as what is practicable in view of 'technological, economic, and institutional consideration.'"[37] The ultimate effectiveness of the BMPs are therefore impacted by the individual land manager's "value system" and the perceived benefit of protecting the resource values as opposed to the costs of operations. Endicott specifically notes that although BMPs may generally be able to mitigate pollution from forestry activities, the "exception to this generalization is unstable locations in key problem areas of the Pacific Northwest (Idaho, northwest California, western Oregon and Washington, and southeast Alaska) where conventional BMPs for road construction may not be sufficient to prevent adverse effects on stream channel and fish habitat (Binkley and MacDonald, 1994)."[38]

There is additional scientific work documenting that BMPs are ineffective at addressing impacts, in particular cumulative impacts from continued logging and road density. Espinosa et al. 1997 demonstrated that aquatic habitats were severely damaged by roads and logging in several watersheds despite BMP application.[39] The authors further noted that the blind reliance on BMPs in lieu of limiting or avoiding activities that cause aquatic damages serves to increase aquatic damage. Even activities implemented with somewhat effective BMPs still often contribute negative cumulative effects.[40] MacDonald and Rittland 1989 concluded that roads

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[35] Reid and Dunne, 1984.

[36] Endicott, D. 2008. National Level Assessment of Water Quality Impairments Related to Forest Roads and Their Prevention by Best Management Practices – Final Report (Prepared for the U.S. Environmental Protection Agency, Office of Water, Office of Wastewater Management Permits Division) (Contract No. EP-C-05-066, Task Order 002), at 70.

[37] *Id*. at 72.

[38] *Id*. at 91.

[39] Espinosa, F.A., Rhodes J.J., and McCullough, D.A. 1997. The failure of existing plans to protect salmon habitat on the Clearwater National Forest in Idaho. J. Env. Management 49: 205-230.

[40] Ziemer, R. R., J. Lewis, T. E. Lisle, and R. M. Rice. 1991b. Long-term sedimentation effects of different patterns of timber harvesting. In: Proceedings Symposium on Sediment and Stream Water Quality in a Changing Environment: Trends and Explanation, pp. 143-150. International Association of Hydrological Sciences Publication no. 203. Wallingford, UK. *See also* Espinosa et al., 1997.

typically double suspended sediment yield even with state of the art construction and erosion control and that suspended sediment contributions from surface erosion, alone, from roads in the absence of mass failure, are typically in the range of 5 to 20 percent above background and remain at elevated levels for as long as roads are in use.[41] Kattelmann 1996 concluded that BMPs could do little to reduce sediment delivery from roads at stream crossings.[42] The synthesis prepared for EPA by Endicott, as well as a body of scientific work that discusses the limitations of BMPs, particularly in the Pacific Northwest, demonstrates that BMP prescriptions for logging roads, in the absence of more, do not sufficiently protect water quality.

Indeed, any forest road BMP program that does not base road management decisions on *pertinent water quality data* is necessarily deficient because complying with road BMPs simply does not equate to protecting water quality.[43] Only pertinent water quality data can demonstrate that road management BMPs actually prevent adverse water quality impacts. Specifically, one can only confirm that BMPs in fact eliminate adverse water quality impacts caused by the roads if one measures water quality impacts from roads, institutes management changes in response to adverse water quality impacts caused by roads, and then monitors the stream a second time or more to determine the extent to which BMPs reduce water quality problems. Implementing BMPs without ascertaining how those BMPs actually affect water quality compliance tells one nothing about whether particular logging roads are adversely impacting water quality.

Oregon's forest practices rules are woefully deficient in this regard. Oregon's forest practices regulations for forest roads are found in OAR 629-625-0000 through 629-625-0700. "The purpose of the road construction and maintenance rules is to establish standards for locating, designing, constructing and maintaining efficient and beneficial forest roads; locating and operating rock pits and quarries; and vacating roads, rock pits, and quarries that are no longer needed in manners that provide the maximum practical protection to maintain forest productivity, water quality, and fish and wildlife habitat." OAR 629-625-0000(3). Those rules include a variety of provisions addressing the location, construction, maintenance, and retiring of logging roads, including many provisions intended to protect water quality. Unfortunately those rules impose generic BMPs and do not use pertinent water quality data to drive road

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Rhodes, J.J., McCullough, D.A., and Espinosa Jr., F.A., 1994. A Coarse Screening Process for Evaluation of the Effects of Land Management Activities on Salmon Spawning and Rearing Habitat in ESA Consultations. CRITFC Tech. Rept. 94-4, Portland, OR.

Beschta, R.L., Rhodes, J.J., Kauffman, J.B., Gresswell, R.E, Minshall, G.W., Karr, J.R, Perry, D.A., Hauer, F.R., and Frissell, C.A., 2004. Postfire Management on Forested Public Lands of the Western USA. Cons. Bio., 18: 957-967.

[41] MacDonald, A. and Ritland, K.W., 1989. Sediment Dynamics in Type 4 and 5 Waters: A Review and Synthesis. TFW-012-89-002, Wash. Dept. of Natural Resources, Olympia, Wash.

[42] Kattelmann R., 1996. Hydrology and water resources. Pages 855–920 in SNEP Science Team, Sierra Nevada Ecosystem Project Final Report to Congress: Status of the Sierra Nevada, vol. 2. Davis: Centers for Water and Wildland Resources, University of California. Wildland Resources Center Report no 39.

[43] Endicott at 166.

management decisions; in fact they are precisely the kind of BMPs that have been shown to be inadequate and ineffective at protecting water quality and beneficial uses.

The Oregon forest practices regulations applicable to forest roads consistently prioritize logging over protection of water quality. For example, Oregon recognizes that "[a] properly located, designed, and constructed road greatly reduces potential impacts to water quality, forest productivity, fish, and wildlife habitat." OAR 629-625-0100(1). Oregon therefore requires operators to submit a written plan before constructing forest roads in locations "where there is an apparent risk of road-generated materials entering waters of the state," before conducting machine activity in Type F or D waters, and before "constructing roads in riparian management areas." OAR 629-625-0100(2). But Oregon's rules do not require ODF to disapprove written plans for the construction of logging roads that may result in adverse water quality impacts. *See* ORS § 527.670. Moreover, although Oregon imposes additional forest practices regulations where construction of a forest road on a high landslide hazard location would threaten public safety, *see* OAR 629-625-0100(3), it imposes no additional restrictions where a similarly situated road would threaten water quality or Oregon coast coho. The upshot is that Oregon recognizes that road construction can cause water quality problems, and it recognizes that operators can avoid some of those problems, but it does not empower regulators to disapprove written plans for the construction of roads that may—or even are likely to— pollute streams and lead to violations of water quality standards and destroy habitat of ESA-listed species.

Presumably Oregon instead relies on its authority to take enforcement action against operators' violating the rules. But many of Oregon's forest practices rules are vague, ambiguous, precatory, or conditional such that there is little or no basis for bringing an enforcement action after the fact. For example, to "minimize" impacts to waters of the state Oregon requires operators to "designate road locations which minimize the risk of materials entering waters of the state and minimize disturbance to channels, lakes, wetlands and floodplains." OAR 629-625-0200(2). But requiring operators to "minimize the risk" is of course not the same as requiring them to avoid adverse impacts to water quality: even minimizing impacts from a road can still mean that nonpoint source pollution from the road is enough to violate water quality standards and adversely impact designated uses. Indeed, "minimizing the risk" may not ever protect waters of the state or avoid adverse water quality impacts, especially where the logging operations are inherently risky. Operators might do everything they can to properly locate a road and "minimize the risk" to waters of the state, but the road might still be in a location where it is 60 percent or more likely to slide into a stream and cause water quality violations. In this scenario the operator would be in compliance with the rule because they would have "minimized" the risk to Oregon waters, but it is still more likely than not that the road will cause water quality impairments sometime in the future. The regulatory language demonstrates that Oregon's road location rule does not require operators to eliminate or avoid water quality problems; rather, it simply requires them to minimize risk. But even minimal risk activities can have large water quality impacts. And what risk is minimal? And how often has the ODF brought an enforcement action against an operator who chose a road location that did not "minimize" those risks?

In fact, Oregon's road rules are rife with obligations to "minimize" risks or impacts. *See* OAR 629-625-0200(4) ("Operators shall minimize the number of stream crossings."); OAR 629-625-0310(4) ("Operators shall design cut and fill slopes to minimize the risk of landslides."); OAR 629-625-0320(1) (requiring minimization of fill when building stream crossing structures; recognizing that "[f]ills over 15 feet deep contain a large volume of material *that can be a considerable risk to downstream beneficial uses if the material moves downstream by water*"; and requiring a written plan that only minimizes, rather than eliminates, the likelihood of "surface erosion;" "embankment failure;" and "downstream movement of fill material."); OAR 629-625-0330(1) (creating road surface drainage obligations to minimize alteration of stream channels and the risk of sediment delivery to waters of the state); OAR 629-625-0430(1) ("When constructing stream crossings, operators shall minimize disturbance to banks, existing channels, and riparian management areas."); OAR 629-625-0600(6) ("In the Northwest and Southwest Oregon Regions, operators shall maintain and repair active and inactive roads as needed to minimize damage to waters of the state.") While we can all applaud efforts to minimize risks to waters of the state, minimizing risks from forest roads simply does not equate to eliminating adverse water quality impacts from forest roads. EPA and NOAA cannot approve Oregon's CNPCP component for forest roads simply based on rules that require operators to minimize the risk to waters of the state.

There are other similar problems with Oregon's logging road rules. For example, the road location rule requires operators to "avoid locating roads on steep slopes, slide areas, high landslide hazard locations" and in other high-risk areas "where viable alternatives exist." Along with suggesting that locating roads in those areas clearly poses risks to Oregon streams, this rule also suggests that where someone determines that viable alternatives do not exist, an operator can with impunity go ahead and locate a road on a steep slope in an area likely to generate a landslide that adversely impacts a stream. Here again the rule does not prevent building of the road in a high-risk landslide area, it simply requires someone to conclude that no other viable alternative exists before they do so. But who makes the decision on what is "viable"? And is "viability" determined based on civil engineering principles or costs to the operator? Similarly, to reduce the duplication of road systems and associated ground disturbance, OAR 629-625-0200(5) requires operators to make use of existing roads "where practical." But who decides what is practical and what criteria go into the analysis? Costs incurred by the operator? Likewise OAR 629-625-0310(1), which sets forth rules regard road prisms, requires operators to use variable grades and alignments "to avoid less suitable terrain so that the road prism is *the least disturbing* to protected resources[.]" Oregon's forest road rules are so loaded with vague, ambiguous, precatory, and conditional language that they can afford EPA and NOAA no rational basis for concluding that they ensure protection of water quality and designated beneficial uses in Oregon's coastal areas.

Nor can EPA and NOAA rely on Oregon's enforcement authority where enforcement most likely only occurs *after* damage to water quality occurs. Many of Oregon's rules are written so that operators must manage logging operations to avoid impacts to water quality. *See, e.g.,* OAR 629-625-0310(2) ("Operators shall end-haul excess material from steep slopes or high landslide hazard locations *where needed to prevent landslides*."); OAR 629-625-0310(5) ("Operators shall stabilize road fills *as needed to prevent fill failure and subsequent damage to waters of the state* using compaction, buttressing, subsurface drainage, rock facing or other

effective means."); OAR 629-625-0410 ("Operators shall not place debris, sidecast, waste, and other excess materials associated with road construction in locations where these materials may enter waters of the state during or after construction."); OAR 629-625-0500(1) ("The development, use, and abandonment of rock pits or quarries which are located on forestland and used for forest management *shall be conducted using practices which maintain stable slopes and protect water quality*."); (3) ("When using rock pits or quarries, operators shall prevent overburden, solid wastes, or petroleum products from entering waters of the state."); (4) ("Operators shall stabilize banks, headwalls, and other surfaces of quarries and rock pits to prevent surface erosion or landslides."); (5) ("When a quarry or rock pit is inactive or vacated, operators … shall dispose of all other debris so that such materials do not enter waters of the state."); OAR 629-625-0600(2) ("Operators shall maintain active and inactive roads in a manner sufficient both to provide a stable surface and to keep the drainage system operating *as necessary to protect water quality*."); (3) & (5). Here again, while these are laudable goals, the rules generally mean that so long as operators are not harming water quality they are in compliance with the rule. More importantly, for all such rules the operator becomes out of compliance with the rule *only after* impacts to water quality have occurred. But by then it is too late for Oregon's enforcement authority to matter.

Oregon also cannot use its enforcement authority to prevent adverse impacts to streams from vacated forest roads. Logging roads are a very significant source of landslides that can and often do impair water quality.[44] The best way to prevent a road from sliding once it has been constructed is to de-commission the road so it no longer poses a risk to downslope waters. The Oregon rule directed at this problem is anemic, however. Instead of requiring de-commissioning of roads, Oregon only requires operators to block the road to prevent vehicular traffic and to take all reasonable steps to leave the road "in a condition where road-related damage to waters of the state is unlikely." OAR 629-625-0650(2). Unfortunately Oregon's rule then states that "[d]amage which may occur from a vacated road, consistent with Sections (2) and (3) of the rule, will not be subject to remedy under the provisions of the Oregon Forest Practices Act." In other words, if an operator takes the most minimal steps to vacate a road, the operator will not be subject to an enforcement action if that road later slides into a stream and impairs water quality.

It is also worth noting deficiencies with Oregon's wet weather road use rule. *See* OAR 629-625-0700. The purpose of the rule is "to reduce the delivery of fine sediment to streams caused by the use of forest roads during wet periods that may adversely affect downstream water quality in Type F or Type D streams." OAR 629-625-0700(1). Here again the rule is deficient because it is designed "to reduce" the delivery of fine sediment; it is not designed "to eliminate" the delivery of fine sediment or "to ensure" that such delivery does not impair water quality. In any event, to accomplish the stated goal, the rule requires operators to use certain surfacing measures to avoid the development of a layer of mud on the surface of "road segments that drain directly to streams." OAR 629-625-0700(2). Additionally, the rule requires operators to "cease active road use where the surface is deeply rutted or covered by a layer of mud and where runoff from that road segment is causing a visible increase in turbidity" in certain streams. OAR 629-625-0700(3). The problem with the rule is that ceasing active road use during a wet weather event does not protect a stream from a hydrologically-connected road that is used for active

[44] Gucinski et al., 2001; Sidle and Ochai (2006).

timber hauling because timber hauling grinds up the road surface and creates fine sediment even during dry weather. While stopping hauling during wet weather may reduce impacts to some extent, the real answer to the problem of hydrologically-connected roads is to disconnect them from the streams so they do not impair water quality. Washington State has just such a program to address the issue, but Oregon has no such program and its wet weather haul rule is not an adequate substitute because it maintains roads across the forested landscape as significant polluters of streams.

Finally, yet another problem with Oregon's road rules is that they are only triggered when active logging operations occur. The lack of a requirement to bring existing, inactive logging roads and other forest roads up to a standard that effectively prevents water quality problems results in many forest roads that are not currently being used for logging falling through the regulatory cracks and continuing to have a negative impact on water quality. Currently only the State of Washington requires land managers to upgrade old roads to comply with today's standards; across most of the country, the oldest, most harmful logging roads continue to deliver sediment into streams and rivers.[45] Oregon's rules, of course, do not address forest roads that are not associated with active logging. And indeed many forest roads formerly used for logging have never been upgraded to comply with today's standards.[46] A detailed evaluation and recommendations for improvement to the Oregon FPA with regard to roads can be found in a report prepared by Oregon's Independent Multidisciplinary Science Team ("IMST") in 1999.[47] Oregon's program is also deficient in this regard and, standing alone, Oregon's failure to develop a regulatory program that addresses logging roads that are not currently in use fully justifies EPA's and NOAA's finding that Oregon has failed to submit an approvable CNPCP.

So long as the logging roads are operated in good faith compliance with the best management practices established by the State Board of Forestry they will not be found to violate

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[45] *See* Endicott at 118-19.

[46] *See* Glen Spain, *Dam, Water Reforms, and Endangered Species in the Klamath Basin*, 22 J. Envtl. L. & Litig. 49, 65 n. 60, 83-84 (2007) (noting the National Marine Fisheries Service and other independent reviewers have critiqued the OFPA and determined it to be insufficient to prevent salmonid species' extinction).

[47] *Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the Measures in the Oregon Plan for Salmon and Watersheds*. (Technical Report 1999-1 to the Oregon Plan for Salmon and Watersheds, Governor's Natural Resources Office, Salem, Oregon.) located at http://www.fsl.orst.edu/imst/reports/1999-1.pdf. *See also* NOAA-NMFS, 2010. 75 Federal Register 29489-29506 *Listing Endangered and Threatened Species: Completion of a Review of the Status of the Oregon Coast evolutionarily Significant Unit of Coho Salmon; Proposal to Promulgate Rule Classifying Species as Threatened (*May 26, 2010) located at http://www.gpo.gov/fdsys/pkg/FR-2010-05-26/html/2010-12635.htm; Oregon Department of Forestry. 1997. *Forest Roads, drainage and sediment delivery in the Kilchis River Watershed.* Report for the Tillamook Bay National Estuary Project (rating 31% of the road length was rated certain or possible for sediment delivery to streams) located at http://www.oregon.gov/ODF/privateforests/docs/kilchis.pdf?ga=t; Skaugset, Arne and Marganne Allen, Oregon Department of Forestry Forest Practices Monitoring Program. 1996. *Road Sediment Monitoring Project Report: Survey of Road Drainage in Western Oregon*. ODF Technical Report (monitoring on state and private lands found a general lack of filtering of drainage waters near streams and that a significant proportion of active and inactive roads can deliver sediment to streams by ditch delivery) located at http://www.oregon.gov/ODF/privateforests/docs/RoadSediment.pdf?ga=t.

water quality standards. ORS § 527.770. But it is also clear, simply from the text of the rules themselves, that Oregon's forest road rules do not prioritize protection of water quality over logging operations, nor do they ensure that logging operations in Oregon's coastal areas will protect water quality and designated beneficial uses. The Oregon FPA and applicable forest practices rules fail to prevent forest roads from causing or contributing to violations of water quality standards. Implementation of BMPs without reference to and monitoring of applicable water quality standards—including the protection of designated beneficial uses—is simply inadequate to protect Oregon streams. Absent such a feedback loop, and absent a new program for requiring land managers to bring roads built to old standards up to modern and effective standards, EPA and NOAA cannot rely on any set of Oregon BMPs as the basis for approving Oregon's CNPCP.

Dr. Frissell's declaration confirms many, if not all, of these problems and weaknesses. *See* Frissell Declaration at 37-48. For example, Dr. Frissell states that he agrees with EPA's and NOAA's determination that Oregon has not provided a sufficient description of the measures landowners use to reduce impacts from forest roads or sufficient data supporting a claim that those measures are effective. Frissell Declaration at 37-38, ¶ 69. Dr. Frissell then provides additional observations about Oregon's forest roads program and its inability to protect water quality. Frissell Declaration at 37-48. Dr. Frissell specifically notes widespread nonpoint source pollution from forest roads in Oregon's coastal areas, at 38-39 ¶ 71; the lack of standards, benchmarks, and monitoring in Oregon's road program, at 39-40 ¶ 72; and many other problems with Oregon's forest roads regulations, at 40-48. Dr. Frissell specifically concludes that:

> Oregon has adopted no watershed-scale measures of road system condition to establish a benchmark for acceptable conditions for salmon persistence and survival, water quality, and other water resources. This curtails the state's ability to measure progress toward water quality compliance and maintaining beneficial uses, and contributing to salmon recovery.

Frissell Declaration at 45 ¶ 82. In other words, *at best* Oregon can have absolutely no idea whether its forest roads program is protecting water quality. But Dr. Frissell goes further than that:

> In my opinion the inherent contribution of forest roads to nonpoint source pollution, in particular sediment but also nutrients, to streams, coupled with the extensive occurrence of forest roads directly adjacent to streams through large portions of the coastal Oregon area, adversely affects water quality in streams to a degree that is directly harmful to fish and other aquatic life. In my opinion this impairment occurs on a widespread and sustained basis; runoff from roads may be episodic and associated with annual high rainfall or snowmelt events, but once delivered to streams, sediment and associated pollutants deposited on the streambed cause sustained impairment of habitat for salmon and other sensitive aquatic and amphibian species. Current road design, management of road use and conditions, the locations of roads relative to slopes and water bodies, and the overall density of roads throughout most of the coastal area all contribute materially to this impairment. This effect is apart from, but contributes additively in effect to, the point source pollution associated with road runoff that is entrained by culverts or ditches before being discharged to natural waters.

Frissell Declaration at 47-48 ¶ 83.

The Oregon Board of Forestry's refusal to adopt forest practices regulations that fully protect water quality and designated beneficial uses violates the CWA and CZARA. The CWA requires states to adopt water quality standards that will ensure full support of designated beneficial uses. And based on EPA's and NOAA's findings, Section (b)(3) of CZARA, 16 U.S.C.A. § 1455b(b)(3), requires Oregon to implement "additional management measures…that are necessary to achieve and maintain applicable water quality standards under section 1313 of Title 33 and protect designated uses." The Environmental Quality Commission has for the most done its part by adopting water quality standards that, in theory anyway, should protect designated beneficial uses in most streams. *See* Section I.B., *supra*. Unfortunately the Oregon Board of Forestry has refused to take the next step and ensure that its forest practices regulations ensure compliance with those water quality standards. But federal law does not allow Oregon to avoid protecting designated beneficial uses because the state perceives that doing so is politically unpalatable; federal law requires Oregon to adopt effective additional management measures for forestry and requires EPA and NOAA to withhold CWA and CZMA grant funds unless and until Oregon does so.

D. <u>Oregon State Forests in the North Coast Area.</u>

Dr. Frissell's declaration also explains in part why management of Oregon state forests in the coastal watersheds do not protect water quality and designated beneficial uses. Frissell Declaration at 13 ¶ 24 (regarding riparian buffers); at 17 ¶ 31 (same); at 43 ¶ 77 (regarding BMP compliance); at 45-46 ¶ 82 (regarding road density); at 50-51 ¶ 87 (regarding landslides). There is also ample additional evidence supporting his conclusions.

The Tillamook and Clatsop State Forests are currently managed under the "Northwest State Forests Management Plan," ("FMP") which was revised by the ODF in 2010. The State Forester implements the FMP through ten-year implementation plans for each district on the Tillamook and Clatsop State Forests (Astoria, Forest Grove, and Tillamook). The Astoria and Forest Grove Implementation Plans are from 2011 and the Tillamook Plan is from 2009. Each District is managed annually pursuant to an annual operations plan. Through these plans, ODF officials plan, authorize, and conduct logging, road construction and maintenance, and timber hauling activities in those two state forests.

Under the current FMP, the goal for old forest structure is 15-25 percent and for layered forest structure it is 15-25 percent in each district. *These goals allow clear-cutting of roughly an additional 100,000 acres above the goal in the previous FMP* (ODF FMP, 2010: S17). That point warrants emphasis: *despite EPA's and NOAA's telling Oregon for over a decade that its forest practices programs are not sufficiently protecting water quality, and despite ample and relevant science demonstrating that clear-cutting and other logging practices in Oregon generate nonpoint source pollution that harms water quality, Oregon substantially increased the amount of clear-cutting allowed in North Coast state forests.* Oregon's recent revisions to its FMP yet again demonstrate Oregon's unwillingness to adopt forest practices that control nonpoint source pollution sufficiently to protect water quality, including designated beneficial uses.

The riparian management provisions of the FMP provide a no-cut zone within 25 feet of any stream, as well as various limitations on cutting within inner (25-100 feet) and outer (100-170 feet) riparian zones depending on stream size and whether the stream is fish bearing (ODF FMP, 2010: J-8). These standards allow cutting in riparian zones that substantially limit recruitment of large woody debris to streams and increases the risk of sediment deposition, thereby harming coho salmon and their habitat.

The FMP also recognizes the risk of landslides, debris flows, and other slope stability issues in the Tillamook and Clatsop forests. The plan calls for analysis of the risk of landslides and depending upon the classification – low, moderate, or high – provides for varying levels of review and modification of the proposed activity (ODF FMP, 2010: 4-73). The FMP further calls for an inventory of forest roads; improved design, construction, and maintenance; and road closures, as well as use of the Forest Roads Manual (ODF FMP, 2010: S-19). But these goals often are not attained, logging and road building continue in landslide prone areas, and the road system continues to contribute sediment to fish bearing streams either through hydrological connections, mass wasting events, or both.

Sediment impacts increase as a greater proportion of a watershed is clear-cut or crossed by road. Elevated sediment concentrations can result from forest practices due to increased soil disturbance and altered hydrologic regimes within harvested watersheds (Gomi et al. 2005). Logging-generated sedimentation is compounded by forest roads, which generate additional sediment and serve as conduits for sediment to flow into streams. The removal of large wood diminishes the stream's capacity to trap, store and regulate the transport of sediment downstream. In these ways, the removal of riparian and upslope vegetation and disturbance of soils elevates sediment loads. Unfortunately Oregon does not limit the percentage of a watershed that can be clear-cut in Oregon State Forests, nor does Oregon prescribe limits on forest road densities in those forests.

Much of the road system in the Tillamook and Clatsop State Forests also contributes to water quality problems because it was constructed decades ago to old construction standards (ODF, Forest Grove AOP, 2013: 12) ("The district's primary road network is an established system that has been in place for about twenty years."). These logging roads often were *intentionally designed to discharge stormwater directly into streams* – using ditches, channels, and culverts to move stormwater off the road and into the existing stream network. Consequently, a significant amount of the road network in most watersheds with state forests remains hydrologically connected to streams.[48]

More recent design standards for logging roads acknowledge that direct discharges are ecologically undesirable and seek to direct drainage onto porous forest soils for infiltration. However, most forest roads in Oregon's state forests were constructed prior to the new state rules (ODF Issue Paper, 2000). As the Forest Grove district has acknowledged: "Many of the district's main roads (collectors) were originally built as railroads and then converted to truck roads in the 1940s and 1950s to standards considerably less stringent than those applied today. These roads

[48] Wemple et al., 1996; Rhodes and Huntington, 2000.

were originally often constructed with inadequate drainage systems, poor surfacing, and little regard for slope stability and fish passage" (ODF, Forest Grove AOP, 2013:12). Consequently, forest roads throughout the Tillamook and Clatsop state forests deliver sediment-laden stormwater to streams; generate landslides and debris flows that deliver sediment to streams; and otherwise adversely impact water quality. *See* Section II.C., *supra*, for a general discussion of the problem of forest roads that applies equally to forest roads on state lands in Oregon.

The contributions of sediment from Oregon's management of its state forests in coastal watersheds harm coho salmon and their habitat and constitute violations of Oregon's water quality standards. Coho spend the initial part of their life cycle rearing and feeding in streams and small freshwater tributaries and the rest of their life in estuarine and marine waters. Coho return to their natal streams to spawn at the end of their lives. As a result, coho require navigable passage back to their natal streams, stable gravel substrates for spawning and redd building, clear water for spawning and feeding, pools for sheltering and feeding, and cool water. Oregon coast coho salmon populations have declined precipitously over the past several decades and habitat degradation due to forestry and development has been a major factor in the decline. *See, e.g.,* 60 Fed. Reg. at 38,011 (proposed Oregon coastal coho listing); 65 Fed. Reg. 42,422 (July 10, 2000) (identifying "past and ongoing destruction of freshwater and estuarine habitats" as key factors precipitating the decline of coho).

Forestry practices on state lands in Oregon are contributing to the decline of Oregon coast coho populations. In recent reviews of the status of coho, NMFS concluded that management of state forests is harming Oregon coast coho:

> For purposes of this assessment, we are unable to conclude that the state forest management plans will provide for OC coho salmon habitat that is capable of supporting populations that are viable during both good and poor marine conditions. It is likely that some OC coho salmon habitat on state forests will be maintained in its current degraded state, some habitat will be further degraded, and habitat in areas that are not being harvested will recover.

75 Fed. Reg. at 29,500 (emphasis added). The impacts from the logging, hauling, and road related activities that ODF plans, authorizes, and carries out harm Oregon coast coho and its habitat by increasing sediment delivery to streams and reducing input of large woody debris, all in violation of Oregon's water quality standards.

III. Oregon's agricultural component does not meet CZARA standards.

NWEA has attached and hereby incorporates in its entirety a *Declaration of Jonathan J. Rhodes*. The Rhodes Declaration explains the shortcomings of Oregon's program to address nonpoint source sufficient to meet water quality standards and protect designated uses, beginning with its finding that the 6217(g) management measures are not intended and do not provide sufficient protection of water bodies from temperature pollution. *Rhodes Declaration* at 3-4 ¶ 10. Temperature pollution is the most prevalent water quality problem in coastal lowland streams, is pronounced in agricultural areas, and is key to salmonid productivity. *Id.* at 9-10 ¶ 21-23. Therefore the incorporation of these management measures into agricultural plans

likewise is not sufficient to address temperature. *Id*. Specifically, the omission in agricultural plans of a specified and sufficient width, height, and density of riparian vegetation fails to ensure that these plans will control key factors in nonpoint source contributions to temperature. *Id.* at 4-6 ¶¶ 11- 15, at 8 ¶ 20. Protection of riparian vegetation from livestock is also assumed to occur by the use of measures that are flawed, such as providing salt and water away from riparian zones, *id*. at 6 ¶ 16, and a further assumption is that only slight improvements in grazing practices are required, *id*. at 7-8 ¶¶ 17-19.

The federal management measures incorporated into Oregon's agricultural plans are also deficient to provide protection of stream banks and bank stability. *Id*. at 10-11 ¶¶ 24-26. Stream banks are key to protecting water bodies from elevated sediment delivery that affects levels of turbidity and fine sediment in streams, both of which have adverse effects on salmonids. *Id*. at 11 ¶27. Eroding stream banks also contribute to temperature increases, *id*. at 11 ¶ 28, preclude healthy fish habitat, *id*. at 11 ¶ 29, reduce large woody debris to streams which is critical to salmonid recovery, *id*. at 11-12 ¶ 30, and contribute to nutrient and pesticide delivery from upslope agricultural activities, *id*. at 11 ¶ 29. Last, the management measures fail to address the need to anticipate inundation of agricultural lands by floodwaters in establishing practices. *Id*. at 12-13 ¶ 32.

A. <u>Oregon's CNPCP fails to protect water quality from nonpoint source pollution from agriculture.</u>

NWEA's past letters to EPA and NOAA explain much of what needs to be said about whether Oregon has a program to implement the CZARA management measures and whether the management measures are adequate or, alternatively, additional management measures are required to attain and maintain water quality standards including designated uses. Attached and incorporated into these comments are the following letters which demonstrate that Oregon does not have a program in place to implement management measures or additional management measures.

1. *Letter from Nina Bell, NWEA, to Michael Bussell, EPA, and John King, NOAA, Re: Concerns About Oregon Department of Environmental Quality's Honoring CZARA Settlement Commitments Oregon Coastal Nonpoint Pollution Control Program (April 3, 2012).*

As you are aware, NWEA's concerns expressed in this letter were prescient because, eventually, Oregon DEQ chose not to honor the commitments it made that underlie the approach taken in the settlement of *Northwest Environmental Advocates v. Locke*, Civil No. 09-0017-PK, Final Settlement Agreement, Exhibit F, Letter from Neil Mullane, DEQ, to Michael Bussell, EPA, and John King, NOAA, July 26, 2010. The settlement was focused on Oregon's outstanding forestry issues but ODEQ agreed that it would identify so-called safe harbor BMPs and issue enforceable orders to comply with load allocations in coastal watershed TMDLs to all significant nonpoint sources, including but not limited to forestry sources. Thus the DEQ commitments largely encompassed the concerns NWEA has expressed with regard to the sufficiency of Oregon's program with regard to agricultural nonpoint pollution controls.

2. *Letter from Nina Bell, NWEA, to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012).*

This letter urged the federal agencies to rescind their interim informal approval of Oregon's agricultural program to encourage the state to clearly include agriculture as a matter to be addressed by the pilot project in the MidCoast Basin TMDL process that was commenced after settlement of the *Locke* case. The letter explained how Oregon's current TMDL program fails to result in any identification of practices or changes in regulatory requirements for agriculture to meet the water quality standards as modified by the issuance of TMDLs. *Id.* at 5-14. It further explains the legal error committed by the federal agencies when they concluded that the inclusion of the CZARA management measures as appendices to the purely voluntary agricultural plans rendered the management measures enforceable. *Id.* at 14-18. The letter demonstrated these problems with the Umpqua River Basin, *id.* at 18-21, and described DEQ's unwillingness to use its own legal authorities to control agricultural nonpoint pollution, *id*. at 21-22. It also described Oregon DEQ's inability to control nutrient pollution, *id*. at 22-23, and its failure to control livestock wastes, *id.* at 23-29. Finally, the letter described Oregon's failure to control the use of pesticides sufficient to protect the state's designated uses. *Id.* at 29-30.

In a document prepared by EPA and NOAA for editing by Oregon, the federal agencies stated that:

> Because [the Oregon Department of Agriculture's] authority to prevent and control nonpoint source pollution associated with agricultural activities and soil erosion is linked to DEQ's authority for nonpoint source regulation (ORS 468B.025) by incorporation of this statute into the AWQMA regulations for each of the coastal areas ODA's authority for nonpoint source pollution is consistent with that of DEQ. In addition, the AWQMA plans and rules identify general riparian requirements to help landowners identify a link for their activities to state expectations which are consistent with 6217(g) guidance. Thus, the State is able to ensure implementation of these agricultural management measures is in conformity with the 6217(g) guidance.

EPA/NOAA, NOAA and EPA Preliminary Decisions on Information Submitted by Oregon to Meet Coastal Nonpoint Program Conditions (Interim Approval Decisions Only), Input from Oregon (July 15, 2013) at 3 (hereinafter "Input from Oregon").

Incorporation of statutory authority into rules is not the end of the analysis, as the federal agencies imply. As is demonstrated *infra*, the ODA rules have been in place for a long time and yet there is nothing to show for it except a few enforcement actions of narrow scope and recent determinations by the agency's local advisory committees that agricultural landowners are largely unaware of the rules and the voluntary plans. The federal agencies' conflating of the plans and rules in one sentence in the above quoted explanation that states the two together contain "riparian requirements" fails to distinguish between the enforceable rules and the voluntary plans, in contrast to federal guidance and common sense. The term "6217(g)

guidance" is also vague in that it may or may not include the requirement to use additional management measures when the management measures are inadequate to ensure compliance with water quality standards.

In any case, some of the plans may have "expectations" that are consistent with the federal management measures guidance, but not all. See, for example, the discussion of the Inland Rogue plan *infra*, where the text of the plan undermines the management measures listed in the plan's appendix. Regardless, the ODA rules set out expectations that involve something less than what is required for a state's program to be approved under CZARA. The ODA basin rules, as discussed in these comments and the letters already sent to the federal agencies, require only that landowners' current agricultural activities not impede the growth of riparian vegetation. That may be a "general riparian requirement" but it is not a riparian requirement that is sufficient to meet the load allocations established in coastal TMDLs for temperature (and other pollutants). It is, therefore, unclear what "link for their activities to state expectations" EPA and NOAA have in mind since presumably the state expectations are to meet the load allocations established by the EPA-approved TMDLs, a result not achieved by the rules. Moreover, the conclusion that this ambiguous "link" is the equivalent of "the State [being] able to ensure implementation" is not logical. A link to a voluntary plan is not able to ensure implementation of anything. A link to a rule that falls short of that which is necessary to meet water quality standards as interpreted by a TMDL is equally not able to ensure implementation of that which is necessary, namely protection of the designated uses.

Presumably knowing full well that this discussion does not hold water, EPA and NOAA go on to state that the federal agencies "acknowledge that these rules are not strong enough to provide the state with direct enforcement authority for the AWQMPAs to meet 6217(g) requirements." Input from Oregon at 4. The federal agencies then fall back on a legal opinion provided by the state "demonstrating the state has adequate back-up authority to ensure implementation of the AWQMAPs." *Id*. Whether the state has the legal authority is not in question. The question is whether the state will use it, as the EPA/NOAA guidance points out. In fact, the federal agencies have no basis upon which to conclude that Oregon DEQ, whose authority it is, will use it to enforce against any agricultural nonpoint source. The federal agencies have raised this issue themselves, writing in comments to Oregon that "the 2012 MOU [between DEQ and ODA] does not include language that to indicate that DEQ has the statutory authority to prevent NPS pollution and require implementation of 6217(g) management measures for agriculture." EPA and NOAA are precisely correct: DEQ has no intention of taking enforcement action against agricultural landowners. *See, e.g.*, Memorandum from Gene Foster, DEQ, to MidCoast TMDL LSAC, Re: MidCoast IR-TMDL Approach Update (March 19, 2013) (absence of any reference to identification of practices and their enforceability); Letter from Dick Pedersen, DEQ, to Dan Opalski, EPA, and Margaret Davidson, NOAA (July 1, 2013) ("the specifics of our plan diverges [sic] from the commitments in the original settlement agreement[.]"). The agencies do have in hand evidence that ODA will not go beyond the letter of its own rules. NWEA has discussed this in each of its letters to EPA and NOAA. In addition, Oregon statutes prohibit ODA from enforcing its voluntary plans. ORS 568.912(1) ("The rules adopted under this subsection shall constitute the only enforceable aspects of a water quality management plan."). That is likely the reason EPA and NOAA decided to delete the following language from their draft document: "ODA is also committed to use enforceable mechanisms to

address water quality pollution problems where voluntary compliance is not achieved." *See* Input from Oregon at 4.

This, of course, begs the question as to whether the management measures the state has labored so hard to incorporate as appendices to its voluntary plans are indeed adequate to meet water quality standards and provide full support to designated uses. Knowing that they are not sufficient might be the reason that the federal agencies deleted language from their draft document stating that they "strongly encourage Oregon incorporate TMDL load allocations into AWQMAPs[.]" *Id*. at 4. Even had they continued to strongly encourage the state to actually use its water quality standards as the appropriate goal for controlling agricultural nonpoint pollution, as required by CZARA, incorporation into the completely voluntary plans would not provide the state with back-up enforcement needed. Yet EPA and NOAA appear to cling to the notion that the management measures will be adequate to meet Oregon's water quality standards despite the fact that they are not intended to protect against thermal pollution. *Rhodes Declaration* at 3-6, ¶ 10-15. Thus, for example, in a comment to Oregon, the federal agencies ask: "Do all AWQMPs in CNP mngt area include management measures consistent with 6217(g) MMs for agriculture . . . especially those that get at riparian protection?" Input from Oregon at 20. The answer, very carefully written to create an impression that riparian areas are protected by the rules, despite the question's pertaining to the plans, is that they "provide that agricultural activities must be conducted to allow for the establishment, growth, and maintenance of riparian vegetation appropriate to the site and to provide streambank stability, filtering of overland flow, and shade," and that "[a]gricultural activities not meeting this requirement are subject to regulatory actions[.]" *Id*. What this text does not discuss is whether the narrow interpretations inherent in this language render the rules adequate to meet the standards. And there the obvious answer is "no."

To the extent that the issue of so-called "legacy" effects of agriculture–denuded riparian areas, damage to natural stream morphology, eroding streambanks–are covered under the federal agencies' CZARA categories of Hydromodification and Wetlands, Riparian Areas, and Vegetated Treatment Systems, EPA and NOAA make the same errors in interpretation of Oregon's program as they do under Agriculture. The federal agencies claim that ODA's agricultural plans are a "mechanism[] for addressing eroding streambanks [because] [a]gricultural activities that cause eroding streambanks are subject to regulatory actions by ODA." Input from Oregon at 17. The page before, however, the federal agencies state that "[e]roding stream banks in the coastal nonpoint management area are *primarily due to legacy forestry and agricultural practices* which resulted in the removal of vegetation from riparian areas, and damage to the natural stream morphology from practices such as canalization, installation of tide gates and splash damming." *Id*. at 16 (emphasis added). Having claimed that eroding stream banks are primarily due to legacy practices and having concluded that the plans are subject to regulatory actions, which is legally incorrect, EPA and NOAA then state that "[l]egacy conditions . . . are not addressed through existing regulatory tools[.]" *Id*. at 17. How then can they have concluded the agricultural plans are a regulatory mechanism to address wholly past actions that are the primary cause of eroding streambanks?

Likewise, as the federal agencies acknowledge, the land use planning goals upon which Oregon relies to demonstrate protection of riparian areas do not apply to agricultural and forestry activities. *Id.* at 19. Instead, it is the same agricultural plans that are unenforceable and

inadequate that EPA and NOAA find include "practices to protect sensitive areas such as riparian zones[.]" *Id*. at 20. They point to the agricultural rules as providing that "agricultural activities must be conducted to allow for the establishment, growth, and maintenance of riparian vegetation appropriate to the site and to provide streambank stability, filtering of overland flow, and shade." *Id*. What is missing from this description of the rules is ODA's narrow interpretation of what constitutes "agricultural activities" discussed in NWEA's letter to EPA and NOAA discussed immediately below. This document then cites to implementation plans developed to meet TMDLs but these are all local government plans, not related in any way to agriculture.

3. *Letter from Nina Bell, NWEA, to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon are Based on a Flawed Understanding of the State's Enforcement Authority (June13, 2012).*

This letter from NWEA explained to the federal agencies that the ODA reads its enforceable rules in a very narrow fashion so as to exclude conditions it considers "legacy conditions." The result of this narrow reading is that ODA's enforcement authority excludes most of Oregon's agricultural nonpoint source contributions, particularly its contribution to temperature in Oregon's streams from lack of shade and from excess sedimentation.

Subsequent to this letter, NWEA attempted to further engage ODA in describing to the public how it determines what constitutes a "legacy" condition. *See* Letter from Nina Bell, NWEA, to Lisa Hanson, ODA, Re: Interpretation of Oregon Department of Agriculture Basin Rules (June13, 2012).ODA responded by memorandum explaining, *inter alia,* ODA's interpretations of its rules with regard to "legacy" conditions, the meaning of "site capability," and how ODA establishes the size of riparian buffers needed to protect water quality. Memorandum from Dave Wilkinson, ODA, to Nina Bell, NWEA Re: Responses to questions from Northwest Environmental Advocates regarding the Oregon Department of Agriculture Water Quality Management Program (June 19, 2012). While this document is likely the most thorough explanation of how ODA interprets its basin rules, it leaves many questions unanswered about these very critical issues. For this reason, NWEA then sent ODA a series of follow-up questions. *See* Letter from Nina Bell, NWEA, to Dave Wilkinson, ODA, Re: Follow-Up Questions on How ODA's Water Quality Program Basin Rules (June 26, 2012). In response, ODA Director Katy Coba sent an email to NWEA stating that ODA would no longer answer questions but would, instead, "utilize forums such as the listening tours." Email from Katy Coba, ODA, to Nina Bell, NWEA Re: reply to your letter (June 27, 2012). Thus ended any further elucidation of how the ODA interprets its rules for agricultural landowners including the critical issue of how ODA determines the width of a riparian buffer required to protect water quality from agricultural nonpoint source pollution.

ODA's June 19, 2012 memorandum, however, does provide some clarity in the following areas. First, ODA rules only require landowners to "<u>allow</u> vegetation to establish" and the rules only require this where current "agricultural activities are presently preventing the growth of vegetation." *Id*. at 1. All other conditions that are not considered current agricultural activities are considered "legacy conditions" and are not covered by the ODA rules. *Id*. at 2. Second, ODA compliance efforts do not require specific conditions of riparian buffers such as width and density

to protect water quality. *See id.* at 3-4. And, finally, the definition of "site capability" used by ODA is from the BLM Technical Reference 1737-15 (1998) and it is defined as "the highest ecological status an area can attain given political, social, or economic constraints[.]" *Id*. at 5.

From this information it can be determined that the ODA rules are not adequate to ensure that the temperature TMDLs' load allocations of zero heat increase from anthropogenic sources will be met by agricultural sources in watersheds where DEQ has completed TMDLs. Because the CZARA management measures are not intended to protect water quality from anthropogenic heating, Oregon requires additional management measures to meet its water quality standards and protect its designated uses, including the Oregon coast coho, a threatened species. Therefore, Oregon's ability to demonstrate that it has a program to ensure agricultural sources meet the load allocations is key to its obtaining approval by EPA and NOAA. ODA has made clear that it does not have a program in place to ensure agricultural nonpoint sources meet these load allocations and DEQ, which has legal authority that it could use, has made plain that it has not and will not use its legal authority to prevent agricultural landowners from polluting public waters.

4. *Letter from Nina Bell, NWEA, to Dan Opalski, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Agriculture Including Dairy Wastes (Dec. 14, 2012).*

This letter discussed the ongoing dairy farm manure pollution in Tillamook Bay despite Oregon's development of a TMDL for bacteria to meet the applicable water quality standards, namely shellfish criteria for human pathogens. It also reports on DEQ's statements with regard to the applicability of TMDLs to livestock and dairy activities, which indicate that the TMDLs have no applicability. Oregon has repeatedly relied on the TMDL program to purportedly demonstrate to the federal agencies that it has a plan in place to control nonpoint source pollution in coastal watersheds. EPA cannot rely on these assertions given Oregon's own failure to use the TMDL program to bring nonpoint sources into compliance with load allocations established in the TMDLs.

5. *Letter from Nina Bell, NWEA, to Dan Opalski, EPA, and Margaret Davidson, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; Additional Information Concerning Oregon's Failure to Regulate Agricultural Nonpoint Pollution (May 10, 2013).*

This last letter to the federal agencies regarding Oregon's failed agricultural nonpoint program brought to your attention the then on-going discussion regarding the meaning of ODA's enforceable rules. As NWEA explained, "the MidCoast Basin rules are geared towards one goal: removing any on-going agricultural activities that may exist in riparian areas." *Id*. at 3. While this is a laudable goal, it fails to address ODA's so-called "legacy conditions," which make up a substantial portion of the load contributions from agricultural lands to temperature and likely to other parameters as well, such as sedimentation and pollutants associated with sedimentation (e.g., nutrients). The ODA's failure to establish the needed parameters of riparian areas that it deems subject to protection by its rules also renders the rules inadequate. *See Rhodes Declaration* at 5-6 ¶¶ 12-15. In this letter we also provided documents regarding the conclusions of the National Marine Fisheries Service with regard to riparian buffers needed to protect salmon

in Western Washington. Finally, we used this opportunity to submit a letter regarding our concerns about temperature trading between point and nonpoint sources in Oregon. This letter demonstrates that although Oregon's temperature TMDL for the Rogue River Basin establishes that nonpoint sources must reduce their heat load contributions to zero, and that DEQ has issued NPDES permits in the basin based on this assumption that nonpoint sources will contribute zero heat load, DEQ made a completely contrary assumption when it allowed the City of Medford to plant trees on agricultural lands in lieu of directly reducing the thermal load in its discharge. This contrary assumption undermines any suggestion that Oregon relies on the load allocations established for nonpoint sources in its temperature TMDLs to protect riparian vegetation sufficient to meet water quality standards.

B. Oregon does not implement the required management measures and does not have a process by which it identifies practices to implement the management measures.

As explained in the May 2, 2012 and June 13, 2012 NWEA letters, Oregon has not established an enforceable mechanism to ensure that it can and will implement the management measures in coastal watersheds. Moreover, the reiteration of the management measures in the appendices to the Oregon agricultural plans is not the same as the federal guidance's requirement that states describe a process to "identify practices" to achieve the management measures. Instead, both agricultural landowners and state regulators are left with the ambiguity of the management measures themselves. Moreover, efforts by NWEA to ascertain how the ODA establishes the meaning of its enforceable rules to define riparian buffers, for one example, have resulted in both a refusal and additional ambiguity. *See* Email from Katy Coba; Memorandum from Dave Wilkinson at 5 ("landowners may choose how they achieve compliance."). Moreover, the ODA's use of the BLM's definition of "site capability" to include "political, social, or economic constraints" ensures both that the ODA efforts remain ambiguous and that they cannot be deemed to be protective of water quality. *See id.*

C. Oregon does not assess the success of the management measures in reducing pollution loads.

Approvable state programs are required to assess over time the success of the management measures in reducing pollution loads and improving water quality. Because it has not identified the practices that constitute Oregon's version of meeting management measures, it would be impossible for the state to ascertain whether the management measures are in place and whether they have been successful in reducing pollutant loads sufficiently to avoid the need for additional management measures. Even with this impenetrable barrier to successful evaluation, ODA has attempted to conduct some riparian monitoring in the past. In doing so, ODA made the findings reported below and demonstrated that its methodology was flawed in numerous ways, including its inability to discern the difference between native and invasive species. This is a significant distinction, for among other reasons invasive species in riparian areas are considered "legacy conditions" that relieve a landowner from compliance with ODA rules. Although these ODA evaluations do not identify whether the management measures are in place or whether they were successful in reducing pollutant loads, they do demonstrate that while some waters had improved, many remained in a poor state and some declined. Unfortunately, ODA did not comment on which poor conditions would be subject to enforcement as a violation of its rules

and which would be considered "legacy conditions" and not subject to anything other than voluntary restoration efforts so the effort sheds no light on whether Oregon can correctly assert it has and uses backup authority to ensure protection of water quality from agricultural runoff. EPA and NOAA have acknowledged that ODA's "high level landscape assessments are not adequate to provide a measure of compliance with agricultural water quality rules," Input from Oregon at 6, but have not noted that ODA has legal authority to enter private lands but has chosen not to use it. *See* ORS 568.915.

The following are findings made by ODA regarding coastal watersheds:

Coos and Coquille watersheds

> All four of the streams in this basin had significant changes in their riparian index scores from 2003 to 2008. Bear and Catching creeks had increased scores, while Palouse and Twomile creeks had decreases in their scores.

ODA, Oregon Department of Agriculture, 2008 Landscape Monitoring of the Coos & Coquille, Upper and North Fork John Day, Mid-Coast, Mid-Deschutes, North Coast, and Yamhill Basins First Replication of 2003 Monitoring at 3.

MidCoast Basin

> Of the four streams monitored both in 2003 and 2008, two had no significant change in their riparian index scores, while the other two had a significant decrease.

Id. at 7.

North Coast Basin

> Five streams monitored in this basin were originally monitored in 2003. Of these, only the Kilchis River showed a significant difference in riparian score. . . . A few of the other streams had significant changes in land cover types. The North Fork Nehalem had a cumulative 21% increase in grass plus grass/agriculture, a 45% decrease in trees, and a 21% increase in shrubs.

Id. at 10.

Bear Creek

> A total of four streams in this basin were examined. . . . These streams showed a wide variety of landscape cover conditions with tree cover ranging from less than 10% to over 95% in single bands. Bare agricultural land ranged from 0% to over 48% in single bands.

ODA, Riparian Condition Monitoring of the Bear Creek, Curry County, Goose & Summer,

Inland Rogue, Klamath Headwaters, Umpqua, and Upper Willamette Basins (2006) at 1.

Inland Rogue

> Ten different streams were assessed in the Inland Rogue basin. Streams in this basin had a wide range of characteristics, with riparian index scores ranging from 39 to 59. Some streams with relatively high index scores still had significant amounts of bare agricultural land. The greatest percentage of trees was found on Slagle Creek, where one of the bands had 86% trees. Slagle had a riparian index score of 57.13. By contrast, the Illinois River had an index score of 51.75, even though it had three bands with greater than 10% bare land, and no tree densities greater than 54%. Whetstone Creek had the lowest riparian score and no tree densities greater than 15%, but it also had no bare land concentrations above 4%.
>
> Constance Creek had extensive areas with eroding streambanks. This was evident everywhere where there were no trees.

Id. at 21-22.

Umpqua

> Eleven different stream reaches were assessed in the Umpqua Basin. These streams had a wide range of characteristics, with riparian index scores ranging from 38 (Marsters Creek) to 61 (Flournoy Creek). All the streams – except Marsters Creek – had high percentages of trees in the 30-foot bands.
>
> * * *
>
> Of the stream reaches examined, Days Creek and Yoncalla Creek had the most stable channels; all the other streams had areas with visibly eroding banks. Three gullies starting in pastured ground leading into the channel were visible on Calapooya Creek. The upper section of this stream had some unstable banks, and a few large sandbars were visible. Champagne Creek's upper 15% showed significant bank erosion, and about half the reach observed showed indications of excessive sediment in the channel. Elgarose Creek had relatively minor amounts of eroding streambanks, with few mid-channel bars. Flournoy Creek's channel conditions were much like Elgarose, except that there was a mid-channel pond in the upper section, and one area with active rill erosion. The lower 50% and upper 10% of Marsters Creek showed severe bank erosion.

Id. at 38-39. Nothing in these reports suggests that Oregon is implementing widespread nonpoint source controls on agricultural lands or that it is even capable of monitoring the effectiveness of the activities that it has conducted successfully.

D. <u>Oregon water quality standards and designated uses require the implementation of additional management measures.</u>

Oregon DEQ has identified numerous waterbodies that fail to meet water quality

standards in coastal watersheds. It has done that even while largely ignoring EPA regulations and guidance. *See* Letter from Nina Bell, NWEA, to Karla Urbanowicz, DEQ Re: Oregon's Draft 2012 Integrated Report and Section 303(d)(1) List of Impaired Waters (Feb. 24, 2014). It has also failed to do so for some key water quality parameters such as sedimentation where DEQ has not used its narrative criterion, OAR 340-041-0007(11), since 1998. *See* Oregon DEQ, Methodology for Oregon's 2012 Water Quality Report and List of Water Quality Limited Waters at 51. Nonetheless, with Oregon's having asserted that it has a program to ensure the CZARA management measures are in place, and no concurrent assertion that they are not in place, one can only conclude that the management measures have not been adequate to meet water quality standards, thereby necessitating additional management measures. This conclusion is supported by the fact that the temperature TMDLs completed in Oregon largely conclude that agricultural lands must contribute zero anthropogenic heat to water bodies and the CZARA management measures are not intended to address temperature as a pollutant. Add the fact that neither Oregon DEQ in its TMDLs, nor ODA in its plans and rules, has established the width of riparian buffers necessary to meet load allocations of zero, *see Rhodes Declaration* at 4-6 ¶¶ 11-15, and it is clear that any purported additional management measures in place in Oregon are purely fictitious. Given that in almost all instances, an allocation to all nonpoint sources for temperature increases is zero, it is even more likely that agriculture is currently contributing to violations of temperature standards and therefore requires additional management measures. This conclusion is supported by the evidence of waters in agricultural lands that do not support Oregon coast coho.

The Tillamook Bay TMDL demonstrates the role of agriculture in contributing to thermal and bacteria pollution. *See e.g.* Oregon DEQ, Tillamook Bay Watershed Total Maximum Daily Load (TMDL) (June, 2001) at 15 ("forestry, agriculture, and fishing activities have taken a high toll on salmon and other living resources dependent on the aquatic environment," quoting the Tillamook Bay National Estuary Project, 1997); *id*. at 34 ("Human activities that contribute to degraded thermal water quality conditions in the Tillamook Bay Watershed are associated with agriculture, forestry, roads, urban development and rural residential related riparian disturbance."). The TMDL's Figure 10 shows the current condition and system potential target effect shade for five tributary rivers to the Tillamook Bay and demonstrates the role of agriculture in contributing to thermal impairments. *See id*. at 36-37. The difference between current and system potential conditions where the land ownership and use is yellow, indicating private agriculture, demonstrates that agricultural lands in the Miami, Kilchis, Wilson , Trask, and Tillamook Rivers are all substantially out of compliance with the load allocation of zero from agricultural lands. As the TMDL states with regard to these graphs, "[t]he lack of effective shading has resulted from removal of trees throughout the watershed, and a subsequent widening of stream and river channels." *Id*. at 37. Similarly, the TMDL demonstrates that bacteria concentrations associated with agriculture far exceed those of other sources. *See, e.g.*, *id.* at 66, Table 16 (agricultural sources contribute 20,000 to 1,000,000 counts/100ml as compared to the next highest category of failing septic systems at 20,0000 counts/100ml).

Not only has Oregon asserted that it has a program in place to assure the implementation of management measures, but in the past EPA and NOAA have agreed. For example, in a status chart issued by EPA and NOAA in September 2012, the federal agencies found that the last of the agricultural plans was put in place by ODA in October 2007. *See* EPA/NOAA, Oregon

Coastal Nonpoint Source Program 6217(g) Guidance Management Measures, NOAA/EPA Approval Status (Sept. 2012).That means that at a minimum, the plans have been in place for six years. The rules – which are the only enforceable aspect of ODA's program – have been in place considerably longer, as follows: Coos-Coquille 2002, Curry County 2004, MidCoast 2002, North Coast 2000, and Umpqua River 2001. ODA, ODA Natural Resources Area Plans and Rules.pdf . The Inland Rogue was updated in 2012. The fact that the plans and rules have been in place for such a long time should suggest that Oregon can point to their widespread success in addressing the conditions on agricultural lands that have caused and contributed to violations of water quality standards. In fact, they cannot.

Even the 2010 Inland Rogue Plan, on which EPA and NOAA rely to assure that Oregon has an approvable plan, fails to incorporate the requirements of the 2008 Rogue River Basin TMDL needed to meet water quality standards. For example, Table 5 of the Inland Rogue Plan, which presents so-called vegetation management problems and possible solutions, is limited to four problems, two of which are associated with temperature: (1) overgrazing the riparian area, and (2) allowing invasive weeds to dominate riparian areas. ODA, Inland Rogue Plan at 18. There is no reference to the so-called legacy conditions in which basin riparian areas have already been denuded of vegetation by human activities and require restoration in order to meet water quality standards for temperature. Even the definition of "overgrazing" as a "condition when stocking rate on a pasture is greater than the forage production capability of the pasture species, due to time of year, soil type and water availability," *id*., implies that grazing in the riparian area is compatible with the zero load allocation given to agriculture in the Rogue temperature TMDL. The plan elaborates on this further: "This [Local Advisory Committee] does not intend to exclude riparian areas from sound/sustainable management. Farmers and ranchers must be able to provide livestock with access to adequate pasture and water." *Id*. at 24. Needless to say, Table 5 and its associated comments do not correspond with the CZARA management measures which have been inserted as Appendix H to the plan and which include, for example, the measure of excluding livestock "from riparian areas that are susceptible to overgrazing and when there is no other practical way to protect the riparian area when grazing uplands." *Id*. at 43-44.

E. <u>Oregon does not implement any additional management measures.</u>

None of the ODA basin rules incorporates additional management measures as needed to meet the zero load allocations established in the existing temperature TMDLs for Oregon coastal watersheds, including the most recently-revised set of rules that apply to the Inland Rogue. As demonstrated immediately above, the Inland Rogue plan – which is not enforceable – does not support the load allocations with additional management measures; in fact it does not even support the management measures. There is no basis upon which EPA and NOAA can conclude that Oregon has identified additional management measures and has a program in place to implement them.

F. <u>ODA's most recent new efforts are inadequate to meet CZARA management measures and additional management measures that are needed.</u>

ODA has taken some interest recently in its agricultural water quality program. One of the

significant drawbacks, however, of its approach is its focus on assessment and evaluation without a concurrent focus on actual improvements to practices. Moreover, as DEQ itself has pointed out, there are significant weaknesses in the ODA assessment and evaluation approach itself.

The purpose of ODA's new approach is two-fold. First, the purpose is to "tell the story of agricultural partners working together to improve water quality." Oregon Department of Agriculture, Water Quality Management Program, Streamside Vegetation Assessment Tool - User's Guide, Version 1 (Nov. 4, 2013) (hereinafter "Use's Guide") at 3. This is a dubious primary goal when one considers the vast areas of agricultural land that lack riparian vegetation. As such, this assessment tool is focused on documentation and tracking. *See, e.g., id.* at 3, Table 1. The claim, asserted in a two-sentence paragraph, that ODA is interested in using adaptive management, *id*., is clearly specious because ODA only discusses evaluating the assessment tool, not changing the expectations of how riparian areas are managed for protecting water quality.

Besides being likely irrelevant to achieving improvements on the ground and in the water, the document is flawed for reasons set out in our letter to the agency of October 31, 2013 which we hereby incorporate by reference. Letter from Nina Bell, NWEA to Cheryl Hummon, ODS Re: User's Guide for the Streamside Vegetation Assessment Tool; Review Draft October 29, 2013 (Oct. 31, 2013). As we discuss in that letter, there are two major flaws in ODA's approach. First, involves the use of "site capability," a problem that underlies all ODA approaches, as discussed in NWEA's previous letters to EPA and NOAA.

Second, ODA plans to use a 35-foot sampling area on both sides of waterbodies. User's Guide at 5. While ODA justifies this riparian buffer width based on its being the minimum Natural Resources Conservation Service (NRCS) Conservation Practice Standard #391, Riparian Forest Buffer, there is no evidence that 35 feet is adequate to provide water quality protections. For example, 35 feet is the *minimum* riparian buffer for all waters set out in the recent NMFS documents establishing minimum buffer requirements for agricultural lands in Western Washington.[49] ODA then goes on to state that:

> The 35-foot assessment area will *not* be used as a…
>
> - Guideline for voluntary project implementation.
>
> - Regulatory standard, to determine compliance for individual properties, or in individual enforcement actions.
>
> - "No touch" area for agriculture. Agricultural activities, if present, need to allow streamside vegetation, consistent with site-capability, to establish and grow.

Id. at 5 (emphasis in original). Not only is the 35-foot area not a guideline for voluntary

[49] NMFS, Letter from Will Stelle, NMFS, to Roylene Rides-at-the-Door, USDA NRCS, and Dennis McLerran, EPA, (Jan. 30, 2014) with attachments: (1) Memorandum from Usha Varanasi, NMFS to Robert Lohn, NMFS, Re: Review "Efficacy and Economics of Riparian Buffers on Agricultural Lands" (March 17, 2003), and (2) NMFS, Interim Riparian Buffer Recommendations for Streams in Puget Sound Agricultural Landscapes November 2012 (Originally proposed as federal Option 3 for the Agriculture Fish and Water (AFW) Process, March 2002).

implementation or a regulatory standard but ODA notes that its effort "does not address site-specific conditions," namely that the width of vegetation needed to support water quality functions is "site specific," as is the width of the riparian zone. *Id*. In other words, ODA's new approach provides no more guidance to agricultural landowners than its current rules and plans, which are silent.

In contrast, prior to ODA's finalizing the document, DEQ informed ODA that:

> Typically, DEQ temperature TMDLs quantify vegetation conditions out to 300 feet from the edge of the active channel for each bank. We use this distance to capture all the vegetation conditions that will contribute to the effective shade. This distance is typically beyond what is required to achieve the effective shade targets, but in some instances vegetation farther from the stream does contribute in some topographies and where there is low vegetation density.
>
> However, selection of 100 feet from the stream edge for a <u>minimum</u> assessment distance to evaluate meeting temperature TMDL load allocations would account for 95% of the conditions that occur in both western and eastern Oregon. However, an alternative of 85 feet for normal conditions and 100 feet for low density vegetation conditions could be sufficient. Although a 100 foot distance is much greater than the proposed 35 foot the additional 65 foot is needed to be useful and consistent with the temperature TMDL load allocations.
>
> The use of 35 feet would be adequate for screening locations of likely rule violation and landowner outreach. Typically, riparian areas in western Oregon are wider than those in eastern Oregon. Thirty-five foot assessment width therefore may assess a narrower part of the riparian areas in western Oregon, but may assess a wider area than the entire riparian area in eastern Oregon. This may lead to western Oregon having scores that seem to indicate greater compliance than eastern Oregon scores. However, the on-the-ground assessments may determine that some areas are in compliance. It will be important to DEQ that these differences between vegetation and compliance are tracked as separate measurements.

Oregon DEQ, DEQ Preliminary Comments on the Proposed Streamside Vegetation Assessment Tool (July 9, 2013) at 3-4 (emphasis added). DEQ also informed ODA that because TMDLs allocate either effective shade or system potential vegetation, the following information is required for determining effective shade: "vegetation height, vegetation density, riparian width, vegetation/stream gap width, and stream aspect." *Id.* at 3. As a consequence of its review, DEQ concluded that the ODA approach would <u>not</u> allow ODA to determine what percentage of lands met goals and objectives its plans or its rules or "to evaluate if the area plans and rules are adequate to achieve water quality goals including water quality standards and TMDL load allocations." *Id*. at 1.

Prior to ODA's finalizing the document, ODA put out information stating that it was discussing various issues with DEQ:

> ODA and DEQ are discussing how to compare the output of the proposed Streamside Vegetation Assessment (current streamside vegetation conditions, as percent in each vegetation category) with conditions needed to achieve the goals and objectives of Area Plans. For example, we are discussing how to calculate the effective shade that current streamside vegetation provides and compare that to the conditions needed to achieve the agricultural load allocation under a temperature Total Maximum Daily Load (TMDL). That comparison will allow us to see "where we are and how far we have to go". If the proposed assessment methodology does not allow us to fully calibrate between the assessment output and TMDLs (or other targets), we will discuss and explain the gap.

ODA, ODA Agricultural Water Quality Management Program, Proposed Tools For Measuring Progress in Small Watersheds: Streamside Vegetation Assessment Compliance Evaluation Summary of Issues Under Discussion Between ODA and DEQ, DRAFT - July 22, 2013 at 2. This ODA document also pointed out limitations of DEQ TMDLs for controlling nonpoint source pollution from agricultural lands:

> DEQ's past TMDL modeling has been based on large rivers and perennial streams, although TMDLs apply to both perennial and intermittent streams. DEQ is exploring how to integrate smaller streams into their modeling. This will be helpful for ODA, since many agricultural streams are small or intermittent.

Id. at 2. Finally, ODA indicated there is ongoing disagreement about a fundamental matter: the definition of "site capability":

> ODA refers to site capable vegetation in Area Rules and Area Plans. Natural conditions (soil types, hydrology) do not support trees and shrubs in all locations. In addition, infrastructure, channelization, invasive species, and other "legacy" issues – rather than current agricultural activities – may prevent the establishment and growth of streamside vegetation. ODA and DEQ are interested in coming to a common understanding of the streamside vegetation (and effective shade) that a watershed, and its specific conditions, can support.

Id. at 3.

In addition to the User's Guide's disconnection from TMDLs and water quality standards, it is also intentionally disconnected from ODA's compliance efforts. This is demonstrated by an ODA Powerpoint presentation: "Firewalls . . . Vegetation Assessment ≠ Compliance Evaluation." *See* ODA, ODA Ag Water Quality Program, Streamside Vegetation Assessment Tool, OACD Conference, November 7, 2013 at Slide 12. ODA states that the effort to "record current vegetation" is "not associated with individual landowners." *Id*. On the other hand, ODA's effort to "determine the percentage of lands achieving compliance with the Area Rules," which is purportedly associated with compliance, states that it will "[i]dentify and prioritize [water quality] concerns [with] manure piles, erosion, and streamside vegetation." *Id*. It is unclear what this attempt to prioritize will mean for ODA's compliance effort. Elsewhere

the agency has stated that the goal of ODA's compliance effort is to "[p]rioritize agricultural lands where conditions may not be in compliance with the Area Rules," despite the fact that the rules are both ambiguous and inadequate to meet water quality standards. ODA, ODA Agricultural Water Quality Management Program, Proposed Tools For Measuring Progress in Small Watersheds DRAFT Overview – September 4, 2013. We deduce this means trying to find the worst of the bad actors. In addition, this compliance effort is limited to just two so-called Strategic Implementation Areas, after which it will be evaluated. ODA, ODA Ag Water Quality Program, Updates Agricultural Water Quality Program Advisory Committee July 25, 2013, Slide 7. Finally, even an effort referred to as seeking to identify "compliance" with ODA rules is in the agency's own words "[n]ot a compliance determination." *Id*. at Slide 17. And, after requesting that the landowner address any water quality concerns, ODA may or may not seek compliance with its own rules. *See id.* at Slide 38 ("prioritize on WQ threat"). Since it announced it was embarking on this new effort, ODA has declined to explain how it will interpret its ambiguous rules in conducting its compliance evaluations.

G. <u>The clean-up of agricultural pollution in the Rogue River Basin's Bear Creek does not demonstrate that Oregon's programs prevent nonpoint source pollution from agricultural activities.</u>

In all of Oregon there appears to be one place where widespread use of agricultural BMPs has resulted in measurable load reductions of pollution: Bear Creek in the Rogue River Basin. According to DEQ, "urban, forested and agricultural areas contributed excess nutrients and other pollutants to Oregon's Bear Creek" prompting it to be listed as impaired in 1998. Oregon DEQ, Making Progress in the Bear Creek Watershed: Stakeholders' watershed approach reduces phosphorus levels (hereinafter "Bear Creek Fact Sheet"). The pollutants at issue included: phosphorus, dissolved oxygen, chlorophyll a, pH, ammonia, temperature and fecal coliform. *Id*. In 1992, a TMDL was developed for pH, DO, aquatic weeds and algae, temperature, sediment, and fecal coliform. *See* Oregon DEQ, Bear Creek Watershed 1992 TMDLs. ODA established a local advisory committee that prepared an agricultural water quality plan in 2005. Bear Creek Fact Sheet at 1. A major upgrade at the Ashland sewage treatment plant was undertaken with the effect of removing large amounts of total phosphorus. But this point source did not do it alone; DEQ's fact sheet points out that,

> [e]fforts to reduce non-point source pollution are also contributing to lower phosphorus levels seen in Bear Creek. Data show that Neil Creek's phosphorus levels have declined from an average high of 0.23 mg/L in May/June 1996–1998 to an average low of 0.07 mg/L in September/October 2008–2009. Phosphorus levels are also declining in Griffin Creek and Jackson Creek.

Bear Creek Fact Sheet at 2. Dramatic strides have been made in getting close to meeting the TMDL's numeric interpretation of Oregon's nutrient standard for total phosphorous. *Id*. While the Oregon Watershed Enhancement Board has spent almost three quarters of a million dollars on restoration and other projects, and the Bureau of Reclamation has funded irrigation system upgrades of more than one a half million, there has also been a striking level of participation by the Talent and Medford irrigation districts, which have contributed more than $2.2 million, and agricultural landowners who have contributed more than $1 million to support irrigation system

upgrades. *See id.* at 2-3.

What accounts for the dramatic success in Bear Creek and the major contributions by agricultural nonpoint sources? Is Bear Creek just one of many untold examples of agricultural land owners in Oregon voluntarily participating in major system upgrades and use of BMPs? Without taking away from the success that has been achieved to date in Bear Creek, and the efforts of one large agricultural producer,[50] the answer is a resounding "no." In fact, the dramatic efforts that have resulted in major pollution reductions in Bear Creek are not typical of Oregon watersheds or coastal watersheds. The agricultural landowners did not rise up to clean up their impact on water quality because the City of Ashland had to make major investments in secondary and tertiary nutrient removal systems or because they were taking water quality seriously. Rather, these efforts were driven by Bear Creek agricultural users because they obtain – and depend upon – imports of a significant amount of water from the Klamath Basin. *See, e.g.,* Bear Creek Watershed Council, Rogue Valley Council of Governments, Bear Creek Watershed Assessment, Phase II - Bear Creek Tributary Assessment, Summary (Dec. 2001) ("Bear Creek irrigation districts have imported water for over a century, which is a significant portion of the water used for irrigation supply."). The Klamath Basin is currently undergoing an adjudication of water rights. *See* Oregon Water Resources Department, Klamath River Basin Adjudication. Three irrigation districts in the Rogue basin,

> depend in part on a 1910 water right to store and divert water from Fourmile Lake in the Klamath Basin over to the Rogue Basin. The use of that water right is now in jeopardy because of several very large claims by the federal government on behalf of the National Forest Service, the Klamath Tribes and the Bureau of Reclamation.

Medford Irrigation District, Klamath Basin Adjudication Information Sheet (June 4, 2013). The Medford and Talent irrigation districts' efforts to "reduce[] sediment and nutrients from irrigated lands by converting flood irrigation to sprinkler irrigation and adding protective liners along canals or replacing the canals with pipes to reduce erosion," Bear Creek Fact Sheet at 1, has apparently had measurable positive impact on water quality, but the impetus behind the majority of these efforts has been to address the writing on the wall: Rogue basin irrigation districts will not be able to count on importing water from the Klamath. Bear Creek cannot be held up as an example of how Oregon has a program to control agricultural nonpoint source pollution because it is primarily an example of how unique circumstances can pressure nonpoint sources into taking significant action. Absent those circumstances, the actions will not occur.

IV. Oregon's pesticides component does not meet CZARA standards.

In two letters, NWEA previously submitted comments to EPA and NOAA regarding Oregon's ability to meet the management measures and the need for additional management

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[50] According to the ODA, the large fruit producer Bear Creek Orchards voluntarily adopted the use of various BMPs, although "[i]t is the efficient use of water that may be making the biggest difference to the local watershed." The Agriculture Quarterly, Big Agricultural Operators Step Up to the SB 1010 Plate (Spring 2001).

measures for pesticides. In the first letter, we pointed out that the federal agencies' interim approval of Oregon's program on pesticides relied on a federal court injunction that has since ceased to apply to many pesticides. *See* NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Approval of Agricultural Management Measures for Oregon (May 2, 2012) at 29-30. Subsequently, in order to give Oregon the opportunity to remedy its failure to have a program in place, NWEA filed a petition with Oregon and provided a copy to EPA and NOAA, encouraging them to weigh in on the petition with the state. *See* NWEA Letter to Michael Bussell, EPA, and John King, NOAA, Re: Oregon Coastal Nonpoint Pollution Control Program; EPA and NOAA's Interim Findings on Pesticides (Aug. 20, 2012); NWEA, 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 (Aug. 9, 2012) (hereinafter "NWEA Petition"). We hereby incorporate those letters and the NWEA Petition as comments on Oregon's CNPCP and we now supplement those letters with the following discussion.

EPA and NOAA have informally and tentatively found that while Oregon has adequate stream buffers for pesticides use on streams with salmon, the state may not have sufficient protection for non-fish bearing streams sprayed by logging companies. Non-fish bearing streams constitute a majority of stream miles in coastal watersheds in Oregon. EPA and NOAA informally approved all other pesticide use in Oregon (e.g., for agriculture, urban uses, and roads). To the best of our knowledge, EPA and NOAA never evaluated whether *additional* management measures were or are now needed for Oregon agriculture, including pesticides, even though the *basic* agriculture measures do not require spray buffers and no basic management measures, including for logging, require protection of drinking water. In light of the evidence, the CZARA management measures for pesticides are not adequate to meet water quality standards including full support of designated uses in Oregon and additional management measures are required.

In 2004, EPA and NOAA informally approved Oregon's pesticide use in logging based on a federal court injunction that established spray buffers near streams, an injunction that largely no longer exists. EPA and NOAA now favorably cite the Oregon Department of Forestry's buffer zones for pesticide applications near fish-bearing streams. The ODF rules for protection of fish-bearing streams, however, are not adequate to protect threatened and endangered species. As set out in NWEA's petition, ODF has two sets of rules that apply to the use of chemicals on forestlands. The first relies on DEQ's hazardous waste laws and omits entirely DEQ's water quality program. *See* Pesticide Petition at 5. The second set of restrictions are 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." OAR 629-620-0400 (emphasis added). As the NMFS biological opinions on pesticides demonstrate, the federal labels do not provide adequate and full protection for threatened and endangered species in Oregon.[51] Specifically, in Oregon coastal watersheds,

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[51] *See* 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) (hereinafter "Chlorpyrifos BiOp"); NMFS, *National Marine Fisheries Service Endangered Species Act Section 7 Consultation Biological Opinion Environmental Protection Agency Registration of Pesticides*

NMFS found jeopardy and adverse modification of critical habitat for the Oregon coast coho from use based on EPA labels of chlorpyrifos, diazinon, and malathion, and jeopardy from use based on the label for 2,4-D. For the Southern Oregon/Northern California coho, NMFS found jeopardy and adverse modification of critical habitat from use based on EPA labels for chlorpyrifos, diazinon, malathion, carbaryl, carbofuran, methomyl, naled, and phosmet. Therefore, any regulatory approach that is based on the EPA labels for those pesticides is not sufficient to protect the designated uses of Oregon coast coho and Southern Oregon/Northern California coho.

The ODF rules also contain the following specific requirements. Applicators must:

- protect riparian vegetation from herbicides, OAR 629-620-0400(2);
- apply chemicals in weather conditions that comply with the rules and labels, OAR 629-620-0400(3);
- not apply chemicals by air within 60 feet and by ground within 10 feet , and not apply fungicides or non-biological insecticides by air within 300 feet, and apply 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, OAR 629-620-0400(4), (5), (7) & (8); and
- not apply 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 application, OAR 629-620-0400(7)(b).

See also, Oregon DEQ, Pesticide Use in Vicinity of Drinking Water Sources; Summary of regulations and recommendations (undated). As NWEA's petition explained, these additional restrictions are not adequate to meet the Reasonable and Prudent Alternatives (RPA) set out by NMFS to address the jeopardy and adverse modification of habitat findings in the biological opinions. *See* NWEA Petition at 6. For example, the RPAs for chlorpyrifos, diazinon, and malathion, all of which have adverse effects on Oregon coastal coho species, call for no-application buffers of 500 feet using ground applications and 1,000 feet using aerial applications. *See* Chlorpyrifos BiOp. These requirements are mirrored on the EPA labels or the ODF regulations.

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); 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); 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).

Some of the pesticides that are the subject of the NMFS biological opinions' jeopardy and adverse modification of habitat determinations are available for use on agricultural products and therefore likely in use on agricultural lands in Oregon's coastal watersheds. Despite the lack of any additional ODA rules beyond the EPA labels, which have been demonstrated to be inadequate for protection of threatened coho, EPA and NOAA have not made any findings on the adequacy of Oregon's program to protect water quality and designated uses from pesticides applied to agricultural lands. Clearly EPA and NOAA cannot approve Oregon's program given these deficiencies.

The federal agencies praise Oregon's Water Quality Pesticide Management Plan, which purportedly uses water monitoring data to drive so-called adaptive management actions, but the state does little monitoring of pesticides with which to make this work and there is no evidence it collects any data in coastal watersheds. *See* State of Oregon, Pesticide Management Plan for Water Quality Protection (May 2011) (hereinafter "Pesticide Plan"). In addition, it is unclear precisely how it intends to carry out this adaptive management. For example, do data need to trigger a finding that levels are causing an impairment before the state acts, by developing a TMDL for example? If so, such actions preclude providing protection to designated uses and only require a response after it is presumed the uses have been harmed. In fact, given Oregon DEQ's resistance to using benchmarks by which to interpret its narrative criteria and the paucity of EPA recommended criteria developed under Section 304(a) of the Clean Water Act for current-use pesticides, it is doubtful that DEQ would make such findings even if the DEQ or a group of state agencies were to develop a screening tool to determine levels of pesticides that should be of concern. Not only does DEQ's 303(d) listing methodology not establish that it will make such determinations, it is implied that it will not. *See* Pesticide Plan at 13 (after discussion of various benchmarks, it states that concentrations of chlorpyrifos and azinphosmethyl "above water quality criteria . . . will result in future 303(d) or related listings of impaired waters in Oregon."). Finally, as discussed elsewhere in these comments, Oregon simply ignores many of its standards and data when it develops its 303(d) lists with the effect that data are not translated into impaired waters listings with any regularity. Moreover, it is unclear how long it would take the state to complete a TMDL following a listing for a current use pesticide.

After intensive monitoring for example, the likes of which are not taking place in coastal watersheds, Neal Creek in the Hood River watershed has been listed for violations of the aquatic life criterion for chlorpyrifos, but it is not listed for azinphos-methyl. *See* Oregon's 2010 Integrated Report, Water Quality Assessment Database;[52] *see also* OSU, Pesticide Best Management Practices in the Hood River Watershed (undated) (showing high levels of azinphos-methyl). Despite use of voluntary BMPs since 1999, azinphos-methyl detections "continue to exceed water quality standards." *Id.* at 21. Despite the failure to remedy these violations, DEQ has not developed a TMDL to address the impairment. Even then, it is unclear whether, in light of a completed TMDL, Oregon would take any regulatory action to control levels of pesticides or would simply continue to use voluntary approaches. Oregon's plan states "[t]his [TMDL] plan *may or may not include ODA regulatory initiatives* (e.g., label restrictions) to bring pesticide levels below a water quality standard." Pesticide Plan at 13. (emphasis added).

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[52] *Available at* http://www.deq.state.or.us/wq/assessment/rpt2010/search.asp.

This plan is also misleading. For example, it states that agricultural "rules provide an enforceable backstop to ensure all landowners do their part to avoid and resolve water quality problems," *id.* at 21, but many rules do not even contain the word "pesticide," *see, e.g.*, ODA Inland Rogue rules at OAR 603-095-1440. In addition, other regulatory approaches that the plan discusses, such as ODA's changing the labels in Oregon or conducting other rulemaking, are based on many years of failure to use voluntary actions. *See* Pesticide Plan at 25-26. To date, even in light of many years of failed voluntary actions, ODA has taken no regulatory action, suggesting that it will never cross that threshold. All regulatory approaches discussed in this document are in response to levels of pesticides that are already at levels that are believed or known to cause harm to designated uses. In many instances, as with the voluntary approaches, the time periods of impairment are specifically intended to be long. For example, even where a water purveyor has data showing pesticide contamination in excess of a Maximum Contaminant Level, established under the Safe Drinking Water Act and frequently based on cost of treatment not just risk to human health, the water "system will not be considered in violation of the MCL until it has completed one year of quarterly monitoring." *See id.* at 29. Helpfully, the State of Oregon's position is that "[i]t is the water supplier's responsibility to provide clean water but their action may not address the source of the contamination." *Id.* Many small drinking water sources do not have the financial resources to collect data to even trigger such a non-response by the State of Oregon.

V. Oregon's CNPCP fails to identify land uses and critical coastal areas that will require additional management measures to attain and maintain water quality standards because it relies on a flawed Clean Water Act section 303(d) listing process to identify impaired streams.

CZARA requires state programs to provide for the implementation of management measures in conformity with EPA's (g) guidance and additional management measures for land uses and critical coastal areas adjacent to impaired or threatened coastal waters. Implementation of these additional management measures must be designed so as to attain and maintain applicable water quality standards under section 303(c) of the CWA, including protecting designated uses. *See* EPA/NOAA, Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance (Jan. 1993) (hereinafter "Program Guidance") at vi. As the federal agencies have observed, "[t]he purpose of the second tier [of additional management measures] is to restore coastal waters and, in the case of the critical areas, to protect against future pollution problems." *Id.* at 2. Citing the legislative history of CZARA, they describe the requirement for additional management measures as follows:

> As described by the amendment's sponsor in a floor statement on CZARA, the additional management measures provide a "second tier of pollution control efforts" and "are targeted to those coastal land uses that are recognized to cause or contribute to water quality problems generally." *See* 136 Cong. Rec. E. 3590, October 27, 1990. In addition, the legislative history describes the additional management measures provision as also requiring "the identification of important coastal areas -- as contrasted to individual land uses under paragraph (1) [section 6217(b)(1)] -- that need additional measures to protect against anticipated

> pollution problems. Unlike paragraph (1), the imposition of additional measures are not contingent upon identified water quality problems, and are to be established as a preventative step to avoid water quality problems that might otherwise develop." *Id*.

Id. at 18. Therefore, state programs must:

> 3. provide for the implementation and continuing revision from time to time of additional management measures that are necessary to attain and maintain applicable water quality standards and protect designated uses with respect to:
>
> a. land uses which, individually or cumulatively, may cause or contribute significantly to a degradation of (a) coastal waters not presently attaining or maintaining applicable water quality standards or protecting designated uses, or (b) coastal waters that are threatened by reasonably foreseeable increases in pollution loadings from new or expanding sources; and
> b. critical coastal areas adjacent to coastal waters which are failing to attain or maintain water quality standards or which are threatened by reasonably foreseeable increases in pollution loadings.

Id. at 4.

Specifically, states must "identify coastal waters that are not attaining or maintaining applicable water quality standards or protecting designated uses, or that are threatened by reasonably foreseeable increases in pollution loadings from new or expanding sources." *Id*. at 18. The Clean Water Act program that is used by states to identify waters that are not attaining or maintaining water quality standards, including the protection of designated uses, as well as identifying threatened waters, is the 303(d)(1) listing process. EPA/NOAA's guidance on the requirements for this identification closely parallel EPA's guidance to states on developing 303(d) lists. *See, e.g.*, EPA, Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act 30 (July 29, 2005). EPA/NOAA guidance requires that states

> identify the following as threatened or impaired waters:
>
> a. coastal waters identified in a state's most recent report under section 305(b) of the CWA as "partially meeting" or "not meeting" designated uses or as "threatened";
> b. coastal waters listed by a state in accordance with the requirements of section 303(d)(1)(a) of the CWA requiring Total Maximum Daily Load calculations if listing is due at least in part to nonpoint sources;
> c. coastal waters listed by a state under CWA section 304(l) as impaired by nonpoint source pollution;
> d. coastal waters identified by a state as impaired or threatened by nonpoint

> source pollution in an assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

Id. at 18-19.

A. Oregon's 303(d) listing process fails to ensure that impaired and threatened waters are identified to support the state's implementing of additional management measures necessary to meet water quality standards.

While EPA and NOAA guidance urges states to rely on their 303(d) list for purposes of CZARA, the problem with doing so in Oregon is that DEQ has, for many years, failed to meet the requirements set out in federal regulations to "assemble and evaluate all existing and readily available water quality related data and information to develop the list[.]" 40 C.F.R. § 130.7(b)(5). EPA regulations specify that the meaning of that phrase includes but is not limited to four broad categories of waters, including waters identified as "threatened" in the state's 305(b) report. Specifically called out is a requirement that states review both data and information on "[w]aters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions." 40 C.F.R. § 130.7(b)(5)(iii). The regulations instruct states that these groups should be "*actively solicited* for research they may be conducting or reporting." 40 C.F.R. § 130.7(b)(5)(iv) (emphasis added).

In contrast to these and other requirements of federal law, Oregon DEQ has failed to identify all waters that do not attain or maintain water quality standards including threatened waters which it does not identify at all. In a letter regarding Oregon's 2012 list, NWEA detailed how DEQ has long failed to use all readily available data and information, as required by federal regulations. *See* Letter from Nina Bell, NWEA, to Karla Urbanowicz, Oregon DEQ, Re: Oregon's Draft 2012 Integrated Report and Section 303(d)(1) List of Impaired Waters (Feb. 24, 2014) at 1-8. For example, DEQ does not accept submissions of "information" in its periodic "call for data," nor does it actively solicit agencies and academic institutions, as required by EPA regulations and CZARA guidance. *Id*. at 7. NWEA's comments explain how Oregon chose to not update the list for any of its coastal watersheds. *See id*. at 8-11. In addition, the comment letter explains how DEQ fails to list waters as impaired based on a failure to fully support designated uses, *id.* at 24-27, as well as other aspects of water quality standards such as narrative criteria, *id.* at 27-38, numeric criteria, *id.* at 38-43, and the state's antidegradation policy, *id.* at 43-45. In conflict with both EPA requirements for 303(d) listing and EPA and NOAA requirements consistent with CZARA, DEQ recently used water quality standards to assess its data and information that are no longer applicable for Clean Water Act purposes. *See id.* at 45-49. Despite trend analysis performed by DEQ, including on some coastal watersheds, DEQ does not assess or identify threatened waters. *See id.* at 49-50.

The NWEA comments highlight the lack of connection between DEQ's assessment and analysis in other aspects of its water quality program and its 303(d) list, using the Rogue River Basin as an example. *See id.* at 50-55. And, finally, the comments demonstrate that DEQ does not use its nonpoint source assessments to develop its 303(d) lists, contrary to EPA listing guidance and EPA/NOAA CZARA guidance. *Id*. at 55-56.

B. Oregon fails to identify land uses causing or threatening water quality impairments.

The EPA/NOAA CZARA guidance calls for states to "identify those land uses that individually or cumulatively cause or contribute to coastal water quality impairments," after identifying impaired and threatened coastal waters. *Id*. at 20. The federal agencies' guidance says that after having done so, "states should consider more specific land use characteristics to help determine whether current or future uses are likely to cause or contribute to water quality impairments." *Id*. Likewise, states should consider "the biological and physical impacts of these land uses within the watershed adjacent to the impaired or threatened waterbody or segment," and consider as well such matters as "habitat and other biological impacts that may be caused by specific land uses." *Id.* The guidance points out that the preferred source of information is refereed technical journals but that federal and state publications and generally accepted models are also appropriate. *Id.*

In contrast to this guidance, Oregon ignores a wide variety of technical information available to identify land uses that consistently cause or contribute to violations of water quality standards in coastal watersheds and harm designated uses, such as the ESA-listed Oregon coast coho, Southern Oregon/Northern California coho, and their habitat. For example, the following sources are not used by Oregon to identify land uses that require additional management measures in coastal watersheds despite the fact that each identifies land uses that consistently cause or contribute to violations of water quality standards including failure to fully support designated uses.

1. Reports from Oregon's Independent Multidisciplinary Science Team.

Oregon's Independent Multidisciplinary Science Team (IMST)[53] has issued at least three pertinent reports including Recovery of Wild Salmonids in Western Oregon Forests: Oregon Forest Practices Act Rules and the Measures in the Oregon Plan for Salmon and Watersheds, Technical Report 1999-1 (Sept. 8, 1999) (hereinafter "IMST Forestry Report"); Recovery of Wild Salmonids in Western Oregon Lowlands, Technical Report 2002-1 (July 15, 2002) (hereinafter "IMST Agriculture Report"); Oregon's Water Temperature Standard and its Application: Causes, Consequences, and Controversies Associated with Stream Temperature, Technical Report 2004-1 (2004) (hereinafter "IMST Temperature Report"). These IMST reports together have concluded, *inter alia*, that:

- Protecting and restoring riparian vegetation is key to providing the ecological functions of salmonid habitat, not just ensuring sufficient shade to address water temperatures;

- From the salmonid habitat perspective, there is no basis for protecting fish-bearing streams over non-fish-bearing streams; and

- Sedimentation has been highly altered including by roads and landslides.

[53] The IMST was established by the 1997 Oregon Legislature in Senate Bill 924, which was signed by Governor John Kitzhaber on March 25, 1997.

The IMST has emphasized that riparian vegetation plays multiple functions, some with direct impacts on water quality including temperature, such as shade, and some with longer term impacts, such as preventing erosion that makes streams more shallow and subject to warming:

> Vegetation provides a myriad of features germane to stream form and function in addition to providing shade. These features include, but are not limited to:
>
> - Roots that stabilize stream banks and protect the banks from erosion;
> - Potential sources or large and small wood for pool formation;
> - A source of detritus (decaying material) and terrestrial insects necessary for biological food chains;
> - Creation of instream and riparian habitat for fish and other aquatic organisms;
> - Encouragement of infiltration of precipitation into soil and groundwater;
> - Allows soils to act as a sponge storing water and releasing it later in the season, and
> - Encouragement of subsurface water flows and exchange of water in the stream with the area underneath the stream bed (called "hyporheic" exchange);
> - Riparian plants that take up nutrients from soil solutions, which is important for maintaining water quality; and
> - Creation of temperature and humidity microclimates that slow stream heating.

IMST Temperature Report at 17. With regard to the role of shade in preventing stream warming, the IMST has concluded that "the vast majority of published studies document that riparian shade has a significant effect on stream temperature." *Id*. at 124. Importantly, the IMST observed that:

> Stream temperatures are often seen as primarily directed at fish – but in reality are a surrogate to overall stream health. Temperature influences many processes in a stream, including nutrient cycling and productivity. Temperature is also important because it influences the metabolic rates and physiology of aquatic organisms, including fish. In addition, cold water is able to absorb more oxygen than is warmer water; therefore, the question of oxygen-richness of water is directly linked to water temperature. Likewise, many processes influence temperature. For example, elevated temperatures are often linked with other signs of stream degradation including loss of riparian vegetation and wider than expected stream channels.

Id. at 15. For these reasons, the IMST did not propose that Oregon protect riparian vegetation solely for shade but also for those other ecosystem attributes set out in its reports. For example, the IMST noted that "[l]arge wood is a key structural and functional component of aquatic systems. IMST Forestry Report at 2. As such, the IMST found that "[b]ecause vegetation and large wood within riparian areas contribute important hydrologic and biologic functions to lowland rivers and estuaries, they should receive protection and be restored to their historical

level of function within river networks." IMST Agriculture Report at 2.

The IMST emphasized the importance of riparian vegetation from headwaters to estuaries: "We conclude that management practices must be considered on a large spatial scale, among agencies, and across different land uses." *Id*. at 2. This point was most clearly called out in its emphatic position that riparian vegetation on non fish-bearing streams ("Type N") required as much protection as those of fish-bearing streams: "Sharp distinctions in the management of riparian zones (as compared to upslope forests), based on the size of the stream and the presence of absence of fish, will result in a failure to maintain the dynamics of structure and function of riparian zones across the landscape." IMST Forestry Report at Exec. Summary. As a result of this strongly held view, the IMST issued a recommendation that Oregon "[t]reat non-fish-bearing streams the same as small, medium, and large fish-bearing streams when determining buffer-width protection." *Id*. at 43. In fact, the IMST proposed that "all large, medium, and small streams, regardless of fish presence, receive a riparian management area (RMA) of 100, 70, and 50 feet, respectively" and "a portion of intermittent or ephemeral streams will require the 50-foot buffer in order to retain aquatic function." *Id*.[54]

Likewise, the IMST emphasized the importance of riparian vegetation in lowlands, *see, e.g*., IMST Agriculture Report at 3-4, 28, 30, 35, supporting an approach that does not distinguish between land ownership and land uses:

> Recovery of wild salmonids requires habitat that is functional across the landscape. For example, management of lowland riparian zones in conjunction with those on adjacent uplands is needed to maintain the dynamics of riparian structure and function across the landscape. Other areas that need to be addressed both within and beyond the boundaries of the western Oregon lowlands include roads and sediment, large wood, fish passage, pesticides, and nutrient inputs to streams. We conclude that management practices must be considered on a large spatial scale, among agencies, and across different land uses.

Id. at 2. The IMST noted that "[s]ignificant differences exist in how riparian areas are managed across Oregon land uses and ownerships" for which it could "find no scientific basis" and called, therefore, for a "greater consistency in riparian zone management across land uses[.]" *Id*. at 126.

In addition to the importance of riparian vegetation, the IMST focused on the importance of controlling excess sedimentation. The IMST noted that the "basic processes by which water and sediment move from uplands – via streams, rivers, and estuaries – to the ocean have been highly altered." *Id*. at 1. The IMST called out the role of sedimentation from land use activities that affect stream temperatures, noting the role of channel morphology – including changing the width and depth of a channel – in stream warming. *See, e,g*, IMST Temperature Report at 70, 72. The IMST noted that sediment "is a natural part of forest stream systems," as are the more

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[54] The IMST also recommended an increase in the conifer basal-area requirements and the number-of-trees requirement for RMAs, "with increase in these requirements for medium and small streams regardless of fish presence." *Id.* at 44.

coarse elements such as gravel. It also found that "[r]oads and landslides increase the amount of fine sediment in streams, but do not always add the more coarse elements," concluding that the scientific basis for managing sedimentation from roads and landslides was difficult but "the concepts are known and provide a basis for reasonable conjecture on how to proceed." IMST Forestry Report at 2. For this reason, the IMST noted a major shift in policy was needed to "bring[] roads not constructed to current standards and other hazardous settings in critical locations into compliance with current standards." *Id*. In other words, the IMST has long agreed with EPA and NOAA that high risk logging roads and high risk landslide areas are a significant problem that must be addressed.

In that vein, the IMST proposed two recommendations to address sedimentation from landslides:

> **Recommendation 13.** Retain trees on "high risk slopes" and in likely debris torrent tracks to increase the likelihood that large wood will be transported to streams when landslides and debris torrents occur.
>
> **Recommendation 14**. Continue to apply the current best management practices (BMP) approach to the management of forest lands with significant landslide potential, and develop a better case history basis for evaluating the effectiveness of BMP in this area.

Id. at 5. Current BMPs for forest lands with significant landslide potential are currently applied only to areas where roads and human habitation is at risk, not streams and designated uses.

2. *Reports from the Oregon Department of Fish and Wildlife Including High Intrinsic Potential Coho Habitat Maps*.

Oregon Department of Fish and Wildlife ("ODFW") has developed High Intrinsic Potential Coho Habitat Maps for coastal coho populations.[55] Each of these maps establish for each coho population: (1) winter intrinsic potential (high to low); (2) compare high winter intrinsic potential habitats with land use/land ownership and fish passage barriers; (3) identify the factors for decline (e.g., channel morphology, instream roughness, lack of spawning gravel, excessive fine sediment); (4) identify high quality winter habitat; and (5) map relative spawner abundance. This information is not used by Oregon DEQ in developing its 303(d) list and is not, apparently, used to identify land uses causing or having the potential to cause lack of full support to the designated use of coast coho species for purposes of Oregon's CNPCP.

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[55] ODFW, High Intrinsic Potential Coho Habitat Maps for the Alsea Coho Population Unit, Beaver Coho Population Unit, Coastal Coho Evolutionarily Significant Unit, Coos Coho Population Unit, Coquille Coho Population Unit, Floras Coho Population Unit, Lower Umpqua Coho Population Unit, Middle Umpqua Coho Population Unit, Necanicum Coho Population Unit, Nehalem Coho Population Unit, Nestucca Coho Population Unit, North Umpqua Coho Population Unit, Salmon Coho Population Unit, Siletz Coho Population Unit, Siltcoos Coho Population Unit, Siuslaw Coho Population Unit, Sixes Coho Population Unit, South Umpqua Coho Population Unit, Tahkenitch Coho Population Unit, Tenmile Coho Population Unit, Tillamook Coho Population Unit, and Yaquina Coho Population Unit, available at http://www.dfw.state.or.us/fish/CRP/coastal_coho_conservation_plan.asp

3. Reports from the National Marine Fisheries Service.

The National Marine Fisheries Service has issued reports regarding the Oregon coast coho and the Southern Oregon/Northern California coho, including Scientific Conclusions of the Status Review for Oregon Coast Coho Salmon (Oncorhynchus kisutch), Draft Revised Report of the Biological Review Team, Northwest Fisheries Science Center (May 16, 2011). This review of the Oregon coast coho identifies land uses that are impacting full support of the species. For example it discusses "[s]everal lines of evidence [that] point to the importance of beaver ponds and side channels as principal habitat features for coho salmon," and notes "[t]he potential benefits of beavers and their associated habitats to juvenile coho salmon thus may be dependent upon their location within the landscape." *Id*. at 48. This discussion, as with many in this report, relies upon the refereed technical journals that EPA/NOAA have identified in their guidance as preferred sources. There is no evidence that any NMFS reports or the journals upon which NMFS relies have been used by Oregon to identify land uses causing or having the potential to cause lack of full support to the designated use of coast coho species for purposes of Oregon's CNPCP.

4. The Load Allocations to Nonpoint Sources Established in Oregon's Total Maximum Daily Loads.

Oregon DEQ TMDLs for coastal basins and watersheds consistently determine that zero or near zero impacts from nonpoint sources can be allowed for temperature. *See* Section VI.B.1. There is no evidence that Oregon uses TMDLs in coastal watersheds to identify land uses causing or having the potential to cause lack of full support to the designated use of coast coho or other species for purposes of Oregon's CNPCP.

C. <u>Oregon Fails to Identify Critical Areas to Protect Against Future Pollution Problems.</u>

Identification of land uses and affected waters consistent with CZARA also requires states to,

> identify and map critical coastal areas -- as contrasted to individual uses identified under paragraph (1) of section 6217(b) -- that need additional measures to protect against current and anticipated nonpoint pollution problems. *See* section 6217(b)(2). The establishment of critical coastal areas should focus on those areas in which new or substantially expanding land uses may cause or contribute to the impairment of coastal water quality.

Program Guidance at 20. While states have flexibility in identifying critical areas, Oregon has chosen to use, *inter alia*, "TMDLs and their associated implementation plans [that] can also identify critical areas for special attention. Oregon requires that TMDLs developed for impaired watersheds be accompanied by water quality management plans that specify load reductions, a schedule for meeting load reductions, and management authorities responsible for achieving the load reduction." Input from Oregon at 23. Oregon TMDLs do map watersheds and basins to which they apply but for Oregon's most ubiquitous pollutant – temperature – they

do not identify critical areas within those watersheds. The TMDLs do, however, establish load allocations for nonpoint sources, generally of zero or a heat contribution close to zero. Unfortunately, the combination of the TMDLs and their associated water quality management plans has had no effect on achieving load reductions, in contrast to DEQ assertions to the federal agencies. *See* Section VI.B. for a discussion of this issue. As a consequence, Oregon does not use TMDLs to identify critical coastal areas as required for approval programs under CZARA.

VI. Oregon's Total Maximum Daily Loads do not effectively control nonpoint source pollution in Oregon's coastal watersheds.

Oregon relies on its development of Total Maximum Daily Loads, pursuant to Section 303(d) of the Clean Water Act, to address various requirements associated with CZARA. These include its purportedly addressing nonpoint source pollution contributing to the Lower Columbia River and necessary interpretations of load allocations to sources to ensure they do not cause or contribute to violations of water quality standards. *See* Input from Oregon at 1-2. For example, ORS § 561.191(2) requires that any program or rules adopted by the ODA "be designed to assure achievement and maintenance of water quality standards adopted by the Environmental Quality Commission." In order to know what agricultural sources must achieve in relation to all other sources of a pollutant, a TMDL is necessary. In addition, ODA is authorized to establish an area subject to a water quality management plan when the Commission has established a TMDL. ORS § 568.909(1)(a). Likewise, ODA is authorized to adopt enforceable rules necessary to implement such a plan to "require any landowner whose land is located within an area subject to a water quality management plan to perform those actions on the landowners land necessary to prevent and control water pollution from agricultural activities and soil erosion." ORS § 568.912(2). Oregon relies on the agricultural water quality plans and rules to claim compliance with the CZARA management measures. *See, e.g.,* Input from Oregon at 3. Oregon also claims that it updates its AWQMAPs "to reflect adoption of TMDLs for the basin and to recognize changes in relevant water quality standards and listings in the basin." *Id*. at 4. Oregon purportedly relies on TMDLs to address other nonpoint sources, such as urban sources, *see e.g., id.* at 7, 9, and to identify critical areas for special attention, *id*. at 23. Oregon has said that identifying impaired waters and developing TMDLs are a significant part of its nonpoint source program. *See, e.g*., Oregon DEQ, Oregon Nonpoint Source Control Program Plan: 2000 Update (Oct. 2000) at iii (Key Elements #3 and #5).

The TMDLs interpret applicable water quality standards as they apply to pollution sources in the relevant watersheds. They establish wasteload allocations for NPDES-permitted sources that presumably are incorporated into permits, and they also establish load allocations for nonpoint sources. There is, however, no evidence that the load allocations are implemented in Oregon. For this reason, Oregon's reliance on the TMDL program to achieve nonpoint source control in coastal watersheds is misplaced and EPA's and NOAA's reliance on it is similarly incorrect. In addition, recent events strongly suggest that Oregon does not intend to continue its TMDL program, at least for many relevant pollutants. For example, DEQ has indicated in numerous forums that it will not continue to develop temperature TMDLs to address the state's most ubiquitous pollutant until it develops a new temperature standard, despite the fact that it has applicable numeric criteria. In addition, for many years running, DEQ has declined to apply its narrative sedimentation criterion in developing its 303(d) list of impaired and threatened waters;

it likewise appears to not be able to develop a sediment TMDL for the MidCoast Basin despite its having done so in the past. Finally, Oregon has used all of its temperature TMDLs to change its standards outside the 303(c) process, an approach that was struck down by a federal court. Even so, temperature TMDLs for watersheds in the CZARA boundary have changed Oregon's numeric criteria for temperature in ways that fail to protect the designated uses. As such, the temperature TMDLs both fail to control nonpoint sources of temperature and fail on their face to protect the designated uses.

A. Oregon's TMDL program changes numeric criteria for temperature bypassing section 303(c) federal approval and producing criteria in excess of safe levels for cold-water species.

The temperature TMDLs established for watersheds within the CZARA boundary contain criteria that supersede otherwise applicable numeric criteria with a range of ambiguities. Some TMDLs merely state that they establish "site potential" or "system potential" vegetation whereas others include graphs that establish superseding numeric criteria for modeled streams. All are more or less ambiguous as to whether they supersede temperature criteria across the watersheds, apart from the modeled streams; we have not attempted to capture that aspect of how TMDLs change or do not change temperature standards in these comments. In addition, TMDLs developed in 2004 and thereafter were written to revised water quality standards that included, *inter alia*, maps of spawning habitat and when spawning occurs. The following discussion explains how the TMDLs have affected temperature criteria in the various watersheds and basins of the CZARA boundary area.

The South Coast Basin/Coquille Subbasin/Upper South Fork Coquille Watershed TMDL, approved by EPA March 23, 2001, established "[s]ite potential conditions [that] should result in maximum shading and more natural temperature patterns during other months of the year." Oregon DEQ, Upper South Fork Coquille Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) (Jan. 2001) at 11. DEQ was unable to determine "system compliance with temperature criteria designed to be applied at times and in waters that support salmonid spawning, egg incubation and fry emergence from the egg and from the gravel" but stated that it was "committed to determine the status of this system for this criteria through future monitoring efforts." *Id*. Even so, the TMDL concluded that "[m]eeting the salmonid spawning criteria is therefore an objective of the TMDL." *Id.* This TMDL both changed the applicable water quality standards and concurrently claimed to protect spawning, egg incubation and fry emergence while stating it didn't.

The North Coast Basin/North Coast Subbasin TMDLs (covering the Lower Columbia-Youngs, Lower Columbia-Clatskanie, Necanicum, and Nehalem watersheds), approved by EPA August 20, 2003, established superseding temperature standards as "system potential." *See, e.g.*, Oregon DEQ, North Coast Subbasins Total Maximum Daily Load (TMDL) (June 2003) at 43, Table 10 (sets out "system potential" in kilocalories per day for 10 waterbodies); *id.* at 44-45, Fig. 11 (graphs compare current conditions to system potential in solar radiation).

The North Coast Basin/Wilson-Trask-Nestucca Subbasin/Nestucca Bay Watershed TMDL, approved by EPA May 13, 2002, uses system potential, expressed as effective shade:

"System Potential effective shade levels in the watershed ranged from 50% to 90%." Oregon DEQ, Nestucca Bay Watershed Total Maximum Daily Load (TMDL) (April 2002) at 2. Even so, "[u]nder system potential conditions, 100% of the river miles along mainstem reaches are expected to achieve temperatures less than the standard of 64°F (17.8°C)," meaning that the numeric criteria are not superseded in this watershed. *Id*. at 2.

The North Coast Basin/Tillamook Bay Watershed TMDL, approved by EPA July 31, 2001, establishes system potential shade as the basis for superseding criteria. Graphs demonstrating system potential temperatures for three waterbodies are set out in Figure 13. Oregon DEQ, Tillamook Bay Watershed Total Maximum Daily Load (TMDL) at 42.

The Rogue Basin TMDL, approved by EPA December 29, 2009, established superseding numeric criteria. *See, e.g.,* Rogue River Basin TMDL, Chapter 2: Temperature at 2-30 to 2-32, Figure 2.18 (setting out seven natural thermal potential (NTP) graphs for eight waterbodies showing NTP superseding temperatures as compared to otherwise applicable numeric criteria); Table 2.12 (demonstrating the NTP for eight waterbodies in the Rogue River Basin range from 18.0°C to a high of 26.0°C for the mouth of the Rogue River).

The Rogue Basin/Applegate Subbasin TMDL, was approved by EPA on February 11, 2004, and uses superseding numeric criteria. Oregon DEQ, Applegate Subbasin Total Maximum Daily Load (TMDL), HUC # 17100309 (Dec. 2003); *see also* Appendix A, the Applegate Subbasin Temperature Assessment at 26, Fig. 1-20(a) (demonstrating the superseding "system potential temperature" for the Applegate River exceeds the otherwise applicable numeric criteria).

The Rogue Basin /Illinois Subbasin/Lower Sucker Creek TMDL, approved by EPA on May 20, 2002, used system potential to change water quality standards. *See* Oregon DEQ, Lower Sucker Creek Illinois River Subbasin Total Maximum Daily Load and Water Quality Management Plan (April 2002) at 10 (describing the water quality standards as allowing use of "system potential"); *id*. at 19, Fig. 2 (graph showing system potential shade compared to current shade); *id*. at 27, Fig. 6 (graph showing system potential temperatures compared to current temperatures); *id.* ("However even with temperature reductions on the order of 2.6-3.0° F temperatures at the mouth of Sucker Creek will still exceed 64° F.").

The Rogue Basin /Illinois Subbasin/Upper Sucker Creek TMDL, approved by EPA April 5, 1999, also known as the Sucker/Grayback TMDL, allocated site potential as effective shade. *See e.g.,* Oregon DEQ, Appendix G, Supporting Documentation for Development of Temperature Load Allocation (March 1999) at G-24, Table 6 (site potential effective shade set out for 20 waterbodies, demonstrating percent increase in effective shade required to meet site potential ranging from 1 to 56 percent).

The Rogue Basin /Lower Rogue Subbasin/Lobster Creek Watershed TMDL, approved by EPA on June 13, 2002, used system potential, concluding that even with predicted increases in shade, "the system is not expected to attain the numeric criteria under all environmental conditions." Oregon DEQ, Lobster Creek Watershed Total Maximum Daily Load (April 2002) at 19. Unlike other TMDLs that use such so-called "surrogate measures" for temperature as

width:depth ratio, the Lobster Creek Watershed TMDL does not include such factors as channel morphology, *see id.* at 20 (discusses other considerations but only uses an effective shade surrogate), and claims as a margin of safety the use of current temperatures for tributaries in modeling the predicted temperatures that become the superseding criteria, *see id.* at 25. In other words, the TMDL claims the use of a tributary temperatures that increase the predicted temperature of the so-called natural conditions as a margin of safety intended to protect the environment, despite the result's being that the superseding target temperatures are higher than they otherwise would be. The TMDL also concludes that " the spawning, egg incubation, and fry emergence criteria is not likely to be met during the late summer months and early fall (July, October)," implying superseding criteria. *Id.* at 21.

The Rogue Basin/Middle Rogue Subbasin/Bear Creek Watershed TMDL, approved by EPA October 2,2007, created superseding natural thermal potential temperatures. *See* Oregon DEQ, Bear Creek Watershed TMDL (July 2007) at 22 (natural thermal potential becomes the standard); *id*. at 43, Fig. 10 (graph showing current thermal loading as compared to natural thermal potential); *id.* at 45, Fig. 11 (graph showing current temperatures as compared to natural thermal potential temperatures).

The Umpqua Basin TMDL, approved by EPA on April 12, 2007, establishes natural thermal potential temperatures that supersede numeric criteria. *See e.g.*, Oregon DEQ, Umpqua Basin TMDL at 3-50, Table 3.8 (chart of NPDES permits with natural thermal potential temperatures that range from 21.8 to 27.5°C).

The Umpqua Basin/Little River Watershed/Little River TMDL, approved by EPA on January 29, 2002, established superseding criteria. *See, e.g.,* Oregon DEQ, Little River Watershed TMDL (Dec. 2001) at 21, Fig. 7 (graph showing that "with system potential vegetation in the modeled reaches, about 70% of the stream segments will be at or below the 64 degree F. temperature criterion. . . . If in fact 64 degrees is not achievable after all feasible steps have been implemented . . . the temperature achieved after all feasible steps have been taken will become the temperature criterion for those waters."). Graphs of natural thermal potential superseding temperatures are set out in the TMDL. *See id.*, at 3-55 to 3-80, Figures 3.19 to 3.39.

The superseding temperature criteria established by these TMDLs can be evaluated for their protectiveness of sensitive designated uses of salmonids by looking at the numeric criteria recommended by EPA in its EPA Region X Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards (April 2003).

B. <u>Oregon's TMDL program fails to result in changes to nonpoint source controls sufficient to meet load allocations established in TMDLs and necessary to meet water quality standards.</u>

TMDLs establish loading capacities for waterbodies and watersheds as well as wasteload allocations for point sources and load allocations for nonpoint sources. 40 C.F.R. § 130.2(i). That definition of a TMDL includes that if "nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs." This is one of the

sources of the concept of "reasonable assurance" that has been incorporated in numerous EPA guidance documents pertaining to the approvability of TMDLs and EPA's determination that the TMDL, including its allocations, has been established at a level necessary to implement water quality standards as required by the statute and implementing regulations.

1. *Most Oregon coastal watershed TMDLs establish load allocations for nonpoint sources but their associated water quality management plans fail to support an effective coastal nonpoint source pollution control program.*

The majority of TMDLs developed in Oregon are for the ubiquitous pollutant of temperature. Following is a discussion of each TMDL developed to date within the CZARA boundary area. In nearly all cases, the load allocation to nonpoint sources for heat loading is zero. In the few exceptions, such as the Rogue and Umpqua basin TMDLs, narrative conditions in the TMDL clarify that many if not most streams are allocated a zero increase for nonpoint sources despite some portion of the Human Use Allowance in the water quality standards' having been allocated to nonpoint sources. For TMDLs that involve other parameters, in some cases Oregon's interest in controlling nonpoint sources is evident: there is no load allocation for nonpoint sources. Where the TMDL discussed reasonable assurance that nonpoint source controls would meet the load allocations assigned, it is discussed. In each case, however, the TMDLs establish what it means for nonpoint sources to meet water quality standards in the watersheds to which these load allocations apply.

a. Midcoast Basin/Siuslaw Subbasin/Clear Lake TMDL

The Midcoast Basin/Siuslaw Subbasin/Clear Lake TMDL, approved by EPA on March 16,1992, established total phosphorus limits for two lakes based on the current and future septic systems surrounding the lake. Oregon DEQ, Total Maximum Daily Load for MidCoast-Clear Lake (undated). The TMDL contains "special conditions" prohibiting the issuance of permits for new development and new septic systems until DEQ approves a plan demonstrating how total phosphorus loadings will be achieved and maintained. *See id.* at 3. The plan was to include an assessment of nonpoint source controls, including from "forest harvesting" and "adopted ordinances as necessary to carry out the provisions of the plan. *See id.* at 4.

b. South Coast Basin/Coos Subbasin/Tenmile Watershed TMDL

The South Coast Basin/Coos Subbasin/Tenmile Watershed TMDL establishes load allocations for nonpoint sources. *See* Oregon DEQ, Tenmile Lakes Watershed Total Maximum Daily Load (Feb. 2007) at 129, Table 46 (sets out total tones of sediment for watershed annually for reference derived loads with a margin of safety); *id*. at 129 ("A target of attaining a 50% reduction [of sediment] within the next 25 years has been incorporated."); *see also* Table 47 (an 86 percent reduction in sediment loads is needed to attain reference conditions). The TMDL also addresses excess algal growth, total phosphorus, and chlorophyll a, by establishing a lake water quality target of ≤7.1 ug/l for total phosphorus. *Id*. at 115. Needed reductions at various stations are established in the range of 66 to 81 percent. *See* Table 40 at 116. The TMDL concluded that the "[t]he annual septic system contribution of TP is estimated at about 10-22% of the total watershed inputs. Septic system contributions are expected to be greatest in the summer and

early fall and it is likely that septic inputs constitute an important component supplying nutrients to support blooms of cyanobacteria from late July to October when runoff from the upper watershed is minimal." *Id.* at 121; *see also id.* Fig. 47 (watershed nutrient contributions compared to septic nutrient contributions).

The TMDL mentions that DEQ may consider reasonable assurance of implementation in assigning pollutant allocations but it does not discuss the issue further. *See id.* at 13. The TMDL also discusses the use of adaptive management in which it seeks to conduct a five-year review of the TMDL. *Id.* at 136. There is no evidence that such a five-year review has occurred. DEQ does conclude, however, that with regard to nonpoint sources "it is envisioned that sufficient initiative exists to achieve water quality goals with minimal enforcement." *Id.* at 138. Moreover, DEQ points out that "[i]f a source that is covered by this TMDL complies with its Implementation Plan (for example SB1010 plan) or applicable forest practice rules, it will be considered in compliance with the TMDL." *Id.* at 139. In other words, by its terms the TMDL clarifies that it is adequate for nonpoint sources to maintain the status quo and do nothing to meet the load allocations in order to be deemed in compliance with the TMDL's load allocations. The discussion of how DEQ will determine that "all feasible steps" have been taken (pertaining to old standards) is longer than its discussion of how or if DEQ will be able to get designated management agencies such as ODF and ODA to change their required practices. *Id.*

c. South Coast Basin/Coquille Subbasin/Coquille River and Estuary TMDL

The South Coast Basin/Coquille Subbasin/Coquille River and Estuary TMDL, approved by EPA on July 3,1996, addressed low levels of dissolved oxygen in the Coquille River and the South Fork Coquille River and the North Fork Coquille River. Oregon DEQ, Coquille River & Estuary Water Quality Report, Total Maximum Daily Load Program (March 1994) at 3. Nonpoint sources including erosion, livestock, forest harvests, failing septic systems, and roads were noted. *Id.* at 4. Nonpoint sources were tagged as the cause of violations of bacteria criteria and possibly sediment oxygen demand. *Id.* at D-3. The TMDL concluded that for nonpoint sources, "emphasis should be placed on reducing particulate organic matter and bacteria which are contributed by nonpoint sources" using "existing regulations and strategies." *Id.* at 6. The TMDL stated that "[i]nteragency agreements between the DEQ and the Departments of Forestry and Agriculture will be used to promote Best Management Practices designed to reduce nonpoint sources of pollution[.]" *Id.* at D-3. No load allocations were established for nonpoint sources.

d. South Coast Basin/Coquille Subbasin/Upper South Fork Coquille Watershed TMDL

The South Coast Basin/Coquille Subbasin/Upper South Fork Coquille Watershed TMDL addressed temperature from the "[p]rimary watershed disturbance activities examined within this TMDL include forest management within riparian areas, timber harvest in sensitive areas outside the riparian zone, sediment delivery, road management, historic removal of instream structure, instream mining practices, and consumptive water withdrawals." *Id.* at 7. Agriculture was not evaluated, *id.*, despite its historical effect on riparian areas and channel morphology, *id.* at 8.

"The primary focus was on specific low gradient reaches along the mainstem of the South Fork Coquille and the lower portion of Rock Creek. These are reaches where impacts have occurred and considerable amounts of solar radiation hit the water surface because shading does not reach the stream." *Id.* The TMDL concluded that "no thermal loads are available for allocation to anthropogenic sources in this system," thereby establishing a load allocation of zero for all human sources. *Id.* at 10.

The TMDL includes a section on reasonable assurance of implementation. It cites to the Oregon Forest Practices Act, concluding that "monitoring activities identified . . . will help determine if management actions are sufficiently protective to meet effective shade allocations set by this TMDL and make appropriate revisions that address water quality concerns." *Id*. at 16. The TMDL notes that "[t]here are also many voluntary, non-regulatory, watershed improvement programs (activities) that are already in place and are helping to address the water quality concerns in upper South Fork Coquille Subbasin." *Id.* There is no indication of how long this approach is expected to take to "help[] resolve water quality related legacy issues."

e. South Coast Basin/Sixes Subbasin/Garrison Lake TMDL

South Coast Basin/Sixes Subbasin/Garrison Lake TMDL, approved by EPA on October 7, 1988, established wasteload allocations for total phosphorus and assigned loads to Garrison Lake tributaries. ODEQ, Garrison Lake TMDL. Nonpoint sources were to "be addressed through specified schedules for developing and implementing needed control programs." *Id*. at 1.

f. North Coast Basin/North Coast Subbasin TMDLs

The North Coast Basin/North Coast Subbasin TMDLs concluded that slightly over half of the heating in this basin is from anthropogenic nonpoint sources. ODEQ, North Coast Subbasin TMDLs at 40-41. A load allocation of zero is given to anthropogenic nonpoint sources. *See id.* at 55, Table 11. In terms of effective shade, this looks like the graphs set out at Fig. 16. *Id*. at 59-63. The TMDL demonstrates that achieving system potential shade, which is equivalent to meeting the numeric criteria, requires restoration of channel morphology and near stream vegetation together. *See id.,* Fig. 15 at 37 (graph of model outputs for the Nestucca River individually and together).

The WQMP contains a section on reasonable assurance the TMDL will be implemented. This discussion cites the "statewide efforts to analyze the existing FPA measures and to better define the relationship between the TMDL load allocations and the FPA measures designed to protect water quality." *Id.* at 107. Despite the load allocation to forestry of zero temperature increase, there is no identification of needed practices (e.g., width, height, and density of riparian buffers) to achieve this load allocation. Despite identification of the inadequacy of state lands to provide full shade to meet the load allocation of zero, the WQMP does not discuss what riparian buffers are needed on state lands. *See id.*

The WQMP contains two paragraphs addressing agriculture, asserting that ODA

> plans and rules will be developed or modified to achieve water quality standards and will address the load allocations identified in the TMDL. In those cases when an operator refuses to take action, the law allows ODA to take enforcement action. DEQ will work with ODA to ensure that rules and plans meet load allocations.
>
> * * *
>
> The agencies will establish the relationship between the plan and its implementing rules and the load allocations in the TMDL to determine if the rules provide reasonable assurance that the TMDLs will be achieved.

Id. at 108. As a result, they will "determine if any changes are needed to the current AWQMA rules specific to the North Coast Subbasins." *Id.*

g. North Coast Basin/Wilson-Trask-Nestucca Subbasin/Nestucca Bay Watershed TMDL

The North Coast Basin/Wilson-Trask-Nestucca Subbasin/Nestucca Bay Watershed TMDL established load allocations of zero for the nonpoint sources of agriculture, forestry, urban and future sources. *See* ODEQ, Nestucca Bay Watershed TMDL at 40. The Nestucca Bay WQMP contains a list of "suggested management measures." *Id*. at 196-199. There is no discussion of how the TMDL or the agencies working with the TMDL will assure that the nonpoint source load allocations of zero are met.

h. North Coast Basin/Tillamook Bay Watershed TMDL

The North Coast Basin/Tillamook Bay Watershed TMDL gives temperature load allocations to nonpoint sources agriculture, forestry and urban development of zero. ODEQ, Tillamook Bay Watershed TMDL at 45. It also demonstrates how different land uses – state forestlands, federal forestlands, private forestlands, urban lands, county lands, private agriculture, and mixed lands – are not in compliance with the superseding criteria set out as surrogate measures of effective shade. *See id.* Figure 10 at 36-37 (showing current conditions and system potential in effective shade for five rivers and also showing the land ownership and use on left and right banks of the waterbodies).

Figure 10 of the TMDL demonstrates that, contrary to the assertions of the ODF, state forestlands do not currently have system potential shade. Looking, for example, at the exclusively state forestlands to the left and right of the Miami River from River Mile 12 to River Mile 6.5, and comparing the model outputs of current condition and system potential condition, it is clear that state forestlands do not meet system potential shade, although River Miles 12 to 9 appear to be fairly close. Likewise, River Mile 10 to 9.7 in the Kilchis River appears to be exclusively state lands and its current condition is well under the system potential. The same is true of those areas in the Wilson and Trask Rivers, although transportation is clearly an interference and forested lands of all types are far superior to agricultural lands.

The Tillamook WQMP sets as its goal the achievement of "water quality standards for bacteria in the rivers and Bay by 2010." Tillamook Bay Watershed TMDL, Appendix D: Water

Quality Management Plan at 97. Likewise its goal for temperature and sediment were also set for 2010. *Id.* It would do this through the ODA process, see *id*. at 100, and the improved forest practices associated with a planned (but not completed) Habitat Conservation Plan that would, inter alia, result in: "[i]ncreased widths of riparian vegetative buffers," "[p]rotection on non-fish-bearing streams," and "[i]ncreased density of trees," *id*. at 101. The WQMP included a year-by-year timeline for implementation. *Id.* at 102-103. Its reasonable assurance of implementation relied on vague descriptions of the use of the Forest Practices Act and ODA plans and rules. *Id*. at 108-109. The WQMP also described each action item and assessed an estimated cost for its completion. *See id.* at 118-119; *see also id.* at 124-141. The authors of the WQMP affirmed the TMDL's goal of meeting bacteria standards by 2010 but inserted, in italics, the following statement: "We do not expect instream temperatures that meet requirements of salmonids can be achieved by 2010. We do believe that significant decreases in temperature in smaller streams can accrue in this time frame with ongoing restoration projects currently underway in the Basin. The 2010 milepost will be a good point to look at the progress made and determine the benefits achieved while planning for further projects if appropriate." *Id*. at 122.

i. Rogue Basin TMDL

The Rogue Basin TMDL establishes load allocations for nonpoint sources that are both numeric and superseded by zero. *See, e.g.,* Oregon DEQ, Rogue River Basin TMDL (Dec. 2008) at 2-36 ("Unless otherwise stated within this chapter, the applicable nonpoint source load allocations for Rogue River Basin streams are based upon potential effective shade values presented in this section and the human use allowance (0.04^{o}C cumulative increase at the point of maximum impact). Most streams simulated have no assimilative capacity, which translates into a zero heat load allocation for nonpoint sources. When a stream has assimilative capacity, nonpoint and point sources may receive allocations greater than background.").

The WQMP states that the implementation plans from the designated management agencies will "give reasonable assurance that management measures will meet load allocations, through both quantitative and qualitative analysis of management measures." Oregon DEQ, Rogue River Basin TMDL Chapter 4: Water Quality Management Plan (Dec. 2008) at 4-6. It also states that the agencies will "[d]evelop Best Management Practices (BMPs) to achieve Load Allocations," develop a timeline for implementation, and a monitoring plan to determine whether BMPs are being implemented and they are effective. *Id.* A list of management measures, "not intended to be comprehensive nor prescriptive" is set out in the plan. *Id.* at 4-12 to 4-13. Under reasonable assurance of implementation, DEQ notes that "[f]orest operators conducting operations in accordance with the Forest Practices Act (FPA) are considered to be in compliance with water quality standards," without explaining how the FPA rules will come into compliance with the TMDL's load allocations of zero. Likewise, the discussion of agricultural rules and plans recites the law and discussions voluntary actions without explaining how they will result in achievement of water quality standards and the load allocations of zero. *See id.* at 4-19 to 4-20.

j. Rogue Basin/Applegate Subbasin TMDL

The Rogue Basin/Applegate Subbasin TMDL assigns load allocations of zero to nonpoint sources. *See, e.g.*, ODEQ, Applegate SubbasinTMDL at 3, Table 1. The Applegate WQMP is

different from any other because it is the product of a community effort to integrate the requirements of the CWA and the ESA. *See, e.g.* WQMP at 22. According to DEQ, "[f]or those pollutants identified in the TMDLs for the Little Applegate Watershed, ODEQ has determined that the tools in the matrix are more than adequate to meet the TMDL implementation requirements. These "tools" are the same tools to achieve proper functioning condition under ESA." *Id.* The description of the ODA and ODF efforts, however, are precisely like those in other TMDLs. *Id.* at 23-25.

k. Rogue Basin /Illinois Subbasin/Lower Sucker Creek TMDL

The Rogue Basin /Illinois Subbasin/Lower Sucker Creek TMDL establishes load allocations for nonpoint sources at zero. *See* ODEQ, Lower Sucker Creek TMDL at 29 ("The numeric temperature criteria in Lower Sucker Creek is not expected to be met and therefore no measurable surface water temperature increases from anthropogenic activities are allowed."); *see also id.* at 30, Table 11 (load allocations to agriculture, forestry, urban, and future nonpoint sources all set at "0%").

l. Rogue Basin /Illinois Subbasin/Upper Sucker Creek TMDL

The Rogue Basin /Illinois Subbasin/Upper Sucker Creek TMDL established load allocations presented as increases in effective shade required for 19 waterbodies for which the nonpoint source causing non-attainment is "harvest," and one of which is "mining." *See* ODEQ, Upper Sucker Creek TMDL at G-24, Table 6 (site potential effective shade set out for 20 waterbodies, demonstrating percent increase in effective shade required to meet site potential ranging from 1 to 56 percent). The TMDL included other surrogate measures for, *inter alia*, channel form (width). *See e.g.*, Oregon DEQ, Water Quality Management Plan, Rogue River Basin, Illinois River Sub Basin (March 1, 1999) at 37.

m. Rogue Basin/Lower Rogue Subbasin/Lobster Creek Watershed TMDL

Rogue Basin /Lower Rogue Subbasin/Lobster Creek Watershed TMDL gives load allocations of zero to federal forest lands, private timberlands, agriculture, urban nonpoint sources. ODEQ, Lobster Creek Watershed TMDL at 24, Table 11. The WQMP's discussion is about statewide forest practices and does not describe how the agencies will ensure that the load allocation of zero is met. *See* Oregon DEQ, Chapter 2 Lobster Creek Watershed Water Quality Management Plan (WQMP) (April 2002) at 18.

n. Rogue Basin/Middle Rogue Subbasin/Bear Creek Watershed TMDL

Rogue Basin/Middle Rogue Subbasin/Bear Creek Watershed TMDL establishes load allocations at 50, Table 18 (chart showing percentage increase in shade required for 12 creeks ranging from 17 to 63 percent increase required to attain water quality standards); at 51, Table 19 (chart showing percent reduction in thermal loading for urban areas required by TMDL ranging from 59 to 76 percent) at 2 (nonpoint sources given 0.05°C impact above applicable criteria); at 3 (three irrigation districts given 0.05°C increase in Bear Creek above applicable criteria). *See*

also 2 ("The difference between current load and the loading capacity is 6059 MW-hr/m2, a load reduction of 64%.").

The WQMP refers repeatedly to plans in order to purportedly demonstrate reasonable assurance. *See id.* at 10-12

o. Umpqua Basin TMDL

The Umpqua Basin TMDL assigned temperature allocations to all nonpoint of 0.1°C. *See* ODEQ, Umpqua Basin TMDL at 3-27 to 3-31, Fig. 3.12 (graphs showing current conditions and "nonpoint source loading capacity."). The TMDL concludes that "[a]ttainment of the surrogate measures ensures compliance with the nonpoint source allocations." *Id*. at 3-3. The load allocation for nonpoint sources is 0.1°C but the TMDL notes that "[t]his human use allowance is for anthropogenic heat loads *in landscapes that are not likely to achieve a natural condition*." *Id*. at 3-4 (emphasis added).

The WQMP for the Umpqua Basin TMDL includes long lists of activities for each watershed (e.g., plant trees, encourage BMPs). *See* Oregon DEQ, Chapter 7, Umpqua Basin Water Quality Management Plan (Oct. 2006) at 7-19 to 7-41. Similar lists are set out for bacteria. *Id*. at 7-45 to 7-49. The timeline for implementation is purportedly set out in the plans from designated management agencies. *See id.* at 7-50. The discussion of reasonable assurance of implementation, however, merely cites to statewide efforts to "analyze the existing FPA measures and to better define the relationship between the TMDL load allocations and the FPA measures designed to protect water quality." *Id*. at 7-72. With regard to agriculture, it relies on assertions that the plans and rules will result in meeting the load allocations. *See id.* at 7-71 to 7-72. The WQMP includes the ODA Plan for this basin which includes the following statement:

> When a condition comes to the attention of the Oregon Department of Agriculture, that appears to be a violation of the temperature rule, every practical means shall be used to make a proper determination as to the agricultural activity's impact on stream temperature. Appropriate analysis will be conducted to verify that agricultural activity is resulting in a loss of shade producing vegetation, that the site has the potential for effective shading vegetation; or that warmed irrigation water is returning to the stream.

Oregon Department of Agriculture, Umpqua Basin Agricultural Water Quality Management Area Plan (Jan. 10, 2001) at 16. As has been demonstrated by NWEA in other letters, the key phrase here is ODA's narrow focus on whether current "agricultural activity" is resulting in loss of shade. If the riparian vegetation has already been removed, that fact is not considered an agricultural activity and the land owner is in compliance with the ODA rules.

p. Umpqua Basin/Little River Watershed/Little River TMDL

Umpqua Basin/Little River Watershed/Little River TMDL established load allocations for nonpoint sources at zero. *See* ODEQ, Little River TMDL at 23. It is the only TMDL that purports to establish a table "to define the effective shade wall that is necessary." *Id*. at 19-20

("The table shows the maximum altitude angle of the solar path for a latitude of 43.25° for different aspects. . . . The table can be used to define the effective shade wall that is necessary to fully shade a stream during any time of the year."); *see also id.* at 20 ("The density of the shade wall is also important. To meet the TMDL requirement of 88 BTU $ft^{-2}day^{-1}$ requires that the shade wall block at least 75% of the direct sunlight."). More specific load allocations are set out in Table 3.10 that indicates whether there is any assimilative capacity available and the load allocation for waterbodies in the basin. *Id*. at 3-53.

The implementation plan for forestry states that:

> Currently, many streams within the Little River Watershed significantly exceed the WQS's for temperature, sediment, and pH. The water quality impairment(s) in the Little River Watershed clearly do not result solely from current forestry activities. Agricultural areas contribute significantly to water quality impairment within the watershed. It is also important to note that historic forest practices such as splash dam activities and the widespread removal of wood from streams may continue to influence current stream conditions and riparian functions. In addition, current forest practices occur on forestlands that simultaneously support non-forestry land uses that can affect water quality, such as grazing, recreation, and public access roads.

Oregon DEQ, Little River TMDL – Appendix D (Dec. 2001) at 263. It then proceeds to mention statewide efforts and to set out the justification for current ODF practices for private forest lands. *See id.* at 263-275. After this discussion, the WQMP states that "[c]urrently the ODF and DEQ do not have adequate data to make a collective determination on the sufficiency of the current FPA BMPs in meeting water quality standards within the Little River Watershed." *Id*. at 275. In other words, despite the table set out in the TMDL for a "shade wall" and the TMDL's load allocation of zero to nonpoint sources, it concludes by not determining the practices necessary to create that shade wall or to assure that ODF or DEQ make that determination and implement it through rules and/or orders.

2. *The Oregon TMDL program fails to support an effective coastal nonpoint source pollution control program.*

Despite nearly all of the TMDLs for temperature in Oregon's coastal watersheds' having established a load allocation of zero heat increase for nonpoint sources, as demonstrated above, the load allocations have not been used to determine minimum riparian buffer width, height, and density to achieve the load allocations. As a result, these TMDLs are not used to establish revised forest practices under Oregon's Forest Practices Act but, rather, repeatedly defer to statewide efforts that have proven slow and unproductive. The TMDLs are not used to establish clear rules to guide agricultural landowners on the size of the necessary riparian buffers or even to allow landowners who would like to adopt voluntary measures to know what they should use. The lack of clarity also undermines any enforcement action that ODA might want to take to enforce its riparian rules. The TMDLs are, primarily, a paperwork exercise, not an effective program to control nonpoint sources in coastal watersheds.

Indeed, Oregon TMDLs fail to evaluate whether CZARA management measures are sufficient to meet load allocations for nonpoint sources and fail to establish additional management measures needed to meet load allocations for nonpoint sources. None of the TMDLs completed to date have evaluated the sufficiency of the management measures established by EPA and NOAA in their Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, EPA 840-B-92-002 (Jan. 1993) to meet the load allocations established by the TMDLs. It seems obvious that at the very least the agricultural management measures set out in Chapter 2 of the Guidance are inadequate on their face to meet load allocations of zero heat increase because those management measures are not intended to reduce temperature pollution. Without an analysis of whether the management measures are adequate to meet the most stringent of standards – a heat load from anthropogenic sources of zero – it cannot be assumed that the management measures are, in fact, sufficient.

Even so, none of the agricultural water quality rules or plans in Oregon reflect the load allocations for temperature that have been established by the TMDLs to ensure that agricultural landowners reduce their anthropogenic heat loads to zero. Neither has the ODF revised its forest practices to meet load allocations of zero anthropogenic heat load increase for forestry operations established in the TMDLs. Instead, discussions are underway about rulemaking to respond to a study showing that use of current forest practices causes heat increases of greater than 0.3°C in streams that are covered under the Protecting Cold Water Criterion (i.e., not impaired). But there has been no rulemaking completed and no rulemaking has responded to the prohibition on heat increases over zero in impaired streams that has been established by the TMDLs completed. Based on the failure of any agency in Oregon to take action or to request action by another agency to address the results of the TMDLs, namely the very stringent load allocations, one can only conclude the following: (1) TMDL findings that there was reasonable assurance that nonpoint sources will meet their load allocations such that point sources may be given certain wasteload allocations were based on false assumptions; and (2) CZARA findings that are based on the assertion that TMDLs will result in nonpoint source controls of any kind, and specifically sufficient to meet water quality standards, are also flawed.

The failure of the existing TMDL program to result in clear and enforceable BMPs led to Oregon DEQ's commitment, now repudiated, to develop so-called Implementation Ready TMDLs. As DEQ noted in its most recent nonpoint source annual report, "[d]evelopment of the Implementation Ready Mid-Coast TMDLs requires a significantly higher level of stakeholder engagement to develop *enforceable implementation plans that will be incorporated into the TMDLs.*" Oregon DEQ, Oregon Nonpoint Source Program 2012 Annual Report (June 2013) at 12 (emphasis added). Logically, it follows from this statement that ordinary TMDLs contain no such enforceable implementation plans. Similarly, this report's identification of the need to "[d]evelop BMPs and other measures/rules to address NPS pollution from forestry, new developments, and on-site disposal within the Coastal Zone," in order to address "[o]utstanding conditions related to Oregon's Coastal NPS Pollution Control Plan," demonstrates that ordinary TMDLs do not result in the identification of necessary BMPs to meet load allocations. *Id.* at 19. Highlighting that point is the DEQ's comment that the expenditure of approximately 57 percent of 319 funds for TMDL implementation and 22 percent of funds for BMP implementation did not mean what it implied: "'BMP Implementation' *did not include implementation of BMPs identified* in a TMDL Implementation Plan and '*TMDL Implementation' primarily focused on effectiveness*

monitoring." *Id*. at 21 (emphasis added). In other words, "implementation" does not mean implementation when it comes to assertions about Oregon TMDLs and nonpoint sources.

Apparently what it does mean is that agencies continue to fiddle while Rome burns:

DEQ staff actively implements TMDLs by:

- Revising industrial and municipal wastewater permits to incorporate revised permit limits.
- Working with local communities and the Oregon Department of Agriculture through the Agriculture Water Quality Management Act process to implement the TMDLs effectively on agricultural lands.
- Working with the Oregon Department of Forestry for implementation on state and private forestlands, through the Oregon Forest Practices Act and long range management plans.
- Working with ODA and ODF on quantifying the effectiveness of BMPs to reduce pollutants, such as sediment, temperature, nutrients and bacteria.
- Assisting local governments in developing TMDL Implementation Plans for urban and rural residential areas.

Id. at 24. None of this purported "active implementation" sounds like landowners are being required to reduce nonpoint source pollution sufficiently to meet water quality standards and load allocations or even clearly told what they should do voluntarily. While DEQ goes on to refer to the "plans [that] describe actions that will be taken," DEQ does not even assert that TMDL implementation plans have resulted in the adoption or use of BMPs that have curtailed loading of pollutants. While there may be some local government implementation plans that clearly state what they intend to do, no agricultural plan or forestry plan has resulted in a clear statement of, at a minimum, the necessary riparian buffers to meet the load allocations. In reading the list of tasks completed in 2012, it is striking that the closest DEQ comes to saying that it has actually done something to reduce nonpoint pollution that does not involve going to a meeting or writing a report is the wholly ambiguous statement that DEQ "[e]ncourage[d] protection strategies on a watershed scale basis in the Rogue, Umpqua, Siletz, Tualatin, and Clackamas Sub-basins." *Id*. at 39. It is not clear that this encouragement resulted in any load reductions or that it could be said to constitute a state program to control nonpoint sources sufficiently to meet water quality standards and protect designated uses.

Of course there was the potential for huge progress in completion of the task described as "[d]eveloped road condition metrics and reporting criteria to guide and verify improvements of forest agricultural and public roads in the Mid Coast TMDL watershed." *Id*. Unfortunately, having substantially completed a draft of this effort, DEQ withdrew it from consideration. *See* ODEQ, Draft Sediment TMDL Road Management Outline; Mid Coast Implementation-Ready Sediment Total Maximum Daily Load: Road Network Desired Outcomes & Multi-Sector Approach (draft Jan. 17, 2013); Letter from Gregory Aldrich, DEQ, to Daniel Opalski, EPA, and Margaret Davidson, NOAA (March 27, 2013) ("For the sediment-related IR-TMDLs, DEQ is setting aside its work on potential management measures[.]"). Elsewhere, DEQ referred to the development of Implementation Ready TMDLs as *"specify[ing] which required and enforceable*

BMPs must be implemented by landowners and Designated Management Agencies (DMAs) to reduce sediment pollution and associated toxics, rather than relying solely on plans from DMAs." DEQ, Issue Paper: Sediment Policy Revisions to Reduce Nonpoint Sources of Toxic Pollutants to Oregon Waters; Human Health Toxics Rulemaking at 7 (emphasis added). But, as with the road effort, the elements of an Implementation Ready TMDL that involve specifying practices and issuing enforceable orders to nonpoint sources have been dropped from DEQ's plans. *See, e.g.*, DEQ, Memorandum from Gene Foster, DEQ to MidCoast TMDL LSAC, TWG Members & Alternates Re: MidCoast IR-TMDL Approach Update (March 19, 2013) (no reference to identification of practices or enforceability).

The remainder of DEQ's efforts on nonpoint sources pertain to providing funding to restoration, often of riparian areas. We have no objection to restoration but Oregon and the federal agencies have not evaluated how allowing landowners to continue to degrade riparian areas while spending tax dollars on fixing up other riparian areas can ever hope to result in net watershed improvements.

C. <u>Existing evidence does not support a finding that TMDLs are reducing nonpoint source loads to meet TMDL load allocations.</u>

There are a few types of analysis available that evaluate the progress made in attaining and maintaining Oregon's water quality. Described below are two efforts by the Oregon DEQ to evaluate monitoring data to assess trends and some progress reports issued by local advisory committees to the ODA that assess the success of the nearly all-voluntary agricultural water quality program that exists in Oregon. Neither set of documents support a finding that Oregon has a program in place to control agricultural and logging nonpoint source pollution sufficient to meet water quality standards and fully support designated uses.

1. Oregon DEQ Basin Assessments' analysis.

Oregon DEQ is purportedly developing "basin assessments" for each of the state's basins. It has completed two that pertain to the CZARA boundary. NWEA's comments on the Oregon proposed 2012 303(d) list discusses the Rogue Basin Plan in detail as an example of data and information that DEQ does not use to develop its 303(d) lists. *See* NWEA 303(d) Letter at 50-55; Oregon DEQ, Water Quality Status and Action Plan: Rogue Basin (Sept. 2011).

The North Coast is the other coastal basin evaluated by DEQ. Oregon DEQ, Water Quality Status and Action Plan: North Coast Basin (March 2011). In it, DEQ concluded, *inter alia*, that "studies show that temperature and sediment impacts due to poor riparian condition and land use activities degrade the biological condition and are north coast wide. Equally important to the aquatic community, but affecting only specific sites or reaches are poor dissolved oxygen and related parameters (nutrients, pH, etc.)." *Id*. at 2. With regard to trends, this analysis states that,

> For the North Coast most sites are classified as in "Good" condition. However, the trend at all 10 ambient sites is downward and the primary pollutant responsible is total solids. Other pollutants trending downward include

> Biochemical Oxygen Demand (BOD) and phosphorus. These results corroborate many of the other studies in the basin and point to both stream specific and basin wide management concerns.

Id.; *see also* 19 (Fig. 13). DEQ concedes that one of its major problems in addressing the "basin-wide" sedimentation problem is the "need for guidance in implementing the narrative standard." *Id*. The agency's inability to interpret and apply its narrative criterion is seriously hampering its ability to identify stream impairments, discussed *supra*, and to develop TMDLs, for example in the MidCoast. *See also, id.* at 24-25. This, in turn, hampers the state's ability to address sources of excess sedimentation such as logging roads, other logging activities, agriculture, and nutrient sources. In addition to impacts on fisheries, DEQ notes that "[a]nother indicator of the susceptibility of surface [drinking water source areas] to landscape changes and subsequent sediment delivery is the significant declines identified in Oregon Water Quality Index due to total solids (see OWQI discussion)." *Id.* at 12. Likewise, the report notes that North Coast invertebrates may be more sensitive to sedimentation than other coastal watersheds. *See id.* at 16. And it concludes that "[p]arameters like total solids and fine sediments were frequently in poor condition and posed a significant risk to the biological communities." *Id*. In other words, sedimentation is a major issue and Oregon DEQ has no way of controlling it because it does not know how to use its own water quality standard. Moreover, DEQ points out that "there are no funds, including Oregon Plan funding, available to routinely collect macroinvertebrate or aquatic vertebrate community information in the North Coast. Future biological assessments in the North Coast are in jeopardy and will yield a "data gap" without some investment in this form of monitoring." *Id*.

In its description of the "implementation highlights" in the North Coast basin, DEQ does not state that any improvements have been made to nonpoint source controls. Instead, it talks about plans and restoration projects. Restoration projects are good but they are no substitute for preventing impairments in the first place or properly regulating nonpoint sources. If Oregon intends solely to address water and habitat quality in the North Coast, and elsewhere within the CZARA boundary, by paying for restoration projects to fix impaired areas, it should conduct an analysis and determine how much money and how many years it will take. While we do not believe that Oregon has taken seriously the need to keep cow manure out of the Tillamook Bay and its tributary rivers, at least the Basin Report discusses the use of BMPs to address some bacteria sources. *See, e.g., id.* at 22. The same cannot be said for the nonpoint sources of all the other parameters. With the exception of bacteria, almost nothing is said about regulating agricultural and forestry lands. *See id.* at 17, 21, 28,32 (fleeting references to the existence of ODA and ODF).

2. *Oregon Department of Agriculture Progress Reports.*

The ODA has five areas within the five basins that comprise the CZARA boundary area in Oregon. The local advisory committees that advise ODA on its plans and rules issue periodic biennial reviews. The MidCoast Biennial Review underscores the primary obstacle to the ODA program's ability to effectuate the load allocations established in the TMDLs. The summarizes the impediments:

- The riparian rules are limited to situations with current agricultural activities
- Situations due to legacy issues or invasive species are not regulated and may not lead to improved landscape condition

ODA, Agricultural Water Quality Program Agricultural Water Quality Management Area Biennial Review Summary, Submitted by the Local Advisory Committee, Meeting Dates April 3, and May 8, 2013. We note that this local advisory committee has made observations that mirror our own. It also makes some recommendations for modifications, although to the rules or to the plans is unclear from the summary:

- Remove invasive species from the list of historical and current human influences to site capability
- Include language recommending that landowners take steps to control invasive species and plant native vegetation in riparian areas
- Include available management measures and approved Coastal Zone Act Reauthorization Amendments management measures in the Prevention and Control Measures Section

Id. It is clear from this terse summary that this local advisory committee believes that the ODA's enforceable rule's limitation to current agricultural activities is a significant impediment to the program's ability to achieve water quality standards.

The Inland Rogue biennial progress report noted no impediments but recommended that "[t]he state (ODA) should carry out their responsibility to educate all agricultural landowners about the Agricultural Water Quality Management Program, Plans, and Rules." ODA, Agricultural Water Quality Program Agricultural Water Quality Management Area Biennial Review Summary, Submitted by the Local Advisory Committee, Meeting Date September 24, 2013. This strongly implies the committee does not believe landowners are aware of the ODA plans and rules. This view is shared by the local committee in the Umpqua basin. ODA, NRD Water Quality Program, Agricultural Water Quality Management Area, Biennial Review Summary, Submitted by the Local Advisory Committee, Management Area: Umpqua Basin, Meeting Date September 13, 2012. In its most recent biennial report, the Umpqua committee summarized the impediments as follows:

- There is a lack of awareness of Plan, Rules, and Oregon's Ag WQ Program
- The agricultural community is skeptical that implementation of currently recommended BMPs will actually improve water quality. The science has changed over time. Historically, landowners were advised to remove large wood and willows from streams, not they are told to plant trees and add large wood placements.
- Some water quality standards may not be achievable.
- It takes a while for people to gain trust.
- People are doing good projects to improve water quality on their land and that information is not being adequately captured/recorded.

- There is limited funding for implementation.

Id. This view was also shared by the Curry County committee. ODA, Agricultural Water Quality Program Agricultural Water Quality Management Area Biennial Review Summary, From the Local Advisory Committee, Management Area: Curry County, Meeting Date: November 13, 2012. In its biennial report, the Curry County committee noted a "[g]eneral lack of awareness of the Curry Area Plan and Rules, in the agricultural community and the public. Lack of awareness that the Rules are mandatory, not voluntary." They also noted "[l]imited funding and capacity for implementation." Not surprisingly, they recommended "more outreach with a clear message letting agricultural landowners know about the Plan and Rules and that the Rules are mandatory and enforceable." *Id*. The committee for the Coos-Coquille area concluded in its biennial report that the impediments were comprised of landowner resistance to government help, inability of agencies to coordinate, and failure to record the independent efforts of individual landowners. ODA, Coos-Coquille Agricultural Water Quality Management Area Plan, Coos-Coquille Local Advisory Committee Meets to Review Area Plan (June 2012) at 2. They made no substantive recommendations. Finally, the North Coast committee made no observations about impediments nor made any recommendations; their report is completely authored by staff. ODA, North Coast Basin Agricultural Water Quality Management Area Plan, Local Advisory Committee Meets for Biennial Review (Sept. 2011).

The latter two reports contain summaries of presentations made by DEQ staff on monitoring results. In the North Coast, DEQ evaluated "general conditions and trends in E. coli, dissolved oxygen (DO), total phosphorus (TP), nitrate/nitrite (NO3/NO2), and turbidity." *Id*. at 2. Despite the date on this document, the data evaluated were limited to between 1985 and 2001. Any perceived trends in decreasing concentrations of pollutants were found to not be statistically significant with one exception. It is worth noting that the North Coast is the recipient of a lot more intensive attention given the Tillamook National Estuary Program designation, yet despite the increase in funding, staffing, and analysis water quality has not improved significantly. The Coos-Coquille report also included a monitoring section contributed by DEQ. *See id.* at 4. Not much data appear to have been collected but of those reported, DO levels continue to be low and turbidity readings continue to be high. Reporting on the findings of the Oregon Water Quality Index, DEQ also noted that the Millicoma River site had a ten-year score of very poor with no trends, the Coquille River at had ten year score of fair with no trends, the North Force Coquille had a ten year score of good but decreasing water quality, and the South Force Coos River had a ten-year score of very poor with no trends. Only the Middle Fork Coquille had a ten year score of good with no trends.

Nothing in these reports suggests that Oregon has a program in place to implement nonpoint source controls, including those sufficient to meet water quality standards.

3. Oregon Water Quality Index Trends.

The Oregon Water Quality Index (OWQI) analyzes a defined set of water quality variables and produces a score describing general water quality. The water quality variables included in the analysis are: temperature, dissolved oxygen (DO), biochemical oxygen demand (BOD), pH, total solids, ammonia and nitrate nitrogens, total phosphorus, and bacteria. In

addition to its normal reports, DEQ issued a special report on 31 monitoring sites in Oregon coast coho habitat, using data from 1991 through 2002. Oregon DEQ, Water Quality Report: Ambient Monitoring Stations in the Oregon Coast Coho Evolutionarily Significant Unit (Feb. 2004). The report concluded that,

> Seasonally, water quality tended to be worse during low flow summer periods at sites where the OWQI was poor. For the 30 sites with sufficient data to analyze for trends, 12 sites had significant increases in water quality while the rest (18 sites) showed no significant trend in either direction. Improvements in water quality were usually due to decreases in total solids, nutrients, and fecal bacteria.

Id. at 1. It is unclear how informative data that are over a decade old are. Figure 2 of the report shows the trends mentioned above. A more recent version of this same effort, covering the years 1998 to 2007, showed 52 percent of stream sites in the Oregon coast coho habitat "had at least moderate levels of water quality impairment," with 27 percent of sites with "extensive impairment in a number of variables." ODEQ, Water Quality Report: Ambient Monitoring Stations in the Oregon Coast Coho Evolutionarily Significant Unit for Water Years 1998-2007 (Aug. 2008) at 5. Of perhaps greater importance was that "[f]or the 34 sites with sufficient data for trending analysis, 17 sites had declining water quality trends, 13 had no significant trends and none had improving trends." *Id*. at 4. Yet more recent data, for trends from 2003-2012, show in the CZARA watersheds two excellent stations decreasing, three good stations decreasing, one fair station decreasing, four poor stations increasing, one good station increasing, and one very poor increasing. *See* Oregon DEQ, Oregon Water Quality Index Water Years 2003-2012. As DEQ has observed, in its most recent annual report on the OWQI:

> From 1990 to the years 1998-2000, the state saw a steady increase in the percent of sites with increasing (improving) OWQI scores from 8% to 70% (Figure 3). . . . Then things changed dramatically in 2001, with a 19% drop in the percent of sites showing increasing trends in OWQI (from 70% in 2000, to 51% in 2001). This downward trajectory continued to 2006-2007, where the percent of sites with significantly improving OWQI over the previous 10-year period has hovered between 6 to 9% (Figure 3, Table 1). The last two years, however, have shown a slight increase in the percent of sites in good or excellent condition (12% in 2011, 18% in 2012).

Oregon DEQ, Oregon Water Quality Index Summary Report, Water Years 2002-2011 and 2003-2012 (Feb. 2013) at 10-11. Overall, despite the length of time that some TMDLs have been in place in Oregon coastal watersheds, the length of time the Oregon Plan for Salmon and Watersheds has been in place – having been established in 1997 – there is little to show that water quality is stabilized let alone improving.

VII. Oregon fails to systematically address violations of water quality standards caused by excess sedimentation.

Oregon DEQ has repeatedly announced that while it has water quality standards that address excess sedimentation caused by anthropogenic activities, generally nonpoint sources, it

will not use it for identifying impaired waters or developing TMDLs. *See* Oregon DEQ, Methodology for Oregon's 2012 Water Quality Report and List of Water Quality Limited Waters at 51; *see also* Oregon DEQ, Memorandum from Ryan Michie et al., DEQ to Mid-Coast TMDL Sediment Technical Working Group Re: Questions and answers about sediment standards and use of biocriteria benchmarks (Oct. 17, 2012) ("Currently DEQ does not have a numeric benchmark for sedimentation and therefore has not been actively listing waterbodies on the 303(d) list."). DEQ discussed its lack of a sediment standard and options for moving forward at length during its rulemaking to update its human health criteria for toxics. Oregon DEQ, Issue Paper: Sediment Policy Revisions to Reduce Nonpoint Sources of Toxic Pollutants to Oregon Waters Human Health Toxics Rulemaking (Dec. 29, 2010). In this Issue Paper, after setting out the various narrative criteria that apply to the need to control excess sedimentation, DEQ explained:

> The narrative standards give DEQ authority to regulate bedded sediment, but lack specificity and are difficult to implement without extensive background work to define deleterious effects. Placement of water bodies on the 303(d) list has frequently relied on the best professional judgment of experts. A sediment benchmark workgroup at DEQ created a draft list of numeric benchmarks to improve implementation of the narrative sediment standard, 340-041-0007(12) for use in the assessment methodology for the 2008/2010 Integrated Report. These benchmarks are only draft and were reviewed by the Independent Multi-Disciplinary Science Team (IMST). Although there were no "fatal flaws" in the approach, additional work is needed before its use as an assessment methodology for the Integrated Report. Numeric benchmarks or other refinements to bedded sediment rules would improve assessment and listing, assist the development of TMDLs or Category 4b plans, and speed the improvement of water quality and aquatic ecosystems affected by sediment or sedimentation.
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> In addition, the bedded sediment narrative standard does not address the effects of too little sediment (armoring) in streams. A stream system lacking in large woody debris and coarse sediment (gravel, cobbles, and boulders) will have limited hyporheic exchange, have less habitat for aquatic invertebrates, fish, and amphibians, and have a reduced capacity to moderate high flows. The current narrative sediment standard does not address the conditions of limited LWD and coarse sediment deficiency in many Oregon streams. While the biocriteria narrative (340-041-0011) could theoretically address this issue, it also lacks specificity and does not address negative effects on drinking water, recreation, and industry that may result from armoring and hydrologic regime alterations.

Id. at 4. DEQ concluded the paper with its recommendations, namely to continue to pursue the development of methods by which to interpret and apply its narrative criteria, to use Implementation Ready TMDLs, now abandoned in their original form, to provide comment on agricultural plans and rules, and to review forest practices BMPs after TMDLs are issued. *Id*. at 7.

To date, Oregon has attempted but failed to revise its turbidity criteria and is currently attempting again.[56] It has failed to complete, and there is no proposed date for completing, a method to interpret its sedimentation standard for bedded sediment. DEQ has never, to our knowledge, reviewed forest practices following the completion of a TMDL and given that DEQ is not developing TMDLs for sedimentation because it has no methodology, such BMP reviews would not address sedimentation directly, although they could, in theory, address the effects of sedimentation on parameters such as temperature (e.g., width:depth ratio) if indeed DEQ were continuing to develop TMDLs for temperature. It is not. To our knowledge, DEQ has not gone back to older TMDLs and compared the existing forest practices to the load allocations needed.[57] DEQ's effort to complete an Implementation Ready TMDL[58] in the MidCoast has stalled and, finally, to the extent that DEQ provides comments to the ODA on its plans and rules those comments have not resulted in the plans and rules' corresponding to the TMDL load allocations of zero and near zero for temperature, rendering that method of achieving control of sedimentation from nonpoint sources ineffective.

The lack of a sedimentation standard that Oregon uses or has a methodology for using does, however, undermine some existing agricultural basin rules that are specifically linked to the standard. For example, the Umpqua Basin rules define "[s]ubstantial amounts of sediment (i.e. in excess of water quality standards for sedimentation) moving from agricultural lands into waters of the state as a result of agricultural activities" as an "unacceptable condition." OAR 603-095-0740(3). Because Oregon DEQ has not defined the meaning of "in excess of water quality standards," this key condition pertaining to the effect of nonpoint sources pollution in ODA's rules has no meaning.

VIII. Oregon coast coho and Southern Oregon/Northern California coho.

The status of important designated beneficial uses—living salmon—is emblematic of the

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[56] *See* Oregon DEQ, Water Quality Standards, Turbidity Standards at http://www.deq.state.or.us/wq/standards/turbidity.htm#doc (demonstrating that DEQ attempted in 2005-2006 to revise its standards); *see also* DEQ, DEQ Initiating a revision of Its Water Quality Standard for Turbidity (Feb. 4, 2010).

[57] DEQ did, however, once use a completed temperature TMDL model to evaluate alternative forest practices proposed by the Bureau of Land Management for compliance with Oregon's water quality standards for temperature. *See* DEQ, Comments for the Science Team Review Western Oregon Plan Revision (WOPR) – Draft Environmental Impact Statement (DEIS) Alternatives (Dec. 7, 2007). The analysis concluded that "BLM's conclusion that maintaining 80% effective shade is sufficient to maintain instream temperature and meet water quality standards and TMDL load allocations is not well supported." *Id*. at 7. DEQ calculated that this proposed level of effective shade would cause a 0.5°F increase in temperature which "is considered a violation of water quality standards and exceeds TMDL load allocations for most basins." *Id*. at A-12.

[58] DEQ's definition of an "Implementation Ready TMDL" has also changed over time. At the time of the writing of this Issue Paper, DEQ defined it to include: "specify[ing] which required and enforceable BMPs must be implemented by landowners and Designated Management Agencies (DMAs) to reduce sediment pollution and associated toxics, rather than relying solely on plans from DMAs." *Id*. at 7. *See also id.* at 5 ("Implementation-Ready TMDLs with their site-specific analyses are one mechanism for regulating toxic pollutants bound to fine sediment. Implementation-Ready TMDLs will expand on this by detailing and requiring specific implementation practices to meet the load allocations."). Both the specification of specific practices and the issuance of those practices as enforceable orders have been dropped from DEQ's definition since then.

various and serious deficiencies in Oregon's water quality protection programs. Of the many designated uses in Oregon's coastal watersheds, one is the Oregon coast (OC) coho, *Oncorhynchus kisutch*, listed as "threatened" under the federal Endangered Species Act. 73 Fed. Reg. 7816 (Feb. 11, 2008). Likewise, the Southern Oregon/Northern California coho (SONCC) are also listed as threatened. *See, e.g.*, NMFS, 5 Year Review: Summary and Evaluation of Southern Oregon/Northern California Coast Coho Salmon ESU (Nov. 3, 2011). The primary basis for the threatened status of OC coho is "whether present habitat conditions are sufficient to support a viable ESU, and whether future freshwater habitat conditions are expected to degrade. The present and future status of freshwater habitat for the Oregon Coast coho ESU remains uncertain." 73 Fed. Reg. 7826. Specifically, NMFS found that

> In many Oregon coastal streams, past human activities (e.g., logging, agriculture, gravel mining, urbanization) have resulted in impediments to fish passage, degradation of stream complexity, increased sedimentation, reduced water quality and quantity, loss and degradation of riparian habitats, and loss and degradation of lowland, estuarine, and wetland coho rearing habitats. The relevant issues are whether current habitat conditions are adequate to support the ESU's persistence (that is, whether the species is endangered or threatened because of present destruction, modification, or curtailment of its habitat or range) and whether habitat conditions are likely to worsen in the future (that is, whether the species is endangered or threatened because of threatened destruction, modification, or curtailment of its habitat or range). Regarding the first issue, the 2003 BRT noted uncertainty about the adequacy of current habitat conditions, and this uncertainty contributed to the slight majority finding that the ESU was likely to become an endangered species within the foreseeable future.

Id. at 7828. Moreover, regarding the adequacy of existing regulatory mechanisms to address the scientific concerns, NMFS found that

> Existing regulations governing coho harvest have dramatically improved the ESU's likelihood of persistence. These regulations are unlikely to be weakened in the future. Of the wide range of land uses and other activities affecting salmon habitat, however, some are more amenable to regulation than others. In the range of Oregon Coast coho, the regulation of some activities and land uses will alter past harmful practices, resulting in habitat improvements; the regulation of other activities is inadequate to alter past harmful practices, resulting in habitat conditions continuing in their present state; and the regulation of still other activities and land uses will lead to further degradation (NMFS, 2005a).

Id. Finally, NMFS concluded that "[e]fforts being made to protect the species, at present, do not provide sufficient certainty of implementation or effectiveness to mitigate the assessed level of extinction risk." *Id.* at 7829.

Oregon has not disagreed. In 2005, it found that "[s]tream complexity and water quality were the two most commonly identified population bottlenecks, regardless of whether populations were or were not classified as viable." State of Oregon, Oregon Coastal Coho

Assessment, Part 1: Synthesis of the Coastal Coho ESU Assessment (May 6, 2005) at 6. Specifically, it determined that stream complexity was a "primary bottleneck" for 13 of 21 populations and a "secondary bottleneck" for 8 of 21 populations. *Id*. It determined that water quality was a "secondary bottleneck" for 15 of 21 populations. *Id*.

The state also determined that "[n]ew regulatory and programmatic action by DEQ, ODA, and ODF has been implemented; this action should further improve water quality and habitat supporting the ESU." *Id*. at 7. It also asserted that "[t[he completion of TMDL's for the coastal ESU will also bring more specificity to recovery processes." *Id.* at 30. Given the passage of time since that was written, current assessments demonstrate that if water quality and habitat are improving, and if TMDLs are having an impact on regulatory protections, they are doing so very slowly. However, the report itself cast doubt on the adequacy of the key efforts to address the "primary bottlenecks":

> 6. Analyses by the Coastal Landscape Analysis and Modeling Study (CLAMS) suggest that the future availability of larger riparian trees in forestlands will increase on fish-bearing streams regardless of land ownership. In contrast, the future potential for wood recruitment is likely to vary across forestland ownerships, with the higher potentials on public lands and lower potentials on private lands. Oregon concludes that these projections suggest that future habitat conditions for coho across the ESU will be at least similar to and perhaps improved over current conditions.
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> 7. CLAMS analyses did not consider what is likely to happen to riparian vegetation on agricultural or urban portions of the landscape. The State concludes that modest improvement in riparian vegetation is likely to accrue on agricultural lands under current rules but acknowledges that considerable uncertainty exists regarding specificity of improvement.

Id. at 7-8. Even for forested lands where Oregon has over the decades improved its regulatory controls on riparian vegetation such that it would eventually result in improvements in wood recruitment, the state could not strongly affirm its belief that habitat would improve and for agricultural lands it was compelled to acknowledge that its conclusion habitat was likely to improve was entirely speculative.

Indeed, protection of Coho habitat remains elusive. As described in sections of these comments that concern specific nonpoint source sectors, namely agriculture and forestry, habitat protection and restoration are inadequate to protect water quality including designated uses such as OC coho. Even the Oregon Department of Fish and Wildlife notes the poor quality of coho habitat. *See* ODFW, Oregon Plan for Salmon and Watersheds Oregon Coast Coho Assessment Habitat (May 6, 2005) at 2 ("Our analysis of the current status of instream physical habitat in suggests that, relative to reference conditions, streams in the Oregon Coastal coho ESU have higher levels of fine sediment and lower levels of large wood."). The Oregon DEQ portion of the Oregon Plan, however, demonstrates that that agency does not see its role to ensure a connection between the setting of standards, developing of TMDLs, and monitoring with the adequacy of regulatory controls by itself or the Departments of Agriculture and Forestry. *See*

e.g., Oregon DEQ, Oregon Plan for Salmon and Watersheds Oregon Coastal Coho Assessment, Water Quality Report, Final Report (May 6, 2005) at 2-4 (agency's description of its "commitment" does not include ensuring that nonpoint sources are controlled sufficiently to meet water quality standards and load allocations established by TMDLs); at 5-6 (nonpoint source elements do not include working with other agencies to ensure their practices comply with standards and load allocations); at 7-8 (description of "regulatory mechanisms" does not include control of nonpoint sources); 13-14 (description of TMDL implementation does not include assessment of ODA and ODF rules to assure they are sufficient to comply with load allocations). DEQ discusses and responds to water quality issues raised by NOAA on April 24, 1997. *See id.* at 17. In some instances DEQ has still not responded to the concerns (e.g., weaknesses in SB 1010, *id.* at 17; the lack of "will to promulgate adequate regulatory mechanisms (e.g., enforceable polities to control nonpoint pollution from agriculture, forestry) *id*. at 18; continuing incomplete efforts to develop forest practices to meet water quality standards, *id*. at 18-19; lack of an antidegradation policy for nonpoint sources, *id*. at 19). The fact that these concerns date to 1997, and that DEQ's response to them dates to 2005, and finally that these issues remain unaddressed to this day, demonstrates DEQ's complete lack of commitment to taking the steps necessary to controlling the nonpoint source pollution that is affecting coho water quality and habitat.

As the Oregon Department of Fish and Wildlife has observed, "[t]he quality of freshwater habitat was one factor that was identified as potentially influencing the decline of coho in the ESU (OCSRI 1997). Pools formed by the dam building of beavers (Castor canadensis) may be an important component of high quality habitat for coho." ODFW, The Importance of Beaver (Castor Canadensis) to Coho Habitat and Trend in Beaver Abundance in the Oregon Coast Coho ESU (May 6, 2005) at 1. This report explains the importance of beaver dams to impact the hydrology, channel geomorphology, and water quality of streams and rivers, particularly low-gradient streams, and their importance to coho. *Id*. at 1-4. It also discusses the fact that monitoring of beaver destruction will be more difficult because state regulations allow people to kill beavers on private lands without a permit. *See id.* at 6. It concludes that "[a]lthough the harvest of beaver in the ESU appears to have declined, habitat surveys conducted in the Oregon Coast Coho ESU from 1997-2003 show high annual variability but no significant trend in the occurrence of beaver pools." *Id*. at 9. Despite the importance of beavers to OC coho habitat protection and restoration, Oregon continues with only non-regulatory efforts. *See id*., Appendix 3 at 28 ("The strategy relies on landowners and land managers to voluntarily allow beaver dams to be built or maintained on their properties.").

The current status of listed aquatic species in Oregon, and Oregon's failure to make a dent in recovery efforts for those species, yet again demonstrate that Oregon's water quality protection programs are inadequate and not meeting CZARA standards. The status of listed aquatic species is one—perhaps even the best—indicator of the failure of Oregon's coastal nonpoint pollution control program.

IX. EPA and NOAA have violated the law by failing to withhold CWA and CZMA grant money from Oregon since 1998.

As Northwest Environmental Advocates alleged in the *Northwest Environmental*

Advocates v. Locke lawsuit, EPA's and NOAA's "conditional approval" of Oregon's CNPCP contravenes CZARA and cannot be maintained. Subsections (c)(3) and (4) of CZARA, 16 U.S.C.A. § 1455b(c)(3) & (4), clearly and unambiguously require EPA and NOAA to withhold CWA Section 319 and CZMA Section 306 grant funds from states that fail to submit an approvable program. EPA's and NOAA's refusal to approve Oregon's CNPCP, and those agencies' insistence that Oregon meet conditions imposed on its program in order to gain final approval, demonstrate that EPA and NOAA previously concluded that Oregon failed to submit an approvable program. Given that conclusion, every CWA Section 319 and CZMA Section 306 grant that EPA and NOAA made to Oregon since 1998 has been in clear violation of federal law. Continuing full CZARA-related grant funding to Oregon also separately violates the Clean Water Act and the CZMA. Absent granting full approval to Oregon's CNPCP, which would clearly be an error for the reasons described in these comments, EPA and NOAA cannot continue granting Oregon CWA Section 319 and CZMA Section 306 funds.

Absent a final decision approving Oregon's CNPCP, continued conditional approval of Oregon's CNPCP, or continued full funding of Oregon under CWA Section 319 and CZMA Section 306, would also violate EPA's and NOAA's settlement agreement with Northwest Environmental Advocates. Paragraph 2 of that settlement agreement states:

> If EPA and NOAA make a finding that the State of Oregon has failed to submit an approvable program, the agencies shall, pursuant to 16 U.S.C. § 1455b(c)(3) and (4), withhold CWA Section 319 and CZMA Section 306 grant funds from Oregon beginning in the funding cycles that immediately follow the agencies' finding and in all future years unless and until EPA and NOAA issue a Full Approval Decision Memorandum approving the State's CNPCP without conditions. After May 15, 2014, EPA and NOAA shall not award full CWA Section 319 or CZMA Section 306 grant funds to Oregon based on any conditional approval of Oregon's CNPCP.

Given the widespread and serious water quality impairments identified and discussed in this letter, Northwest Environmental Advocates fully supports EPA's and NOAA's proposed decision to find that Oregon has failed to submit an approvable coastal nonpoint pollution control program. EPA and NOAA must now act—and disapprove Oregon's program—by the May 15, 2014, deadline imposed by the settlement agreement and stipulated dismissal in *Northwest Environmental Advocates v. Locke*.

X. Conclusion.

Thank you for considering and responding to these comments. Please notify the Washington Forest Law Center and Northwest Environmental Advocates in writing of any subsequent action that EPA and NOAA take related to this issue and its December 20, 2013 Federal Register notice. In the meantime, please contact me if you have any questions about these comments or if you would like to discuss these issues further.

Sincerely,

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