# Regulation of Water Quality and Forest Practices

Briefing for the Oregon Board of Forestry
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## I. Introduction

This paper outlines the roles of the Environmental Quality Commission and Board of Forestry in protecting Oregon's water quality. The legislature has established a partnership between these bodies, and their respective Departments, to achieve the goals of federal and state law.

The Board of Forestry (Board) is charged with responsibility to "supervise all matters of forest policy and management under the jurisdiction of the state …" ORS 526.016. Under the Forest Practices Act (FPA), the Board is given exclusive authority to adopt and enforce rules governing forest practices. ORS 527.610 to 527.770, 527.990(1) and 527.992. The Environmental Quality Commission (EQC) is responsible for establishing the policies for the operation of the Department of Environmental Quality in executing a wide variety of environmental programs, including the state's solid and hazardous waste programs, air and water pollution control programs, sewage treatment operations, and prosecution of environmental crimes. ORS 468.015; ORS chapters 465 and 466.

The regulation of forest practices on private and state lands is almost entirely a matter of state law. Although operations on forestlands may give rise to liability under such federal laws as the Endangered Species Act and the Clean Water Act, there is no federal law governing forest practices on state and private lands, and no mandate that states adopt such laws.

In contrast, the water quality programs under the EQC's jurisdiction are the product of both longstanding state statutes and more recent federal delegations of regulatory authority. With respect to the latter, the most important legislation is the Clean Water Act (CWA).[1] Congress intended the Act to be implemented by the states. However, to the extent that states fail to take necessary implementing measures, or if the Environmental Protection Agency (EPA) finds state action insufficient to protect water quality, the federal government retains ultimate authority to administer and enforce the CWA. The legislature also has established a goal of retaining state control over water quality regulation by giving the EQC broad authority to take any actions "necessary … to implement" the CWA. ORS 468B.035(1)[2].

[1] 33 USC § 1251-1387.

[2] That authority is shared with the Board and the Department of Agriculture for certain purposes. ORS 468B.110(2), 468B.200-468B230, 568.900-568.933.

## II. Water Quality Regulation

Under Oregon law, water is a public resource and pollution of the public waters has been prohibited for many decades. Furthermore, other statutes affecting water quality must be construed so that water quality is protected and in the case of conflict, the EQC's authority is controlling. See ORS 468B.010[3].

Added on to this longstanding state authority, Congress adopted the Federal Water Pollution Control Act in 1948. The FWPCA was substantially amended, however, in 1972 and again in 1987. As amended, it is often now referred to as the Clean Water Act. Congress intended that states be delegated the principal role in administering the Act, with EPA being responsible for oversight[4]. With respect to many key provisions of the Act, EPA must step in and take over if the State fails to accept the delegation or fails to operate the delegated program properly. In other situations, if a state fails to fulfill its obligations, EPA is authorized to withhold federal funds. With respect to some provisions of the Act, citizens are also authorized to ask federal courts to require EPA to act or to impose penalties on persons who fail to comply with the Act.

The core CWA provisions relevant to this outline are:

1. States are required to adopt **Water Quality Standards**. If a state fails to adopt standards or EPA determines the standards are insufficient, EPA must adopt standards for the state. Water Quality Standards are:

    a. A determination of what the beneficial uses are or should be for each water body. This must include protection of all fisheries that are present or were present in the streams in 1974.

    b. The criteria that need to be applied to pollutants or pollution to protect the most sensitive of the designated or actual beneficial uses. These criteria ordinarily must be numeric, but narrative criteria can be used when it is not possible to develop numeric criteria.

    c. Provisions that protect existing high quality water from being degraded and prohibit new sources of pollution in waters that already fail to meet standards.

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[3] The later and more specific provisions in ORS 468B.110 and 527 control over the general statements found in ORS 468B.015, 020, and 025, and DEQ rules, but only to the extent that they are express and unambiguous.

[4] The Corps of Engineers plays a significant role in the permitting of dredged and fill material placed in "navigable waters," including wetlands, under Section 404 of the CWA. 33 USC § 1344. The State of Oregon also administers a regulatory program governing the placement and removal of fill material in waters of the state, through the Oregon Department of State Lands (DSL). *See* ORS 196.800 – 196.905 (DSL removal/fill permits).

2. Point sources are required to obtain discharge permits (known as **NPDES or Section 402 permits**) before adding pollutants to waters of the U.S.[5]

   a. Generally, any discrete conveyance, such as a pipe, a ditch, or truck, is a point source.

   b. Pollutants are broadly defined and include sediment and turbidity, and in some contexts, heat.

   c. Waters of the U.S. include all navigable rivers and lakes and the tributaries to those rivers and lakes. This includes intermittent natural and artificial ditches or streams that feed the rivers. Adjacent wetlands are also included, although the precise coverage is currently being litigated and also is the subject of draft regulations.

   d. The NPDES permits must include effluent limits. These are permit conditions that require the use of appropriate pollution control technology and conditions that prohibit discharges that would cause or contribute to a violation of water quality standards.

   e. Traditionally, most silvicultural activities, including ditches and culverts have not been treated as point sources. The regulatory status of these sources is currently the subject of litigation in federal courts.

3. Section 319 of the CWA requires states to adopt and implement **Nonpoint Source Management Programs** that ensure, to the maximum extent practicable, nonpoint source pollution does not cause or contribute to violations of water quality standards[6]. Unlike the Section 402 permit programs, states have a considerable degree of flexibility in developing and implementing such programs and EPA has only indirect authorities to enforce state compliance. Failure to secure approval of a 319 plan, or to implement identified BMPs, can result in loss of federal grant funds.[7]

4. States are also required to determine which water bodies fail to meet water quality standards. This is known as the **Section 303(d) List**[8]**.** A **Total Daily Maximum Load** (TMDL) must be developed for the listed water bodies[9]. The TMDL is essentially an equation wherein the state or EPA determines how much assimilative capacity exists in a water body and then allocates portions of that capacity to point sources, non-points

[5] 33 USC § 1362(14) (definition); § 1311(a) (prohibition of discharges without permits).
[6] 33 USC § 1329.
[7] The Coastal Zone Management ACT (CZMA), 16 USC §§ 1451-1465, also links federal funding to approved state management plans.
[8] 33 USC § 1313(c)(2)(A).
[9] 33 USC § 1313(d).

> sources, and reservations for future growth. States are required to implement TMDL allocations. Allocations are a matter of policy, subject to the usual administrative law requirement of reasoned decisionmaking. Point source allocations are implemented directly through permits. Nonpoint source allocations are implemented through planning, non-regulatory and regulatory activities such as the Forest Practices Act, and Agricultural Water Quality Management Plans under SB 1010. If a state fails to implement a TMDL, EPA will require implementation, but since it lacks direct authority over most nonpoint sources it is required to further reduce loads given to point sources if the state fails to implement nonpoint source allocations.

## III. Forest Practices Regulation

The Forest Practices Act (FPA) gives the Board authority to adopt rules governing forest practices. ORS 527.610 to 527.770, 527.990(1) and 527.992. Responsibility for enforcement falls to the State Forester and Department of Forestry. For the present discussion, the FPA's key elements can be summarized as follows:

1. Forest practice rules must encourage "economically efficient" forest practices that "ensure the continuous growing and harvesting of forest tree species" as the leading use of private forestlands. ORS 527.710(2). Consistent with the Act's general statements of policy, the rules must "provide for the overall maintenance of the following resources: (a) air quality; (b) water resources, including but not limited to sources of domestic drinking water; (c) soil productivity; and (d) fish and wildlife." ORS 527.710(2).

2. The forest practice rules include Water Protection Rules governing activities in or adjacent to water bodies, wetlands, and riparian areas. OAR 629-635-0000 to 629-660-0060. The rules are intended to serve the FPA's resource protection goals for water, fish, and wildlife:

> "The overall goal of the water protection rules is to provide resource protection during operations adjacent to and within streams, lakes, wetlands and riparian management areas so that, while continuing to grow and harvest trees, the protection goals for fish, wildlife, and water quality are met.
>
> (a) The protection goal for water quality (as prescribed in ORS 527.765) is to ensure through the described forest practices that, to the maximum extent practicable, non-point source discharges of pollutants resulting from forest operations do not impair the achievement and maintenance of the water quality standards.
>
> (b) The protection goal for fish is to establish and retain vegetation consistent … that will maintain water quality and provide aquatic

> habitat components and functions such as shade, large woody debris, and nutrients.
>
> (c) The protection goal for wildlife is to establish and retain vegetation … that will maintain water quality and habitat components … . For wildlife species not necessarily reliant upon riparian areas, habitat in riparian management areas is also emphasized in order to capitalize on the multiple benefits of vegetation retained along waters for a variety of purposes." OAR 629-035-0100(7)(a)-(c).

3. The FPA contains important substantive limitations on new rules which directly affect forest practice standards. ORS 527.714. Rules which implement the FPA's resource-protection objectives and which would "provide new or increased standards for forest practices" must meet stringent evidentiary criteria. ORS 527.714(1)(c), (5). For example, evidence must show that existing practices are likely to cause degradation of protected resources, and the proposed rule must reflect available scientific information, relevant monitoring, and, as appropriate, adequate field evaluation at representative locations in Oregon. ORS 527.714(5)(a)-(c). Proposed rules must be drafted with precision to prevent the harm or provide the benefits for the resource requiring protection. Rules must directly relate to, and substantially advance, their underlying objective. ORS 527.714(5)(d). New rules must undergo an alternatives analysis, non-regulatory approaches must be considered, and the "least burdensome" alternative must be chosen. ORS 527.714(5)(e). The benefits to the resource achieved by the rule must be proportional to the harm cause by forest practices. ORS 527.714(5)(f). New rules must also be accompanied by a detailed economic impact analysis. ORS 527.714(7).

4. Subject to ORS 527.765 and 527.770 (the BMP provisions discussed below), forest operations must comply with EQC rules and standards relating to air and water pollution control, and violations are subject to DEQ and EQC regulations and sanctions. ORS 527.724.

## IV. Relationship Between the Commission and Board

The legislature has given the Commission primary responsibility for complying with the mandates of the federal CWA[10] and has given the Board exclusive responsibility for regulating forest practices. However, the potential for regulatory conflict or overlap arises from the fact that forest operations can affect whether a water body meets water quality standards. The legislature has dealt with this issue by exempting forest practices from certain aspects of the EQC's jurisdiction, providing the Board with limited water quality regulatory authority, and providing each body with a process to request that the other consider its concerns.

[10] As noted above, this authority is shared with the Department of Agriculture for certain purposes. *See* footnote 3.

*1. Forestry exemption from effluent limitations.* Although the EQC has full authority to use TMDLs and related load allocations to protect water quality standards (ORS 468B.110(1)), that authority is limited in the following manner:

> "Unless required to do so by the provisions of the [CWA], neither the [EQC nor the DEQ] shall promulgate or enforce any effluent limitation upon nonpoint source discharges of pollutants resulting from forest operations on forestlands in this state. Implementation of any limitations or controls applying to nonpoint source discharges or pollutants resulting from forest operations are subject to ORS 527.765 and 527.770. …" ORS 468B.110(2).

This exemption withdraws "forest operations on forestlands" from EQC's regulatory jurisdiction (at least as far as "effluent limitations," "limitations" or "controls" are concerned) and places jurisdiction in the Board's hands, through the best management practice provisions of ORS 527.765 and 527.770.

The precise meaning of ORS 468B.110(2) has not been explored by the courts and it contains several ambiguities. Technically it prohibits the EQC and DEQ from imposing "effluent limitations" on nonpoint source forest operations. The term is not defined in state law, but under federal law an effluent limitation is a condition imposed on a NPDES permit to require use of specified technology or ensure compliance with water quality standards. We therefore assume that the legislature meant something more, particularly in light of the broader terms "limitations or controls" used in the second sentence.

2. *Best Management Practices.* As a substitute for EQC "limitations or controls," the legislature directed the Board to adopt best management practices (BMPs), i.e. "forest practices rules adopted to prevent or reduce pollution of waters of the state." 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."

*3. BMP enforcement shield.* The FPA provides that forest operations conducted in accordance with BMPs "shall not be considered in violation of any water quality standards." ORS 527.770.

*4. Enforcement savings clause.* The forestry exemption, BMP rules, and BMP shield, are narrowly drawn. Apart from these provisions, the EQC retains full enforcement authority:

> "Subject to ORS 527.765 and 527.770, any forest operations on forestlands within this state shall be conducted in full compliance with the rules and standards of the Environmental Quality Commission relating to air and water pollution control. In addition to all other remedies provided by law, any violation of those rules or standards shall be subject to all remedies and sanctions available under statute or rule to the Department of Environmental Quality or the Environmental Quality Commission." ORS 527.724.

## V. Cooperation and Collaboration

We have described how the legislature has divided responsibility for water quality regulation between the EQC and Board. Despite the relative clarity of this division, possibility of conflict remains because the agencies might disagree over the appropriate level of regulation. (In this connection, "the agencies" includes the federal EPA, which has ultimate authority under the CWA with respect to water quality standards and TMDLs and the authority to cut off federal funds if it determines that the state does not have an adequate nonpoint source management plan.) The EQC might believe that the Board has not appropriately applied its BMP authority (ORS 527.765); conversely, the Board might take issue with the EQC's water quality standards as they affect forest operations (ORS 468B.105). The legislature anticipated disagreement and created cooperative mechanisms for the review of water quality rules governing forest operations.

The scope of potential disagreement includes BMPs established under ORS 527.765 and WQSs and TMDLs adopted under ORS Chapter 468B. As noted above, significant portions of EQC's water quality program are subject to EPA oversight, including WQSs and TMDLs. By the terms of the forestry exemption, the EQC is prevented from imposing effluent limitations, but not if the EQC is "required to do so by the provisions of the [CWA]." ORS 468B.110(2). As a consequence, some water quality disputes implicate the EPA as well as the Board and EQC.

The legislature has established reciprocal processes by which the Board and EQC may bring disagreement over water quality standards and BMPs to each other's attention. Under ORS 468B.105, upon the Board's request, the EQC "shall review any water quality standard that affects direct operations on forestlands." Conversely, under ORS 527.765, the EQC may petition the Board to review BMPs.

ORS 527.765 requires the Board to adopt BMPs and other rules "as necessary to insure that to the maximum extent practicable nonpoint source discharges … do not impair the achievement and maintenance of water quality standards established by the [EQC]." When developing BMPs, the Board must consider five factors, among others:

(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.

In addition to these factors, the Board applies the FPA's strict rule-setting standards, found in ORS 527.714. ORS 527.710(2), 527.714(1)(c). The Board must also consult with the EQC in adopting and reviewing BMPs and other rules to address nonpoint source pollution. ORS 527.765(2).

Special procedures govern review of existing BMPs. The Board is required to consider petitions seeking review of BMPs, so long as the petitions meet certain minimum criteria. ORS 527.765(3)(a). Having initiated review, the Board *must* dismiss a petition if it finds "that forest operations being conducted in accordance with the best management practices are neither significantly responsible for particular water quality standards not being met nor are a significant contributor to violations of such standards." ORS 527.765(3)(b). Dismissal must be by an order that includes findings regarding allegations in the petition, and the Board's reasons and conclusions. ORS 527.765(3)(d). If the EQC is the entity petitioning for review, the Board has two options: terminate review with the EQC concurrence, or begin rulemaking. ORS 527.765(3)(c).

If the Board determines that BMPs should be reviewed, rulemaking must begin. "Rules specifying the revised best management practices must be adopted not later than two years from the filing date of the petition for review, unless the board, with concurrence of the [EQC], finds that special circumstances require additional time." ORS 527.765(3)(e). Upon EQC's request, the Board is required to take interim action "to prevent significant damage to beneficial uses" while the BMPs are being reviewed. ORS 527.756(3)(f).

It is apparent from the structure of the BMP and WQS adoption and revision process that the legislature has given the matter considerable thought. With respect to WQSs, the process anticipates dialog between the Board and EQC. With respect to BMPs, the process anticipates significant public involvement in Board decision making. Interested parties have a specific burden of proof, and the Board must justify a decision not to revise a BMP in a manner unlike routine petitions for rulemaking under the Administrative Procedures Act.[11] *Compare* ORS 183.390. The EQC is given a special role in each stage of the process. Finally, the legislature included a disincentive to discourage Board inaction: the "BMP shield" is lost if the Board fails to complete BMP revisions, or make a finding that revisions are not required, within the statutory deadline. ORS 527.770. In sum, although the legislature has not mandated agreement between EQC and the Board on all aspects of water quality regulation, it has provided the agencies with a process and incentives to reach agreement.

[11] As noted above, a decision to revise a BMP is also subject to specific statutory criteria. ORS 527.714, 527.765(1).

Environmental Quality Commission and Board of Forestry Joint Meeting
October 21, 2004
Attachment E

GENJ9812

# Temperature Standards: Natural Conditions Criterion

## Question and Answers

*On Aug. 8, 2013, EPA disapproved a key provision of Oregon's temperature standard, the "natural conditions criterion." EPA's action was ordered by the Oregon Federal District Court on April 10, 2013 based on an earlier ruling in February 2012. Oregon DEQ can no longer use the natural conditions criterion to account for warmer temperatures in Oregon's rivers, lakes and streams. The court similarly sent back to EPA a general natural conditions narrative criterion, which EPA also disapproved on Aug. 8.*

*This document describes the current status of Oregon's water quality standards for temperature and natural conditions and DEQ's plan for implementing the water quality protection program following EPA's action. This topic will be discussed with the Environmental Quality Commission on Aug. 21. If DEQ receives policy direction from the commission or if other legal action significantly alters DEQ's ability to move forward as planned, we will inform the public.*

### What is the temperature "natural conditions criterion?"

The natural conditions criterion in the temperature standard accounts for the fact that some Oregon streams have water temperatures that are naturally warmer than the numeric criteria contained in Oregon's water quality standards. Under the natural conditions criterion, when DEQ determined that a water body under natural conditions, without human impacts, could not meet the numeric criteria in the temperature standard, the natural temperatures became the goal for the waterbody.

There is also a general natural conditions criterion that applied to other substances or conditions of water. Please see the Q&A on the general provision below.

### How did DEQ apply the criterion?

Prior to the development of a water quality plan called a total maximum daily load – or "TMDL" – DEQ applies numeric criteria and other temperature standard provisions in permits, water quality assessments and other water quality programs. Where river or stream temperatures are warmer than the numeric temperature criteria, DEQ must develop total maximum daily load for the water body.

When DEQ developed a TMDL under the natural conditions criteria, DEQ collected data and conducted analysis to determine the natural temperatures for the water body. Where this analysis showed that the numeric criteria could not be met due to natural conditions, DEQ based future wastewater discharge permits and nonpoint source targets (for example, stream shade targets) on the natural condition temperatures.

Since EPA's approval of the natural conditions criterion in 2004, DEQ has used the criterion to develop at least 14 TMDLs around the state.

### How does this decision affect Oregon's temperature standard?

Following EPA's disapproval of the natural conditions criterion, DEQ can no longer use the criterion in carrying out our water quality programs.

### Does that mean the temperature standard no longer exists?

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No, the temperature standard still exists. Only the natural conditions method of calculating acceptable temperature levels has been revoked. DEQ must now use the remainder of the temperature standard, which includes numeric criteria, the human use allowance and the cold water protection criterion, for issuing permits and developing water quality management plans (TMDLs).

**How will DEQ determine temperature requirements for permits and water quality plans?**
DEQ will use the biologically based numerical values, the human use allowance, the cold water protection criterion and all other remaining provisions of the temperature standard. However, where these provisions are not attainable, DEQ will not be able to issue TMDLs and DEQ may need to use alternate compliance pathways for permitted sources.

**What about existing water quality permits?**
Existing permits are not immediately affected by this decision and remain valid. Permits that contain temperature requirements will be evaluated and revised if necessary when they are next renewed.

**What happens to permits up for renewal?**
Some permits up for renewal will be able to meet the remaining applicable provisions of the temperature standard. DEQ intends to move forward and renew these permits.

**What will DEQ do with sources that can't meet the temperature standard without the natural conditions provision?**
Sources that cannot meet permit limits for temperature at the time of permit renewal may be able to use a compliance schedule to allow time to identify and implement a solution. DEQ can also grant variances in situations where it can be demonstrated that the temperature standard is not attainable or feasible. DEQ will encourage water quality trading to offset heat loads in some circumstances. Permit renewals that will result in needed water quality improvements related to other pollutants, such as toxics or dissolved oxygen, will be prioritized for renewal.

**How will DEQ handle recent water quality management plans (TMDLs) that used the natural conditions criterion? Won't this affect allowable temperature levels in future water quality permits?**
DEQ will not incorporate recently approved TMDLs based on the natural conditions criterion into wastewater permits unless they result in a permit limit that is more stringent than a limit based on the numeric criteria and human use allowance.

**Will DEQ revise the TMDLs that used the natural conditions criterion?**
There is pending litigation on the temperature TMDLs and until that is resolved, the future status of existing TMDLs based on the natural conditions criteria is uncertain. DEQ does not know when this litigation will be resolved.

At present, nonpoint source temperature reduction targets from existing approved TMDLs continue to apply and should be implemented. Management practices and stream restoration to reduce temperatures in impaired waters are needed whether the ultimate regulatory goal is natural conditions or the numeric criteria. Also, the cold water protection criterion has not changed and is still effective.

**Will the natural conditions criterion or something similar be restored at some point in the future?**
The water quality standard for temperature must protect uses of the state's waters, be scientifically based and be administratively workable. The ability to address the natural variability of temperature through DEQ's regulatory programs remains important. DEQ may recommend that the Environmental Quality Commission revise the temperature standard or other

regulations to address this critical function in the future since the natural conditions criterion has been removed. However, any decision to revise water quality standards will be made within a rulemaking process, which will be deferred until more is known about pending legal and federal actions.

### What is the general natural conditions criterion and what does the EPA disapproval mean for that provision?

Oregon's water quality standards also include a general natural conditions criterion. A similar criterion has been in the state's rules since the 1970s. This provision applies to any naturally occurring substance or condition of the water, such as iron, arsenic or other earth metals, nutrients (i.e. nitrogen and phosphorus), dissolved oxygen and others, where the natural conditions do not meet otherwise applicable criteria.

Following EPA's disapproval, DEQ can no longer use this criterion for wastewater permitting, TMDLs, water quality assessment or other federal Clean Water Act actions. Where a permit or TMDL cannot attain the numeric criteria due to natural conditions, DEQ will consider compliance schedules or variances if appropriate, or may consider adopting site specific water quality criteria.

### What can people do to help protect Oregon's rivers, lakes and streams?

The innovative, good work being done by Oregon communities, watershed councils, landowners and others to improve water quality and restore stream habitat and streamside vegetation must continue.

### Alternative formats

Alternative formats (Braille, large type) of this document can be made available. Contact DEQ's Office of Communications & Outreach, Portland, at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696.