

# NORTHWEST ENVIRONMENTAL ADVOCATES



December 20, 2022

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*submitted via:* <https://wq.ecology.commentinput.com/?id=Cipsj>

**Re: Washington's Water Quality Management Plan to Control Nonpoint Sources of Pollution Draft for Public Review, Including Voluntary Clean Water Guidance for Agriculture Chapter 12 Riparian Areas & Surface Water Protection**

Dear Ben:

This letter constitutes the comments of Northwest Environmental Advocates on the Washington Department of Ecology's 2022 319 Plan that includes four chapters of its agricultural best management practices ("BMPs").

Washington's Water Quality Management Plan to Control Nonpoint Sources of Pollution Draft for Public Review

Lack of comments on portions of the plan does not imply that NWEA agrees with the statements therein or the completeness of this document. We incorporate by reference the following two documents: (1) Letter from Nina Bell, NWEA, to Joelle Gore, National Oceanic and Atmospheric Administration ("NOAA"), Re: *Coastal Nonpoint Pollution Control Program: Intent to Find that Washington has Satisfied All Conditions of Approval Placed on its Coastal Nonpoint Pollution Control Program* (Sept. 14, 2020); (2) Letter from Nina Bell, NWEA, to Ben Rau, Ecology, Re: *Draft Washington's Water Quality Management Plan to Control Nonpoint Sources of Pollution* (June 5, 2015). These are documents that Ecology has in its possession and are therefore not attached. These previous comments continue to apply to Washington's nonpoint source program because, as the slight amount of editing of the 2022 219 Plan demonstrates, not much has changed.

Plan at 7–8: The draft Plan does not state that in describing how Ecology updated its Plan, Ecology included (or in some cases did not) the binding commitments made by Ecology in

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*Northwest Environmental Advocates v. U.S. Department of Commerce*, Case No. C16-1866-JCC (Stipulated Order of Dismissal) (Jan. 8, 2021). For example, the red-lined addition on page 41 comes from this document.

Page 8: Lack of riparian protection is a source that contributes to nutrient pollution and dissolved oxygen depletion that should be included in Table 1.

Page 9: Table 2 is missing that mercury from atmospheric deposition enters waterways from agriculture and logging. *See, e.g.*, EPA/Oregon Department of Environmental Quality’s Willamette River basin Total Maximum Daily Load (“TMDL”) for mercury (demonstrating that these nonpoint sources are the majority source of mercury loadings to the Willamette).

Page 13b: Ecology states that “[t]he goal for this chapter is to develop guidelines for riparian management zones that, when implemented, will help restore and protect Washington State waters from agricultural pollution and facilitate the achievement of water quality standards.” However, the commitment by Ecology in *NWEA v. Commerce* for riparian area BMPs specifically is “to meet water quality standards to the extent possible.” “Facilitating the achievement” and designing practices to meet water quality standards is not the same thing. Not only does Ecology need to change its “goal” for the riparian chapter, it needs to conform its goal to its binding commitments.

Page 16: We appreciate Ecology’s addition of the *Lemire* case. Ecology should also include information on the number of enforcement actions it has taken since its last plan, evaluate and explain the reasons why it has and has not used enforcement as a tool to address nonpoint sources, and explain how it plans on using enforcement action in the years covered by the Plan. For example, enforcement is a key component of the Straight-to-Implementation (“STI”) alternative to TMDLs. If Ecology does not use enforcement, what effect will it have on the efficacy of the STI approach?

Page 16: Ecology states that it has enforcement authority with regard to logging. Has it ever used this authority?

Pages 17–18: Please inform the readers of how well the regulation of the dairy program has been working.

Pages 18–19: Please inform the readers of how well the on-site septic program has worked with regard to upgrading septic systems to control nitrogen pollution in Puget Sound. Does Ecology agree or disagree with NWEA’s assessment of this program set out in pages 67–73 of the above-referenced NWEA comments on the EPA/NOAA proposed CZARA approval, in particular its discussion of the Marine Recovery Areas?

Page 26: Please amend the list of items that the Clean Water Act supports with regard to nonpoint sources to include the requirements set out in the statute and discussed in the following pages, including not just “plans and programs” but also the identification of best management practices.

Page 31: Add in the recent history of Washington's CZARA approval, namely that EPA and NOAA held a public comment period on the proposed approval and the date of that proposal.

Pages 33–34: Ecology should include here under the Federal Farm Bill Programs (or elsewhere in the Plan) an explanation of how those programs do and do not meet the minimum BMPs that Ecology and its staff believe are necessary to meet water quality standards. Does Ecology believe that these conservation practices promoted by the federal agencies and their programs fully meet the need to control nonpoint source pollution to Washington waters?

Page 41: It is incorrect for Ecology to assert that “our TMDL approach . . . [d]esignates suites of BMPs for various land-use categories.” It may in the future but it has not done so to date.

Page 43: It is not enough for Ecology to state that “[i]f implementation [or TMDLs] stalls, for instance because of recalcitrant landowners, Ecology will utilize enforcement tools as necessary and appropriate.” The Plan should evaluate whether this statement is an accurate reflection of the way in which Ecology has conducted its nonpoint program in the recent past and explain how it will be the same or different in the future.

Page 44: The description of the STI process omits commitments made in the *NWEA v. Commerce* case, namely how it will conduct “watershed evaluations,” which is a term used to describe the STI process, in item nos. 2.a.i (“Washington shall . . . use the BMPs for . . . TMDL alternatives, including but not limited to Straight To Implementation projects, with nonpoint components” and 2.d.i–iv (“When pollution sources are identified and property operators are contacted, Washington shall discuss and recommend BMPs consistent with the agricultural BMP guidance”; “Washington shall track what BMPs are implemented at those sites”; “Washington shall provide training to its field staff on how to use the BMP guidance”; and “Washington shall develop outreach materials for each set of BMPs that can be used by field staff to assist in Washington’s communication and recommendation of BMPs.”). Note that on page 46 in the discussion of TMDL alternatives, Ecology has added the following language: “Ecology will discuss and recommend BMPs consistent with the Voluntary Clean Water Guidance for Agriculture when addressing agriculture sources.” This captures some but not all of the commitments that Ecology has made for TMDL alternatives.

Page 45: Ecology’s reference to the East Fork Lewis River Alternative Restoration Project is not consistent with its description of “Other Water Clean-up Projects in Advance of a TMDL.” Specifically, at 196 pages long, it hardly meets the description of such projects: “To reach that goal, like STIs, the focus is on doing, not planning.”

Page 46: See comments for page 44.

Page 49: Why is there only a reference to integrating with TMDLs instead of also STIs and other TMDL alternatives?

Pages 49–51: The description of the new tracking system is impressive. The Plan needs to describe how the tracking system will improve Washington’s poor record of achieving nonpoint

source controls. Tracking on its own does not help the designated uses of human health protection and aquatic life.

Page 54: Ecology correctly reflects its commitment to “use the Voluntary Clean Water Guidance when developing education and outreach materials related to agricultural sources” but it fails to state if and when it will “develop outreach materials for each set of BMPs that can be used by field staff to assist in Washington’s communication and recommendation of BMPs,” as it committed to do in *NWEA v. Commerce* item 2.3.iv.

Page 56: Noting typos: “The water quality program made changes to our nonpoint **fuunding** based on feedback”; “ There are no longer match **requirements** for our nonpoint source funding.”

Pages 55–56: The one thing that is most important to remedy environmental injustice is to actually implement nonpoint source controls to improve water quality, support healthy populations of fish and shellfish, and support the quality of fish and shellfish consumed by people. There is nothing in this section that makes that commitment. That suggests that Ecology believes the status quo is sufficient to address environmental injustice (as well as climate change, threatened and endangered species, and tribal treaty rights).

Pages 62–71, 110: Ecology needs to include the existing logging practices in this 319 Plan Update so that the plan meets statutory requirements and so that the practices are reviewed by EPA when it evaluates this Plan.

Pages 72–74, 111: Have there been any instances where Ecology has seen that since the Washington Department of Agriculture took over the regulation/oversight of Washington’s Dairy Nutrient Management program, water quality has deteriorated?

Pages 74–77, 111: Is Ecology aware of any instances when Marine Recovery Area (MRA) plans have been prepared if a local health jurisdiction identifies any areas where nitrogen has been identified as a contaminant of concern. *See* WAC 246-272A-0015 (1)(b)(ix). Why is this not discussed in the Plan?

Page 78: We understand that Ecology has not devoted sufficient time to updating this plan but it is peculiar in the extreme to assert three relevant 2016 goals and then to have made no determination of whether those goals were met.

Page 81: It is sad that Ecology can say nothing more about nitrogen reductions from nonpoint sources that will be needed to meet water quality standards in Puget Sound. You might at least note the very significant percentage of anthropogenic nitrogen that Ecology believes will be necessary to reduce from nonpoint sources.

Pages 84–85, 86–87, 88–90, 97–98: Sections on recovering wild fish, climate change, environmental justice, and Washington’s tribes could be improved by a more clear focus on the most important nonpoint source control action that can be taken: protecting and restoring riparian

areas. Ecology could reference its obligation to, for the agricultural BMPs, “establish necessary widths, and base riparian buffer plant composition guidance on mature vegetation communities composed of native species and consistent with ecological site potential, to meet water quality standards to the extent possible[.]” *See NWEA v. Commerce* item no. 2.1.iv. It should also describe how it will vastly increase its efforts to ensure that riparian areas are protected and replanted with sufficient vegetation to meet water quality standards. Business as usual is not adequate.

Pages 153–167: Because Ecology does not discuss the Clean Water Act section 319(h) annual work plans and annual reports in its Plan, it has not included the commitments made in *NWEA v. Commerce*, item nos. 2.e, f that pertain to these respectively. Please amend the Plan accordingly. As it stands, the only reference to these requirements is on page 166 (“Annual Section 319 project reports document accomplishments in aligning programs.”). This is not adequate.

Page 221: Please include an “Appendix I” with the current logging practices in order to meet the statutory requirements for a 319 plan.

#### Voluntary Clean Water Guidance for Agriculture Chapter 12 Riparian Areas & Surface Water Protection

These comments do not constitute a complete review of the document as due to its length and the timeframe for public comment, we were unable to conduct a full review.

Page 14c: In this chapter, Ecology establishes riparian buffer minimum requirements based on “riparian forest potential,” yet fails to include a definition of that phrase in the definition section. For example, at page 18b, Ecology states: “These default RMZ widths do not apply to streams without riparian forest potential; RMZ widths for these streams are primarily based on water quality protection.” In several places, such as page 24b, Ecology discusses what this means due to adjacent wetlands, but it is otherwise silent on how to address the issue. *See, e.g.*, page 36b. Instead, it uses the phrase “other streams without riparian forest potential (eastern WA).” *Id.* (emphasis added). Elsewhere, it refers to Eastern Washington waters “without riparian forest potential due to climate conditions.” *Id.* at 35b (emphasis added). On page 42b, the guidance states: “These default RMZ widths do not apply to streams without riparian forest potential; RMZ widths for these streams are primarily based on water quality protection and are presented later in the document (see pages 83-91).” Pages 83–91 include a summary of buffer size and its relationship to phosphorus removal/trapping and a portion of sediment in runoff. These pages do not cast any clarity on what the RMZ widths should be for streams that Ecology deems to be “without riparian forest potential,” a term that is never defined. (A word search does not identify alternative pages.) Tables 11–13, all of which pertain to eastern Washington streams “without forest potential due to climate conditions” include footnote 1, which reads: “See guidelines that precede tables for determining: when to include a filter strip and how to determine its width; when and how to modify zone widths; what vegetation should consist of in a given zone; and what activities should or should not occur in any given zone.” This footnote does not clarify when a stream fits into this approach and frankly refers to information that isn’t readily identified. It would be helpful in this regard for the guidance to be specific as to which

“guidelines that precede tables” Ecology refers. For example, does it mean the material on pages Pages 22b–24b: The guidance states: “A site potential (SP) plant community is composed of native vegetation species and has a plant density that would occur in a minimally managed condition on a site, e.g. a Douglas fir forest community, Black cottonwood forest community, Sandbar willow community, etc.” This requirement for use of native species is repeated elsewhere, e.g., page 23b: “Use current Level IV EPA ecoregions, NRCS Land Resource Area designations, and/or other resources to help determine appropriate native plant communities.” On page 24b, Ecology states:

It is not feasible to provide detailed species mixtures and plant density recommendations for all of the potential native riparian vegetation communities throughout the state. Suggestions on resources to consult for determining the appropriate native species mixtures and plant densities for a given site are provided in Ecology’s RMZ Implementation guidance.

This is plainly inconsistent with the commitments made by Ecology in *NWEA v. Commerce*, item no. 2.a.iv (emphasis added):

For the BMPs involving riparian areas, Washington shall establish necessary widths, and base riparian buffer plant composition guidance on mature vegetation communities composed of native species and consistent with ecological site potential, to meet water quality standards to the extent possible[.]

In addition, Ecology makes no effort to evaluate whether its recommended use of the “NRCS ecological site descriptions and/or an equivalent assessment of the potential natural vegetation community,” *see* draft Guidance at 15b, is sufficient to meet the goal of the BMPs. It merely assumes that they are sufficient, making a mockery of the science-based evaluation the agency has purportedly completed.

Pages 29b–31b: In a section titled “Western WA- Additional Buffer Configuration and Modification Recommendations” it is absolutely unclear what applies where Ecology, a landowner, or another agency determines that a stream lacks riparian forest potential.

Page 99b: The guidance states that “[t]he core zone of the RMZ should be vegetated with a native plant community consistent with the ecological site potential, as discussed later in this guidance.” *Id.* (emphasis added). But there is no discussion about “ecological site potential” later in the guidance other than page 126b that identifies site potential tree heights and suggests that where there are “no data” the area is “unsuitable for trees.” If the reference to what comes “later in the guidance” is to the entire guidance, that’s simply another way of Ecology’s saying nothing about what “ecological site potential” means.

Page 126b: Ecology defers to NRCS yet again in its description of “ecological site conditions are unsuitable for trees (e.g., arid sub-regions of the Columbia Plateau), or where current and expected future land use was judged by NRCS to never allow trees to become established (e.g., intensive agriculture).” There is no clarity as to whether Ecology is actually adopting the NRCS

conclusion about intensive agriculture (and other views) and no explanation by Ecology of why such streams would be excluded from meeting water quality standards.

However, to return to the central issue, which is what defines a stream “without riparian forest potential,” we want to make the following points. First, Ecology in its guidance and in some of its advisory committee meetings (where it referred to “natural riparian areas”), appears to take the position that in much of Eastern Washington there is no “riparian forest potential.” For example, in the guidance, Ecology states that “for western Washington in particular, the majority of agricultural lands adjacent to buffers were historically forested.” *Id.* at 111b. Second, Ecology is mistaken in this assumption and hinting that such potential does not exist and therefore drastically different guidelines apply—*compare* zones in “preferred option” and tables at 32b–34b with those on 35b–36b—because Ecology ignores the historic role played by beavers in retaining water in streams and creating the very conditions required for riparian forest potential.

Beavers, however, are not mentioned with regard to determining whether streams in Eastern Washington (or anywhere in the state) have “riparian forest potential.” A key issue is beaver occupancy, which was historically widespread. Beavers are the only efficient, cost-effective, and proven method of improving stream flow, hydrology, and habitat conditions in the highly damaged agricultural areas of Eastern Washington to support riparian forests in areas that have “climate conditions,” another phrase not defined by Ecology. But rather than look at the historic riparian forests that protected water quality and the key role beavers played in supporting those forests, Ecology uses the concept of “climate condition” as a get-out-of-jail card.

Instead, the whole of the guidance mentions beavers exactly once, at page 102b (“beaver ponds can have reach-scale effects upon stream temperatures, e.g. by influencing shading, water surface area, water velocity, etc.”) as compared to the literature review that includes, for example, a summary of Kozlowski *et al.*, Guidance at 235b, who are described as noting an “improvement in hydrology resulting from increased beaver dam occurrence.” Thereafter, the only references to beavers in the literature review are how they can cause damage to unprotected restoration seedlings. It’s as if Ecology intentionally put on blinders to an entire area of study in the field of restoration ecology.

Ecology needs to better understand that it incorrectly implies that eastern Washington has no riparian forest potential. We suggest that, to start, Ecology read the following, which we will not summarize here: (1) NMFS, *Oregon Beavers Engineer Better Fish Habitat, More Fish* (July 14, 2016) available at <https://www.fisheries.noaa.gov/feature-story/oregon-beavers-engineer-better-fish-habitat-more-fish>; (2) USDA, Forest Service, Pacific Northwest Research Station, Forestry Sciences Laboratory, *Using Beaver Dam Analogues for Fish and Wildlife Recovery on Public and Private Rangelands in Eastern Oregon* (July 2019); (3) Christian Dewey, *et al.*, *Beaver dams overshadow climate extremes in controlling riparian hydrology and water quality*, *Nature Communications* (2022) 13:6509; T.J. Beechie *et al.*, *Channel incision, evolution and potential recovery in the Walla Walla and Tucannon River basins, northwestern USA*, 33 *Earth Surf. Process. Landforms* 784-800 (2008); (5) Jeff Baldwin, *Institutional Obstacles to Beaver Recolonization and Potential Climate Change Adaptation in Oregon*, 79 *Yearbook of the Association of Pacific Coast Geographers* 93-114 (2017); (6) Rita K. McCreesh, *et al.*,

*Reintroduced Beavers Rapidly Influence the Storage and Biogeochemistry of Sediments in Headwater Streams (Methow River, Washington)* 93 Northwest Science 112-121 (2019); and (7) Nicholaas Bouwes, *et al.*, *Ecosystem experiment reveals benefits of natural and simulated beaver dams to a threatened population of steelhead (Oncorhynchus mykiss)*, Scientific Reports, 6:28581, DOI: 10.1038/srep28581 (2016). There is a great deal more literature on the historic role beavers played in maintaining riparian forests and how they can restore the streams that agricultural uses have destroyed.

Moreover, we urge Ecology to read these documents and then follow the science by including as agricultural BMPs the actions by landowners that will return beaver occupancy to streams, namely preventing: mechanical destruction of bank dens and tunnels by grazing cattle; destruction of banks' sedimentation and root structure needed for bank dens and refuge holes; stream dewatering below 2.5 feet; trapping or killing of established beavers, pregnant beavers, adult beavers caring for young under two years of age; and high velocity stream flows that blow out beaver dams—i.e., requiring the installation of beaver dam analogues (“BDAs”) for mitigation. The omission of beaver-related actions by landowners is a huge oversight by Ecology in its agricultural BMP guidance. This omission also renders the guidance inconsistent with the commitments made by Ecology in *NWEA v. Commerce*, item 2.a.iv (emphasis added):

For the BMPs involving riparian areas, Washington shall establish necessary widths, and base riparian buffer plant composition guidance on mature vegetation communities composed of native species and consistent with ecological site potential, to meet water quality standards to the extent possible[.]

Determining and achieving “ecological site potential” requires Ecology’s evaluation of and identifying the conditions for restoring beavers on the landscape.

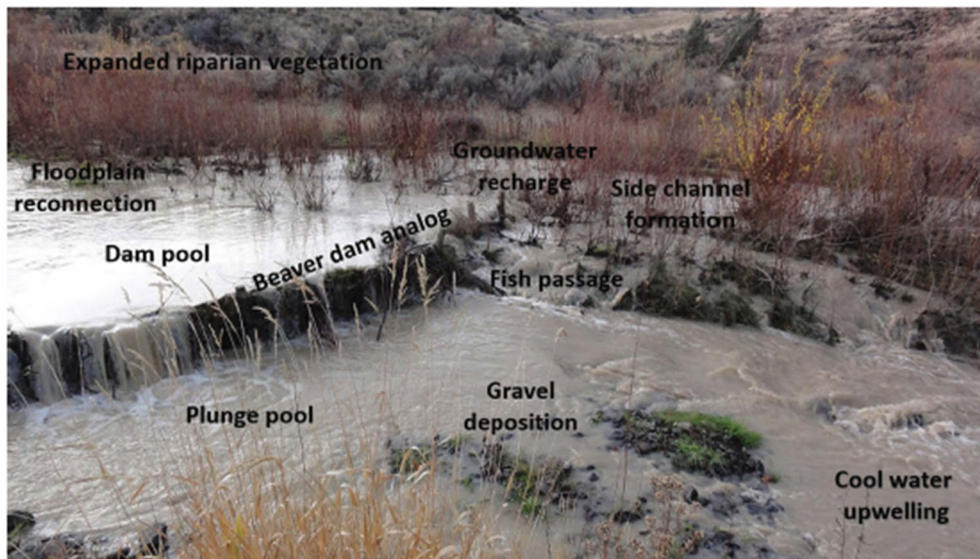


Figure 3. Example of a beaver dam analog (BDA) annotated with some of the expected responses.

(From Bouwes *et al.*)



Voluntary Clean Water Guidance for Agriculture Chapter 10 Livestock Management: Pasture & Rangeland Grazing

The comments on the riparian chapter apply to the pasture and rangeland grazing chapter, particularly with regard to incorporating the historic occupancy of beavers into both the analysis and the recommended BMPs.

Conclusion

As Narcissa Whitman described, prior to the virtual eradication of beavers by the early 1900s:

*We descend a very steep hill in coming into Grande Ronde, at the foot of which is a beautiful cluster of pitch and spruce pine trees, but no white pine like that I have been accustomed to see at home. Grande Ronde is indeed a beautiful place. It is a circular plain, surrounded by lofty mountains, and has a beautiful stream coursing through it, skirted with quite large timber. The scenery while passing through it is quite delightful in some places. We nooned upon Grande Ronde river.*

*The Letters and Journals of Narcissa  
Whitman, August 28th, 1836*

Sincerely,



Nina Bell  
Executive Director

Attachments:

NMFS, *Oregon Beavers Engineer Better Fish Habitat, More Fish* (July 14, 2016)  
available at <https://www.fisheries.noaa.gov/feature-story/oregon-beavers-engineer-better-fish-habitat-more-fish>

USDA, Forest Service, Pacific Northwest Research Station, Forestry Sciences  
Laboratory, *Using Beaver Dam Analogues for Fish and Wildlife Recovery on Public and  
Private Rangelands in Eastern Oregon* (July 2019)

Christian Dewey, *et al.*, *Beaver dams overshadow climate extremes in controlling riparian hydrology and water quality*, *Nature Communications* (2022) 13:6509

T.J. Beechie *et al.*, *Channel incision, evolution and potential recovery in the Walla Walla and Tucannon River basins, northwestern USA*, 33 *Earth Surf. Process. Landforms* 784-800 (2008)

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Rita K. McCreesh, *et al.*, *Reintroduced Beavers Rapidly Influence the Storage and Biogeochemistry of Sediments in Headwater Streams (Methow River, Washington)* 93 *Northwest Science* 112-121 (2019)

Nicholaas Bouwes, *et al.*, *Ecosystem experiment reveals benefits of natural and simulated beaver dams to a threatened population of steelhead (*Oncorhynchus mykiss*)*, *Scientific Reports*, 6:28581, DOI: 10.1038/srep28581 (2016)