



Executive Summary

Oregon Department of Forestry & Oregon Department of Environmental Quality



Memorandum of Understanding: Improving Water Quality

Oregon laws require the Departments of Environmental Quality and Forestry to protect and restore water quality in forests under state jurisdiction. These forests are privately owned, or owned by the state, counties, municipalities, and non-profits. In 1998, DEQ and ODF signed a Memorandum of Understanding about how the agencies would work together. It laid out how they would support each other's programs to protect, restore, and maintain water quality.

The 1998 MOU focused on streams that do not meet Clean Water Act standards. The Clean Water Act uses a pollutant measurement called Total Maximum Daily Loads, or TMDLs. TMDLs identify the maximum amount of a pollutant a body of water can receive and meet the water quality standards. In the late 1990's DEQ had a few clean water plans with set TMDLs. These types of plans were relatively new in Oregon and nationally.

Since 1998, the agencies worked together on a number of projects and policies. However, the forest industry, science about water quality, and regulatory programs have changed. Given these changes, the agencies updated the MOU to clarify their roles, responsibilities, and joint work.

The prior MOU relied on state laws and forestry's administrative rules for implementing TMDLs on forestlands. In March 2021, the Oregon Department of Justice reviewed the MOU and each agency's legal authorities. DOJ clarified each agency's state and federal authorities. The updated MOU reflects current law and agency authority. Both agencies want to continue the joint efforts to protect, restore, and maintain water quality under the Clean Water Act. The MOU sets the path for doing so. The updated MOU:

- Focuses more on meeting TMDLs based on the Clean Water Act requirements.
- Explains each agency's authority for setting and implementing TMDLs.
- Sets how ODF and DEQ will work together within their respective authority to complement each agency's work to protect, restore, and maintain water quality.
- Clarifies the process for DEQ and its commission to work with the ODF and its board on making water quality rules and setting voluntary measure options related to the topics covered in the MOU.
- Commits both agencies to ensure ODF's data and analyses are used to strengthen TMDLs.

The updated MOU will be signed later this year or early next year and replace the 1998 MOU.

Sincerely,

Richard Whitman, Director
Oregon Department of Environmental Quality

Nancy Hirsch, Acting State Forester
Oregon Department of Forestry



Aug. 31, 2021 DRAFT

**Memorandum of Understanding:
Oregon Department of Forestry – Oregon
Department of Environmental Quality
Collaboration on Achieving Water Quality Goals**



Contents

Preamble 2

 History of DEQ-ODF collaboration..... 2

I. Introduction 3

 I.1 Vision & Purpose..... 3

 I.2 Background..... 3

 DEQ water quality authorities 3

 ODF water quality authorities..... 4

 Nexus of DEQ and ODF water quality-related authorities..... 4

 I.3 Elements Out of Scope 5

II. Interagency Coordination..... 5

 II.1 Principles of Interagency Collaboration..... 5

 II.2 Agency Roles 6

 II.2.A DEQ-Led Water Quality Processes..... 6

 II.2.B ODF-Led Water Quality Processes 10

III. Mechanics of MOU..... 11

 III.1 Dispute Resolution..... 11

 III.2 MOU Action Plan 11

 III.3 MOU Amendment and Review processes 11

References..... 13

Appendix 1..... 14

Appendix 2. Temperature TMDL Replacement Schedule 23

Appendix 3. Flowchart Overview: TMDL Development Process and DEQ/ODF Collaboration 25

Preamble

The Oregon Department of Environmental Quality (DEQ) and the Oregon Department of Forestry (ODF) have responsibilities and requirements to protect and restore water quality on non-federal forest lands in Oregon. These responsibilities originate in state and federal law, and the two agencies desire to describe clearly how they will work together to carry out those responsibilities.

History of DEQ-ODF collaboration

ODF and DEQ (the Agencies) signed a Memorandum of Understanding (MOU) in 1998 focused on improving water quality on waters within non-federal forest lands that were not meeting water quality standards. The “water quality limited streams” were identified by DEQ, and that designation was approved by the federal Environmental Protection Agency (EPA) under section 303(d) of the federal Clean Water Act (CWA). The CWA requires states (or the EPA) to improve water quality on water quality limited streams through the preparation and implementation of “Total Maximum Daily Loads” (TMDLs), which identify what pollution reductions must occur for waterways to meet water quality standards. In 1998, DEQ had developed few TMDLs, and those efforts were nascent in Oregon and nationally. Since then, the Agencies have coordinated on several projects and policy efforts. Additionally, there have been substantial changes in the forest industry, scientific understanding regarding water quality, and regulatory programs. Given both the length of time since the 1998 MOU, and the evolution of the context (i.e., regulatory programs, policy, and sociopolitical), the Agencies have developed a new MOU to describe in a clear and transparent way how the Agencies will work together effectively and efficiently. This MOU replaces the 1998 agreement.

The Agencies have different legal and policy frameworks¹ guiding their operations, within the broader requirements of the CWA. The legislature has tasked the Environmental Quality Commission and DEQ with implementation of the CWA. DEQ’s responsibilities are driven largely by federal statutes and rules. ODF operates largely under state statute and rules that have specific requirements in order to make changes. These different frameworks have led to different types of analyses and conclusions related to the sufficiency of forest practice regulations necessary on non-federal forest lands to improve water quality where needed to meet water quality standards. Additionally, because of these different frameworks, it is challenging for the Agencies to collaborate and reconcile technical analyses and conclusions associated with water quality and practices sufficient to achieve water quality outcomes. The Agencies need to address these differences so that there is clarity and transparency for agency staff, agency decision-makers, landowners, other interests, and the public about the steps that will be taken to improve water quality if standards are not being met.

¹ “Policy framework” refers to the interconnected set of statutes, rules, procedures, and guidance.

I. Introduction

I.1 Vision & Purpose

Vision:

Oregon will maintain high quality waters on waterways on non-federal forest lands in Oregon that are already meeting standards. On the forest lands where waterways are not meeting standards, Oregon will identify the conditions necessary to improve water quality to the point where water quality standards are met and use regulatory and non-regulatory measures to assure that those conditions are attained within a defined period of time.

Purpose:

The purpose of this MOU is to describe how the Agencies will work together to protect waterways on non-federal lands that already have high quality waters, and to improve water quality on waterways that are not meeting water quality standards. By describing how the Agencies will work together, this MOU is expected to improve transparency, efficacy, and efficiency.

- The agencies will accomplish this by collaborating on:
 - Processes to assess the adequacy of Forest Practices Act (FPA) rules and non-regulatory measures in achieving water quality standards and (if completed) TMDL load allocations; and
 - Processes to assess the relevancy of water quality impairments and TMDL development related to potential forestry impacts. This includes incorporating forestry-related considerations in TMDL development, implementation, and reporting.

I.2 Background

DEQ water quality authorities

The Environmental Quality Commission (EQC) and DEQ are charged with protecting water quality in Oregon under both federal and state laws.² This responsibility includes establishing water quality standards, which must be approved by the EPA and which must be set to protect beneficial uses of water, including fish and other aquatic life. Water quality standards, once approved by EPA, have the effect of federal law.³

Every two years DEQ must assess water quality and report to the EPA on the condition of Oregon's waters. If a waterbody fails to meet a water quality standard, DEQ is obligated to develop a TMDL to reduce pollution inputs from current condition to levels necessary to attain the applicable water quality standard. Like water quality standards, TMDLs must be submitted to the EPA for review and approval. In order to be approved by EPA, the TMDL must provide

² ORS 468B.010.

³ 33 USC § 1313(c)(3)

reasonable assurances that actions will be taken to reduce pollution, and that these actions will result in outcomes that will ultimately lead to attainment of the water quality standard.⁴

ODF water quality authorities

The Oregon Board of Forestry (Board) must establish best management practices (BMPs) designed to meet water quality standards and TMDL load allocations to the maximum extent practicable, as described in ORS 527.765. BMPs may include both voluntary measures and FPA rules. Additionally, the department may develop non-regulatory options to address load allocations. ODF is the designated management agency (DMA) for implementing TMDL load allocations on non-federal and non-tribal forestlands.

When the Board adopts or amends FPA rules to meet water quality standards or load allocations, state statute requires it to consider certain factors. These include: (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. ORS 527.765.

In addition, for certain types of FPA rules, state statutes also require the Board to make certain findings in order to change regulatory requirements, and to consider additional factors. For example, for rules protecting natural resources, the Board must find that there is monitoring or research evidence that forest operations carried out under existing rules are degrading resources, before adopting increased requirements. In addition, the Board is directed to balance resource protection with effective and efficient forest harvest operations. ORS 527.630. Depending on how they are applied, these state statutory provisions could conflict with federal requirements under the CWA.

Nexus of DEQ and ODF water quality-related authorities

The recent DOJ memorandum (Appendix 1) lays out the nexus of the agencies and their respective governing bodies:

The Board, the EQC, ODF, and DEQ have interconnected roles in protecting Oregon's water quality on forestlands. Broadly speaking, the EQC and DEQ assess waters and establish the water quality standards, while the Board and ODF then establish forest practices to work towards those standards. The legislature intended for the two agencies to work collaboratively on their efforts so that each agency brings in its specific perspective and expertise to create a coordinated effort with the goal of protecting water quality and complying with the CWA.

Regarding TMDLs, as the Board and Commission work cooperatively to improve water quality to meet water quality standards in sub-basins that are not currently meeting standards, the Commission or DEQ is responsible for determining the amount of pollution reduction needed on non-federal forestlands. If additional measures beyond existing FPA rules are necessary to achieve those reductions, then the Board and ODF are responsible for identifying what measures will be implemented and then monitoring to assure that implementation occurs on schedule. In

⁴ U.S. EPA. Office of Wetlands, Oceans and Watersheds. Memorandum: *Follow-up to WDD Hot Issues Discussion on Reasonable Assurance in TMDLs* and included references. February 15, 2012.

determining whether current, generally applicable, FPA rules are adequate to achieve pollution reductions, DEQ and the Commission may also consider non-regulatory measures.

State statutes establish a process for expedited revision of FPA rules when the EQC determines that changes are necessary to meet water quality standards. ORS 527.765(3). This process is initiated by a petition from the EQC to the Board. Through the processes and commitments described in this MOU, the Agencies intend that this authority be used only as a last resort, and that when DEQ or the EQC determine that additional measures are needed beyond generally applicable FPA regulations, that such measures normally be identified and implemented through an implementation plan prepared by ODF and reviewed and approved by DEQ.

I.3 Elements Out of Scope

DEQ and ODF are party to other MOU's that address water quality-related activities. This MOU is not intended to cover every aspect of the nexus between forestry and water quality or replace the following agreements or supersede existing statutory or regulatory requirements.

1. Land use conversions (for more information, see ODF *et al.*, 2006)
2. Pesticide Analytical and Response Center (for more information, see PARC, 2006)

II. Interagency Coordination

II.1 Principles of Interagency Collaboration

The agencies will use the following principles to achieve effective collaboration for the processes and interactions described in this MOU:

- A commitment to collaboration.
- Freely sharing information and expertise.
- For transparency, explicitly documenting how each agency uses information and analyses provided by the other agency.
- Striving toward achieving efficiency and limiting redundancy in the work that the Agencies do to protect water quality.
- Using available data, scientific information, uncertainty, and accepted scientific methods.
- Commitment to work toward achieving water quality outcomes through:
 - Continued forward progress toward meeting water quality standards and load allocations, even where uncertainty exists; and
 - Adaptive management informed by data and scientific information.

II.2 Agency Roles

II.2.A DEQ-Led Water Quality Processes

1. Water Quality Standards

DEQ, acting through the EQC, is required by federal law to establish water quality standards to protect designated and existing beneficial uses. Water quality standards must be adopted as rules by the EQC and approved by EPA. In addition, the EQC must periodically review and revise the standards if needed to protect beneficial uses of water.

DEQ conducts public processes at several points during the water quality standards revision and adoption process. First, DEQ broadly solicits public input on what its priorities should be for projects included within its triennial review workplan. DEQ has several steps during its development of specific revisions to the water quality standards that seek external input. Because this process is conducted through rulemaking, DEQ's process includes, at a minimum, a rulemaking advisory committee, a fiscal impact statement, and public notice and comment, including a public hearing. DEQ includes interested parties on its regulatory advisory committee with the objective giving a voice to the range of interests potentially affected by the proposed rules. DEQ frequently includes other state and federal agencies in the rulemaking advisory committee, particularly where the rulemaking may have an effect on that agency's programs.

DEQ will offer to meet with ODF during the triennial priority setting and work planning effort to solicit input for water quality standards priorities.

DEQ will provide an opportunity for ODF to participate on its regulatory advisory committee for water quality standards rulemaking efforts where the agencies identify a nexus with the rulemaking scope and forestry-related activities.

2. Integrated Report

Every two years, DEQ prepares a statewide assessment of water quality as required by sections 305(b) and 303(d) of the CWA. Key areas for DEQ to engage with ODF are 1) during the revision and addition of methodologies to evaluate water quality; 2) in advance of the biennial data solicitation; and 3) when the draft assessment is published for public comment.

DEQ will offer a meeting to ODF to solicit input into which methodologies will be revised prior to development of the biennial Integrated Report.

DEQ will communicate with ODF in advance of actions seeking input and data, including the data solicitation window, public comment on the draft methodologies and draft assessment conclusions.

3. Section 319 Program: Plan and annual reporting

The Oregon Nonpoint Source Management Program Plan (NPS Plan) describes the federal and state statutory basis of the Nonpoint Source (NPS) Program. Oregon's NPS Plan describes goals, priorities, objectives, and strategies for preventing, controlling, and eliminating pollution of Oregon's waters from nonpoint sources.

The NPS Plan includes measures needed to meet federal and state surface water and groundwater water quality standards and established TMDL load allocations (LAs). The NPS Plan identifies the needed collaboration, coordination, and communication for its implementation to address NPS pollution.

EPA requires the NPS Plan to be updated every five years and submitted to EPA for approval. The NPS Plan and NPS annual report approvals are required by the CWA. When revising Oregon's NPS Plan, DEQ will seek input from ODF on elements of the plan and the annual reports that relate to nonfederal forestlands. This input includes review of draft descriptions and requests for data and information for inclusion, as appropriate.

4. TMDL Development and Implementation

4.1. TMDL Development:

Oregon Administrative Rules (OARs) require DEQ to develop a Water Quality Management Plan (WQMP) as part of each TMDL, and specify the elements that must be contained in the Plan.⁵ When developing or revising a TMDL, DEQ forms a TMDL local advisory group or a Rules Advisory Committee (RAC) (depending on whether the action will be taken by DEQ or by the EQC) to provide input into the TMDL and associated WQMP. DEQ will request representation from ODF and non-federal forest landowners for these groups for TMDLs that include non-federal forestlands. This work includes input regarding allocations of pollutant loads to point and nonpoint sources, including load allocations for the non-federal forestlands. DEQ may assign load allocations by sector (e.g., forestlands) or by individual sources (e.g., landowners), as necessitated by landownership proportions within a basin. In addition, DEQ and ODF will meet at least every two years to discuss upcoming priorities for TMDL development, which will allow for early and regular collaboration.

4.1.1. Development of new TMDLs

When DEQ is developing a **new** TMDL that DEQ expects will include load allocations for non-federal forestlands the Agencies will collaborate during the initial stages of development in the following ways.

During planning for a particular TMDL development, ODF and DEQ will confer regarding existing monitoring or research data that ODF has access to regarding condition of water quality on non-federal forestlands, and ODF will make such data available to DEQ if the Agencies agree that the data are relevant to the TMDL being developed, the load allocations, or the Water Quality Management Plans. DEQ and ODF also will confer regarding any additional data the Agencies believe may be necessary to determine whether existing generally applicable FPA rules are adequate to meet load allocations for non-federal forestlands.

⁵ OAR 340-042-0040(4)

a. DEQ will inform ODF on:

- The area or geographic extent that will be covered by the TMDL.
- The water quality standards and 303(d) listings and impairments to be addressed.
- The models and analytical methods that DEQ expects to use for TMDL development.
- The existing data that DEQ expects to use and additional data that may be sought in development of the TMDL, including development of load allocations for non-federal forestlands.

b. During subsequent stages of development of a new TMDL that DEQ expects will include load allocations for non-federal forestlands, DEQ and ODF will confer regarding:

- Review of model calibration results.
- Discussion of uncertainty and variability.
- Model validation as appropriate (type of model, data availability, etc.).
- TMDL model scenarios set up to identify sources, evaluate proposed allocations, and determine implementation options.
- Potential surrogate measures that identify landscape or water segment conditions likely to achieve load allocations.

During the TMDL and WQMP development, if DEQ determines that current generally-applicable FPA rules are not adequate to achieve load allocations on non-federal forestlands, OAR 340-042-0080(2), DEQ will seek technical and programmatic input from ODF on additional regulatory or non-regulatory measures that are technically feasible and that could be implemented by rule revisions, stewardship agreements, incentive programs or other means and that if implemented would achieve the load allocations, as applicable.

4.1.2. Development of revised temperature TMDLs pursuant to court schedule

DEQ and EPA are under a court-ordered schedule for revising existing temperature TMDLs in 15 project areas around the state. See Appendix 2 to this agreement for the schedule by which DEQ and EPA will in carrying out these revised TMDLs. Should circumstances arise that compel DEQ to undertake another TMDL(s) under an expedited schedule, DEQ and ODF will confer to identify specific opportunities for ODF input. This schedule will require an expedited process for collaboration between DEQ and ODF for these particular TMDLs, as follows.

a. DEQ will inform ODF of:

- The area or extent that will be covered by TMDL.
- The WQS and 303(d) listings and impairments to be addressed.
- The models and analytical methods that will be used for TMDL development.

b. During TMDL/WQMP development DEQ will inform and solicit input from ODF on:

- Review of model calibration results.

- Discussion of uncertainty and variability.
- Model validation as appropriate (type of model, data availability, etc.).
- TMDL model scenarios set up to identify sources, evaluate proposed allocations, and implementation options.
- Potential surrogate measures that identify landscape or water segment conditions likely to achieve load allocations.

During the TMDL and WQMP development, if DEQ determines that current generally-applicable FPA rules are not adequate to achieve load allocations on non-federal forestlands, OAR 340-042-0080(2), DEQ will seek technical and programmatic input from ODF on additional regulatory or non-regulatory measures that are technically feasible and that could be implemented by rule revisions, stewardship agreements, incentive programs or other means, and that if implemented would provide reasonable assurance to achieve the load allocations.

See Appendix 3 for a summary of this process.

4.2 TMDL Implementation:

The WQMP is the framework for TMDL implementation and is designed to work in conjunction with detailed plans and analyses provided by Designated Management Agencies and other sources in their sector-specific or source-specific implementation plans. ODF may propose alternative management strategies to address the load allocations in implementation plans for DEQ review and approval. The WQMP and implementation plan commitments constitute DEQ's federally-required reasonable assurance demonstration that the TMDL will be implemented, and load allocations will be achieved. Reasonable assurance is a CWA requirement and considered as part of EPA's review and necessary for TMDL approval.

If DEQ has determined that generally-applicable FPA rules are not adequate to assure that load allocations will be achieved, ODF will assist DEQ in identifying additional measures to include in the TMDL Water Quality Management Plan.

TMDL implementation plans developed by DMA's or other sources can be of several forms:

- 1) An existing "plan" that meets the requirements of a TMDL WQMP as described in OAR 340-042. This "plan" could be a state forest Habitat Conservation Plan, a private forest Habitat Conservation Plan or some form of CWA assurances, rules developed under the FPA, stewardship agreements, sub-basin specific supplemental Forest Practice Act rules of the Board, multi-party landowner agreements, or other existing measures specific to non-federal forestlands. DEQ will document either geographically or describe the particular waterbody types or fact sets where the "plan" satisfies the load allocation, or is expected to achieve the load allocation with implementation over time. DEQ will also identify geographies or fact sets within the TMDL project area not covered by the plan or where the plan does not sufficiently address the load allocation, if any.
- 2) A new implementation plan to be developed (where an existing plan or measures are not adequate). If a new implementation plan is needed, DEQ and ODF will specify, in the TMDL and/or WQMP, the changes in environmental conditions that must be attained by the implementation plan to meet applicable load allocations.

If a new implementation plan is required, ODF will prepare the plan designed to meet applicable load allocations and submit it to DEQ for review within 18 months of DEQ's issuance of the TMDL and WQMP.

II.2.B ODF-Led Water Quality Processes

Non-regulatory and incentive-based programs

Non-regulatory programs (including incentive-based) are key to successfully achieving water quality goals. Implementing measures, with certainty, to attain the predicted outcomes identified to achieve water quality standards and reach TMDL load allocations is important to maintain and improve water quality. The Board and Department of Forestry encourage the use of non-regulatory measures where feasible. In addition, the FPA already has models of incentives for non-regulatory practices (e.g., OAR 629-642-0300). ODF will therefore expand implementation of non-regulatory measures, with incentives where possible, as a potential tool to achieve water quality standards and TMDL load allocations on non-federal, non-tribal forestlands using its authority and direction from the Board. These measures will also be designed to provide reasonable assurance of implementation.

Water Quality Standards and TMDLs: Implementation Evaluation and Reporting

ODF and DEQ concur that the focus of implementation of TMDLs and water quality standards will occur at the program-wide level to the greatest extent possible, for both regulatory (i.e., FPA) and non-regulatory measures. There will likely be instances (e.g., for certain TMDLs) where basin-specific implementation may be the best option, which the Agencies will determine as the need arises. ODF will enhance policies and practices to evaluate implementation measures through stakeholder input and/or adjustments in agency priorities. ODF will then report the implementation of regulatory and non-regulatory measures to DEQ on a regular basis.

FPA Sufficiency Reviews

ODF has longstanding policy and rules on reviewing sufficiency of FPA rules to meet goals, including protection of water quality. DEQ will continue to be invited to participate in external review teams for soliciting input and seeking clarity and transparency for sufficiency reviews. For water quality-related rules, ODF completes these reviews using a variety of information sources such as literature reviews, field studies, and information from TMDL analyses, and with input from partner agencies. For FPA sufficiency reviews, TMDL information would be requested from DEQ that aligns with analysis at a site or reach level. ODF staff brings this information to the Board for their decisions on sufficiency of these rules to meet desired goals. If the Board finds the rules are insufficient at protecting water quality, there are several findings required to make changes to rules. In such instances, ODF and the Board coordinate with DEQ and the EQC to change the rules.

Basin specific Rules

If the Board determines based on evidence that forest practices in a watershed are measurably limiting achievement of water quality, it shall appoint an interdisciplinary task force to analyze

conditions in a watershed and recommend watershed-specific practices to ensure water quality achievement. The task force should rely on the findings and analysis used by the EQC in establishing the water quality standards and any approved TMDLs for the waterbody.

For more information, see Appendix 1, March 2, 2021 DOJ memorandum.

III. Mechanics of MOU

III.1 Dispute Resolution

Regarding water quality goals, the Agencies are committed to working together with the intent to resolve issues at the staff level in a timely manner. If issues cannot be resolved, elevation of specific disagreements within the agencies' will occur as follows:

- If issues cannot be resolved at the staff and manager levels, managers will raise the issue to the Director and State Forester.
- The Director and State Forester will meet to provide direction to reach resolution before invoking options outlined in statute.

If resolution is not reached within the Agencies, state statute lays out processes whereby the Board may request that the Commission review any water quality standard that affects forest operations on forestlands.⁶ Similarly, in the instance that DEQ determines that existing Board rules or any other measures proposed to reduce pollution from these forestry activities (which may include voluntary actions as well as regulatory changes) are inadequate to achieve water quality standards, DEQ will initiate the petition process set forth in state statute by asking the Commission to petition the Board to revise its rules to protect water quality on forestlands.⁷

III.2 MOU Action Plan

The Agencies will collaborate on the specifics of implementing this MOU, which will be detailed in an associated MOU Action Plan.

III.3 MOU Amendment and Review processes

The Agencies will review this MOU every five years, or sooner if agreed upon by the Agencies. No amendments may be made to this agreement without the express written agreement of both Agencies.

, State Forester
Oregon Department of Forestry

Date:

⁶ ORS 468B.105

⁷ ORS 527.765

Richard Whitman, Director
Oregon Department of Environmental Quality

Date:

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Appendix 1

**DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION**

MEMORANDUM

DATE: March 2, 2021

TO: Peter Daugherty, State Forester, Department of Forestry
Richard Whitman, Director, Department of Environmental Quality

FROM: Matt DeVore, Assistant Attorney General, Natural Resources Section
Diane Lloyd, Assistant Attorney General, Natural Resources Section

SUBJECT: Authority to Protect Water Quality on Forestlands

Question presented:

What are the respective authorities and obligations of the Environmental Quality Commission and the Board of Forestry for the protection of water quality on forestland? [\[1\]](#)

Short answer:

The Environmental Quality Commission (Commission) is charged with protecting the quality of waters of the state and with administering the federal Clean Water Act (CWA) in Oregon. This responsibility includes establishing water quality standards to protect beneficial uses of waters, issuing permits and certificates that limit water pollution, and (in areas where water quality standards are not met) overseeing development and implementation of plans to further limit pollution from all sources in order to improve water quality so that standards are met in the future. These plans, known as “Total Maximum Daily Loads” or “TMDLs” identify the amounts of pollution that can occur from particular sources in order to achieve water quality standards. If pollution reductions are needed from particular sources in order to improve water quality and meet standards, they are achieved through limits and requirements in permits and certificates (for point sources), and through implementation plans (for non-point sources, such as forest operations). To approve TMDLs, the Department of Environmental Quality (DEQ) (or the Commission), and then the federal Environmental Protection Agency (EPA), must conclude that

these management actions (carried out through permits and certificates issued by DEQ), and implementation plans (which are normally prepared by other governmental entities and approved by DEQ), are likely to be implemented to achieve water quality standards.

The Board of Forestry (Board) is obligated to establish best management practices and forest practice rules to ensure 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 set by the Commission. This obligation includes two elements, first, maintaining the water quality of water bodies that already meet those standards, and second, the implementation of plans (including TMDL implementation plans) to improve the water quality of water bodies that do not meet the standards. In considering forest practice rules, the Board also must make a series of determinations related to the need, effectiveness and impacts of the proposed rules.

Discussion

Environmental Quality Commission and Department of Environmental Quality

The Commission has controlling authority for regulating water pollution.^[2] Under the direction of the Commission, the legislature charged DEQ with taking such actions as are necessary for the prevention of new pollution and the abatement of existing pollution.^[3] The legislature charged the Commission with the obligation to adopt water quality standards and to take other steps necessary to implement the CWA in Oregon.^[4] Water quality standards, if approved by EPA, have the effect of federal law.^[5] If the EPA does not approve the standards, the EPA must develop and adopt standards that would apply to Oregon's water bodies.^[6]

Water quality standards consist of three components: a designated use or uses for the water body, water quality criteria based upon such uses and antidegradation requirements.^[7] One of the designated uses that frequently creates a limiting factor relevant to forestry operations is native cold water dependent aquatic species, such as salmon and trout. Water quality standards include the water quality criteria and policies to protect these designated uses. In the case of temperature, the criteria are made up of numeric and narrative elements, including (a) biologically-based numeric criteria (for example, with temperature, a 7-day average of the daily maximum stream temperature)^[8]; and (b) a narrative criterion or criteria (for example, no increase in temperature is allowed that would reasonably be expected to impair cool water species).^[9] The temperature standard also includes an anti-degradation requirement, designed to prevent high-quality waters that meet the biologically-based numeric criteria from being degraded (for example, the protecting cold water standard that limits temperature increases from all sources taken together to 0.3 degrees Celsius).^[10]

Every two years, DEQ must assess water quality throughout the state and report to the EPA on the condition of Oregon's waters. DEQ prepares an Integrated Report that meets the requirements

of CWA sections 305(b) and 303(d). Section 305(b) requires a report on the overall condition of Oregon's waters. Section 303(d) requires DEQ to identify waters that do not meet water quality standards. If a waterbody fails to meet one or more water quality standards, DEQ is required to identify the amounts of pollution coming from different sources, and determine what reductions are necessary in order for the applicable standard to be met. This determination is called a Total Maximum Daily Load (TMDL).^[11] CWA section 303(d) requires that a TMDL be “established at a level necessary to implement the applicable water quality standard.” Federal and state regulations define a TMDL as the sum of the wasteload allocations (allowable pollutant loads from point sources), load allocations (allowable pollutant loads from nonpoint sources), and background.^[12] The TMDL identifies the amounts of pollutants that a water body can receive and still meet water quality standards.

Where a pollutant is highly variable or difficult to measure directly, a TMDL may use surrogate measures as an additional means to express allocations.^[13] One example, particularly important for nonpoint sources such as farm and forestry operations, is the use of riparian shade as a surrogate measure for temperature TMDLs. EPA regulations allow TMDLs to be “expressed in terms of either mass per time, toxicity, or other appropriate measure.”^[14] For TMDLs for water bodies that do not meet temperature standards, DEQ typically determines nonpoint source heat loads by analyzing current shade levels relative to the amount of shade likely to occur without operations impacting shade cover in riparian areas. Under this analysis, DEQ is able to correlate shade levels needed along particular stream segments within sub-basins (fourth order hydrologic units set by the U.S. Geological Service, such as the Imnaha subbasin of the Grande Ronde in eastern Oregon, and the Applegate subbasin of the Rogue basin in western Oregon) in order for biologically-based numeric criteria to be met.^[15]

TMDLs must be reviewed by EPA for consistency with federal requirements. In order to be approved by EPA the TMDL must be accompanied by a management plan that provides reasonable assurance that, when implemented, it will result in attainment of the relevant water quality standard.^[16] When a TMDL is developed for waters impaired by point sources only, the issuance of discharge permits to the point sources provides the reasonable assurance that the wasteload allocations in the TMDL will be achieved because federal regulations require that effluent limits in permits be consistent with wasteload allocations in applicable approved TMDLs.^[17] Where a TMDL is developed for waters impaired by both point and nonpoint sources, EPA evaluates whether nonpoint source reductions specified in the TMDL have a “reasonable assurance” of occurring. In its evaluation, EPA considers whether practices capable of reducing the specified nonpoint source pollutant loads: “(1) exist; (2) are technically feasible at a level required to meet allocations; and (3) have a high likelihood of implementation.”^[18] EPA’s requirement of reasonable assurance of implementation of load allocations for nonpoint sources was upheld by the United States Third Circuit Court of Appeals.^[19] Load allocations for nonpoint source pollution are often broad in nature and can be assigned to types or sectors of nonpoint sources such as all non-federal forest operations in a sub-basin.^[20]

As discussed, DEQ’s TMDLs are not water quality standards, but are the state’s primary plan for achieving the water quality standards in waterbodies where standards are not met.^[21] As noted above, the TMDL wasteload allocations for point sources are implemented through discharge

permits issued by DEQ.^[22] For non-point sources, the TMDL allocations are implemented by designated management agencies (DMAs), such as cities, counties and other government agencies (including ODF for non-federal forestlands), as identified by DEQ in the TMDL.^[23] DMAs develop TMDL implementation plans that may contain regulatory measures, non-regulatory measures, or both, and that are subject to review and approval by DEQ.^[24]

For non-federal forestlands, the Commission has adopted a specific TMDL implementation rule. This rule provides that “[n]onpoint source discharges of pollutants from forest operations on state or private lands are subject to best management practices and other control measures established by the Oregon Department of Forestry under * * * ORS 527.610 to 527.992 and according to OAR chapter 629, divisions 600 through 665.”^[25] However, “[i]n areas where a TMDL has been approved, site specific rules under the Forest Practices Act rules will need to be revised if [DEQ] determines that the generally applicable Forest Practices Act rules are not adequate to implement the TMDL load allocations.”^[26] If the Board fails to act following such a determination by DEQ, then DEQ must request that the Commission petition the Board for rule changes.^[27] If the Commission made such a petition and the Board failed to adopt changes within two years,^[28] the Commission could adopt by rule and enforce, or DEQ could adopt by order and enforce, source-specific requirements on forest operations in a sub-basin in order to comply with the TMDL requirements of section 303(d) of the federal Clean Water Act and the need to establish “reasonable assurance” of implementation.^[29]

State law provides that neither the Commission nor DEQ may adopt or enforce any effluent limitation upon nonpoint source discharges from forest operations, unless they are required to do so by the provisions of the CWA.^[30] TMDL load allocations are not effluent limits as that term is defined in the context of the CWA to apply to limits on point source discharges of pollutants in discharge permits.^[31] Additionally, as discussed above, when a water body is not meeting water quality standards a TMDL is required by the CWA and therefore the state law limitation on the adoption of “effluent limitations” cannot be interpreted as a prohibition on adopting load allocations in the context of TMDL development.

Board of Forestry and Department of Forestry

The legislature delegated to the Board the responsibility to “supervise all matters of forest policy and management under the jurisdiction of the state.”^[32] The legislature provided the Board with exclusive authority to develop and enforce forest practice rules and the obligation to coordinate with other state agencies concerned with the forest environment.^[33] The Board must adopt forest practice rules that provide for the overall maintenance of air quality, water resources, soil productivity, and fish and wildlife.^[34] Specifically as to water quality, the Board must establish best management practices (BMPs) and forest practices rules to ensure 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 Commission.^[35] To establish best management practices the Board must adopt rules for forest practice that prevent or reduce pollution to waters of the state.^[36]

The legislature provided further direction to guide the Board's rulemaking process. When the Board enacts forest practice rules that are not specifically addressed in statute, it must do all of the following:

- Describe the purpose of the rule and the level of protection desired.^[37]
- Determine that there is monitoring or research evidence that documents that degradation of resources is likely.^[38]
- Determine that the proposed rule reflects available scientific information, the results of relevant monitoring and, as appropriate, adequate field evaluation at representative locations in Oregon.^[39]
- Determine that the objectives of the rule are clearly defined.^[40]
- Determine that the restrictions placed on forest practices as a result of adoption of the proposed rule:
 - Are to prevent harm or provide benefits to the resource or resource site for which protection is sought;^[41] and
 - Are directly related to the objective of the proposed rule and substantially advance its purpose.^[42]
- Determine that the availability, effectiveness and feasibility of alternatives to the proposed rule were considered, and the alternative chosen is the least burdensome while still achieving the desired level of protection.^[43]
- Determine that the benefits to the resource that would be achieved by adopting the rule are in proportion to the degree that existing practices are contributing to the overall resource concern.^[44]
- Prepare and make available to the public a comprehensive analysis of the economic impact of the proposed rule.^[45]

Current Board rules provide that if the Board determines that forest practices in a watershed are measurably limiting water quality achievement or species maintenance, and the water body in the watershed is either: (a) designated by the Commission as water quality limited, or (b) contains threatened or endangered aquatic species, the Board must appoint an interdisciplinary task force that includes representatives of forest landowners within the watershed and from appropriate state agencies.^[46] The task force must analyze the conditions in the watershed and recommend whether additional watershed-specific protection rules are needed.^[47] The task force should rely on the findings and analysis used by the Commission in establishing the water quality standards and any approved TMDLs for the waterbody.

Forest operations must be conducted in full compliance with the rules and standards of the Commission.^[48] If the operation is conducted in accordance with the Board's rules currently in effect, then an operator shall not be considered in violation of any water quality standard.^[49] This is often referred to as a "BMP shield." The BMP shield can be lost if the Board does not take

timely action to review BMPs in response to a petition from the Commission, as described below.^[50]

Implementation of Water Protection Measures on Forestlands

As described above, the Board, the Commission, ODF, and DEQ have interconnected roles in protecting Oregon's water quality on forestlands. Broadly speaking, the Commission and DEQ assess waters and establish the water quality standards, while the Board and ODF then establish forest practices to comply with and work towards compliance with those standards. The legislature intended for the two agencies to work collaboratively on their efforts so that each agency brings in its specific perspective and expertise to create a coordinated effort with the goal of protecting water quality and complying with the CWA.

Coordination between the agencies is an ongoing process. This coordination can help to inform the Commission's development of water quality standards, which can include waterbody specific criteria. The Commission establishes water quality standards in rule based on EPA regulations and guidance as well as DEQ's research and analysis.^[51] The Board and ODF may assist in the Commission's decisions related to water quality standards and also participate in DEQ's water quality standards revision process.^[52] The Board may also request that the Commission review any water quality standard that affects forest operations on forestlands.^[53] However, state water quality standards must be reviewed and approved by EPA, so the state's authority in developing standards is limited by what is approvable by EPA.^[54]

If a waterbody is meeting the Commission's water quality standards, the Board's obligation is to ensure that forest practices do not impair maintenance of those standards.^[55] If a waterbody is not meeting the Commission's water quality standards, DEQ will establish a TMDL for that waterbody, and determine whether current Board rules and any other measures proposed by ODF are adequate to achieve the pollution reduction required by the TMDL.^[56] The Board and ODF should participate actively in DEQ's development of any TMDL involving state and private forestlands, including sharing data and information prior to and during TMDL development, and by participating in and providing input during DEQ's Local Advisory Group.^[57] Once a TMDL is adopted and approved by EPA, any load allocations for non-federal forestlands and operations included in the TMDL will be binding. The Board is then obligated to implement rules that establish forest practices (which may include voluntary actions as well as regulatory changes) consistent with the TMDL. If DEQ then determines that existing Board rules or any other measures proposed to reduce pollution from these forestry activities (which may include voluntary actions as well as regulatory changes) are inadequate, DEQ will initiate the petition process set forth in ORS 527.765, by asking the Commission to petition the Board to revise its rules to protect water quality on forestlands. This process could lead to the loss of the BMP shield provisions for forest operations if the Board fails to revise the rules within the required time.

If the Board initiates rulemaking to adopt basin-specific water protection rules, it must follow the procedural steps required by forestry statutes, including making the findings required by ORS 527.714. DEQ's determination of a load allocation for non-federal forestlands in a sub-basin would be binding on the Board in establishing an overall target for the Board. However, the Board would retain discretion to determine how to achieve that target or outcome. In particular, under ORS 527.714(5)(e), the Board is obligated to choose the alternative practice that is the "least burdensome to landowners * * * while still achieving the desired level of protection." In addition, ORS 527.765(1) requires the Board to establish forest practice rules that meet a "maximum extent practicable" (MEP) standard. The Commission is not under an obligation to consider the burden to the landowners, however, nor is the MEP limitation included in Section 303(d) of the Clean Water Act. For the Board to meet its statutory obligation, it must look beyond the analysis of the Commission and take into account the effect that a particular forest practice would have on landowners. But because TMDL implementation is a requirement of the Clean Water Act, this required analysis does not authorize the Board to change the Commission's determination of water quality standards or TMDL requirements.

In sum, as the Board and Commission work cooperatively to improve water quality in sub-basins that are not currently meeting water quality standards, the Commission is responsible for determining the overall amount of pollution reduction needed on non-federal forestlands, and the Board is responsible for determining how to achieve those reductions. In determining whether current, generally applicable, Board rules are adequate to achieve reductions, the Board, ODF, DEQ and the Commission may also consider non-regulatory measures so long as DEQ can establish that there is a reasonable assurance that the measures, when implemented, will result in attainment of the relevant water quality standard.

^[1] Public disclosure of this Memorandum is not intended to operate as a waiver of the attorney-client privilege. The Attorney General provides advice and representation to the Governor, any officer, agency, department, board or commission of the state or any member of the legislature. The Attorney General may not render opinions or give legal advice to persons other than the state officers listed above. Any opinions or conclusions in this memo are not intended to be advice, except as provided in ORS 180.060.

^[2] ORS 468B.010.

^[3] ORS 468B.020(2).

^[4] ORS 468B.048, ORS 468B.035. *See also* Clean Water Act, 33 USC §1251 et seq.

^[5] 33 USC §1313(c)(3).

^[6] 33 USC § 1313(c)(4); 40 CFR § 131.22.

^[7] 40 CFR § 131.3(i), 40 CFR § 131.6.

^[8] *See, e.g.* OAR 340-041-0028(4)(a), limiting temperature to 13 degrees Celsius for certain streams at certain times of the year.

^[9] OAR 340-041-0028(9)(a).

^[10] OAR 340-041-0028(11).

^[11] 33 USC § 1313(d); ORS 468B.110.

- [12] 40 CFR 130.2(i); OAR 340-042-0040(4)(b).
- [13] OAR 340-042-0040(5)(b).
- [14] 40 CFR § 130.2(i).
- [15] See Willamette Temperature TMDL, Figure 4.17, p.4-71 and Appendix C, <https://www.oregon.gov/deq/FilterDocs/chpt4temp.pdf>.
- [16] EPA Guidance for Water Quality-based Decisions: The TMDL Process, p. 24. April 1991.
- [17] 40 CFR 122.44(d)(1)(vii)(B).
- [18] See, e.g., Environmental Protection Agency, EPA Chesapeake Bay TMDL. Section 7. Reasonable Assurance and Accountability, available at www.epa.gov/sites/production/files/2014-12/documents/cbay_final_tmdl_section_7_final_0.pdf.
- [19] American Farm Bureau Federation vs. United States Environmental Protection Agency, 792 F3d 281, 300-301 (2015).
- [20] 40 CFR § 130.2(g).
- [21] 40 CFR § 130.7(c).
- [22] ORS 468B.050.
- [23] ORS 468B.110(1).
- [24] OAR 340-042-0040(4)(1)(G), OAR 340-042-0080(1).
- [25] OAR 340-042-0080(2).
- [26] *Id.*
- [27] *Id.*
- [28] ORS 527.765(3)(e).
- [29] ORS 468B.110(1).
- [30] ORS 468B.110(2).
- [31] 33 USC § 1311; 40 CFR § 122.2.
- [32] ORS 526.016.
- [33] ORS 527.630(3).
- [34] ORS 527.710(2).
- [35] ORS 527.765(1).
- [36] *Id.*
- [37] ORS 527.714, ORS 527.714(4).
- [38] ORS 527.714(5)(a).
- [39] ORS 527.714(5)(c).
- [40] ORS 527.714(5)(d).
- [41] ORS 527.714(5)(d)(A).
- [42] ORS 527.714(5)(d)(B).
- [43] ORS 527.714(5)(e).

[\[44\]](#) ORS 527.714(5)(f).

[\[45\]](#) ORS 527.714(7).

[\[46\]](#) OAR 629-635-0120(2).

[\[47\]](#) OAR 629-635-0120(3).

[\[48\]](#) ORS 527.724.

[\[49\]](#) ORS 527.770.

[\[50\]](#) ORS 527.770, 527.765(3)(e).

[\[51\]](#) ORS 468B.048.

[\[52\]](#) ORS 468B.110; OAR 340-041-0001.

[\[53\]](#) ORS 468B.105.

[\[54\]](#) 33 USC § 1313(c)(3); 40 CFR 131.21.

[\[55\]](#) ORS 527.765.

[\[56\]](#) 33 USC § 1313(d); ORS 468B.110.

[\[57\]](#) ORS 468B.110; OAR 340-042-0050.

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Appendix 2. Temperature TMDL Replacement Schedule

DEQ must amend and submit replacement temperature TMDLs for the areas listed below. DEQ must submit TMDLs to EPA at least 30 days in advance in order for EPA to complete its approval or disapproval by the dates listed below.

Jan. 15, 2024

- Southern Willamette Subbasins*
- Mid-Willamette Subbasins*
- Lower Willamette, Clackamas, and Sandy Subbasins*

**This TMDL will exclude the Willamette River mainstem and major tributaries. TMDLs for the Willamette River mainstem and major tributaries will be developed and submitted for EPA's approval or disapproval by Feb. 28, 2025.*

Feb. 28, 2025

- Willamette River mainstem and major tributaries
Tributaries included in the Willamette mainstem and major tributaries project area:
 - Willamette River from the confluence of the Columbia River including the Willamette Channel and the Multnomah Channel to confluence of Coast and Middle Forks (approximately river mile 187)
 - Clackamas River up to River Mill Dam/Estacada Lake (approximately river mile 26); Santiam River (all 12 miles)
 - North Santiam River up to Detroit Dam (approximately river mile 49)
 - South Santiam River up to Foster Dam (approximately river mile 38)
 - Long Tom River to Fern Ridge Dam (approximately river mile 26)
 - McKenzie River to confluence with the South Fork McKenzie River (approximately river mile 56)
 - South Fork McKenzie River to Cougar Dam (approximately river mile 4)
 - Blue River to Blue River Dam (approximately river mile 1.9)
 - Middle Fork Willamette to Dexter Dam (approximately river 17)
 - Fall Creek to Fall Creek Dam (approximately river mile 7)
 - Coast Fork Willamette to Cottage Grove Dam (approximately river mile 30)
 - Row River to Dorena Dam (approximately river mile 7.5)
- North Umpqua Subbasins
- South Umpqua and Umpqua Subbasins

Apr. 17, 2026

- Applegate, Illinois, Lower Rogue, and Middle Rogue Subbasins
- John Day River Basin

- Upper Rogue Subbasin

June 4, 2027

- Snake River - Hell's Canyon
- Lower Grande Ronde, Imnaha and Wallowa Subbasins
- Middle Columbia-Hood, Miles Creeks

May 29, 2028

- Walla Walla Subbasin
- Willow Creek Subbasin
- Malheur River Subbasins

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Appendix 3. Flowchart Overview: TMDL Development Process and DEQ/ODF Collaboration

[To be developed]

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