



State of Oregon Department of Environmental Quality

Draft Fiscal Impact Statement Changes Made Since Last Version

Upper Yaquina River Watershed Total Maximum Daily Loads for
Bacteria and Dissolved Oxygen
Advisory Committee Meeting 3

Introduction

Consistent with Oregon Revised Statute 468B.110 and OAR chapter 340 division 42, DEQ prepared Total Maximum Daily Loads and a Water Quality Management Plan to address bacteria and dissolved oxygen impairments in the Upper Yaquina River Watershed. The TMDLs and WQMP will be proposed for adoption by Oregon's Environmental Quality Commission, by reference, into OAR 340-042-0090. The TMDLs and WQMP are supported by DEQ's Upper Yaquina River Watershed TMDL Technical Support Document. These draft documents will be available for public review during the comment period and hearing that will precede proposing the rule for adoption by the EQC.

Fee analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

Fiscal and Economic Impact Overview

Issuance and subsequent implementation of the proposed TMDLs and WQMP may have fiscal or economic impacts (both negative and positive) on current and future operators of some: farms and ranches; private forestlands; a railroad right-of-way; and federal, state and county lands or operations within the Upper Yaquina River Watershed. However, DEQ determined that fiscal or economic impacts and costs of compliance would not be different than if the TMDLs were issued as a department order.

This fiscal impact statement does not quantify the costs of on-going water quality impairment to beneficial uses of waters of the state, nor the potential economic or ecosystem service benefits of improving water quality and attaining beneficial uses ~~access~~.

Implementation of these TMDLs is intended to address water pollution, as required by the relevant sections of the federal Clean Water Act. The negative economic and health impacts of water pollution potentially affect all those who live, work and recreate within the watershed, as well as those downstream, including commercial, recreational and subsistence fishing communities. The externalized costs of water pollution may disproportionately negatively affect poor, rural, indigenous and minority communities in Oregon.

In contrast, [direct economic](#) costs of TMDLs implementation are borne only by those entities contributing ~~sources of excess~~ pollutants to waterways. These costs can be reduced by these entities by choosing pollutant control or reduction strategies or options that align with their particular circumstance, perspective and/or business needs. [The potential economic and ecosystem service benefits of improved water quality and beneficial use access may be realized by all those who live, work and recreate within and downstream of the Upper Yaquina River Watershed.](#)

Statement of Cost of Compliance

Costs of compliance with this TMDL rule can include administrative and implementation costs. DEQ [did](#) not [receive](#) specific information for potentially affected operations within the watershed to determine economic impacts to particular landowners or business operators. DEQ expects costs of compliance to vary for one or more of the following reasons:

- Locations and seasonality of pollution sources and activities can vary from locations and seasonality of bacteria and dissolved oxygen impairments.
- Pollution controls or activities may already be in place in some locations that prevent or reduce exceedances of water quality [criteria](#).
- Pollutant control strategies required in the WQMP vary by pollutant and source sector.
- Multiple pollution controls may be needed [at](#) some locations.
- The presence of buildings or transportation infrastructure may preclude pollution controls in some locations.
- DEQ does not have exhaustive information to determine all potential sources or what actions are currently occurring that could be modified or enhanced to prevent exceedances of water quality standards. Pollutant source assessment and allocations are identified by source sector, not individual property or activity.
- Varying acreages and locations of pollutant sources and [relative amount](#) of pollutant contributions.
- A range of organizational capacity exists for implementation plan development and there are varying levels of complexity are needed in plans.

Members of the Upper Yaquina TMDLs Rule Advisory Committee recommended DEQ use available information to quantify total costs of full implementation of the pollution controls of riparian [vegetation](#) restoration and livestock access limitations estimated to be needed by the TMDLs. In 2010, DEQ estimated costs for riparian restoration in the Willamette Basin, equivalent to standard buffers in the [Conservation Reserve Enhancement Program, using data from the National Resource Conservation Service \(DEQ, 2010\)](#). One RAC member estimated that extrapolating these costs to the Yaquina River Watershed and applying inflation adjustment factor (1.385) to better estimate 2022 costs, yields anticipated costs of approximately \$6500 to \$10,000 per acre for riparian vegetation or fencing. DEQ concluded that these figures represent a reasonable range of riparian restoration costs, [while noting](#) that individual site costs would range from \$0 to \$10,000 per acre, depending on the existing condition of riparian areas, which may already have adequate pollution controls in place.

DEQ estimated that approximately 160-acres along certain streams in the watershed require restoration to effectively implement the TMDL. Using the \$10,000 per acre figure, DEQ conservatively estimated approximately \$1.60 million will be needed for establishing the needed riparian vegetated buffer. These estimated costs are not distinguishable between public and private investment and costs cannot be refined to a site-specific level (for the reasons listed above).

Where investments are necessary to meet TMDL targets and implementation requirements, DEQ identifies funding resources in the WQMP and online that include, but are not limited, to state and federal grants (including [Oregon Watershed Enhancement Board and Clean Water Act Section 319 nonpoint source implementation grants](#)) and below-market interest rate loans (that can include principal forgiveness) through the Clean Water State Revolving Fund program. Other state and federal opportunities are provided on DEQ's water quality funding resource webpage: <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-Funding.aspx>

[At least one](#) Members of the Upper Yaquina TMDL Rule Advisory Committee recommended [acknowledging and](#) quantifying previous investments in watershed restoration in the Upper Yaquina River Watershed. Over the past two decades, grants from the Oregon Watershed Enhancement Board to the Mid Coast Watersheds Council have been applied in cooperation with, and investments from, agricultural and small woodlot landowners to improve riparian conditions, reduce livestock access to streams and improve instream habitat. In addition, one landowner enrolled 60 acres in the US Department of Agriculture's Conservation Reserve Enhancement Program. [Riparian](#) restoration projects require [years to](#) multiple decades to [provide functions needed to](#) improve water quality and DEQ does not have current information on the status, success or costs of most restoration projects. However, [DEQ's review of several](#) Oregon Watershed Enhancement Board [final project](#) reports [found](#) that [certain](#) projects were not fully implemented [in the watershed](#). [Moreover, the 2021 Strategic Implementation Area](#) tax lot-level survey by Oregon Department of Agriculture [confirmed](#) that [multiple streamside](#) areas [in the watershed are not in a condition that provides the full range of](#) riparian functions, [nor are they on a trajectory to do so](#). The combination of past or existing riparian improvement or protection projects may offset a portion of the costs of restoring riparian vegetation required by the TMDL.

For each affected entity in the sections that follow, potential costs of compliance for implementing pollutant controls are highly variable for the reasons in the list above.

State and federal agencies

Several state and federal agencies will be assigned responsibility for developing plans and implementing management strategies to achieve cumulative pollutant load reductions, specified in the TMDL and WQMP. Compliance costs are not different for implementing TMDLs issued by department order or TMDLs adopted as rules. Grant and low interest loan funding is available to support implementation of pollution controls and watershed restoration actions required to meet TMDL requirements.

DEQ implements pollutant waste load allocations through NPDES permits. Because allocations are applied in permits upon evaluation for renewal or initial applications, this does not represent additional fiscal impact to DEQ for TMDL implementation.

Oregon Department of Forestry is responsible for developing plans for management strategies and overseeing implementation of state Forest Practices Act rules to achieve nonpoint source pollutant load allocations and meet water quality standards on non-federal forestlands (state, county, and private) within the watershed, perform annual reporting and participate in monitoring and periodic progress reviews. Per ODF authorities described in state statutes and rules, a mix of existing practices, programs and voluntary measures are promoted for implementation to improve or protect water quality, land condition and aquatic habitat on non-federal forestlands. Administrative costs for implementing these existing rules and programs are not dependent on TMDLs, but ODF will incur administrative costs for development of a TMDL implementation plan. Administrative and implementation costs for ODF and individual forestland owners/operators will be not different for implementing TMDLs issued by department order than TMDLs adopted as rules. Financial incentives and technical assistance programs are available through federal, state and local agencies and organizations to assist private forest landowners/operators to support implementation of site assessment, pollution controls, watershed restoration activities or forestland condition improvements that may be necessary to meet TMDL requirements.

Oregon Department of Agriculture is responsible for developing plans for management strategies and overseeing implementation of practices to achieve nonpoint source pollutant load allocations and meet water quality standards on private lands for all agricultural activities within the watershed, perform annual reporting and participate in monitoring and periodic progress reviews. Per ODA authorities described in state statutes and rules, a mix of existing regulatory programs and voluntary measures are implemented on agricultural lands or related to agricultural activities, in partnership with local Soil Water Conservation Districts and Local Advisory Committees, to improve or protect water quality, ~~aquatic habitat~~ and land condition that impacts water quality. [ODA dedicated a position to help implement the Oregon Plan Habitat Strategy in the Oregon Coast ESU \(ODFW, 2007\).](#) Administrative costs for implementing these existing rules and programs are not dependent on TMDLs, but ODA will incur administrative costs for development of a TMDL implementation plan. Administrative and implementation costs for ODA and individual landowners/producers are not different for implementing TMDLs issued by department order than TMDLs adopted as rules. Financial incentives and technical assistance programs are available to assist private landowners. Grant and low interest loan funding is available to ODA, SWCDs, and individual landowners/operators to support implementation of assessment, pollution controls and watershed restoration actions or land condition improvements that may be necessary to meet TMDL requirements.

Oregon Department of Transportation is responsible for implementing practices to achieve pollutant allocations related to highways within the watershed. ODOT is required to comply with its DEQ-issued MS4 stormwater permit, including development of a statewide TMDL implementation plan. The plan must include practices to achieve TMDL allocations related to both stormwater discharges and nonpoint sources of excess solar radiation.

Compliance costs are not different for ODOT for implementing TMDLs issued by department order than TMDLs adopted as rules.

Oregon Department of State Lands protects and conserves state waterways and wetlands through administration of Oregon's Removal-Fill Law, Scenic Waterways Law and the Wetland Conservation Program. DSL will not incur additional administrative or compliance costs in administering its aquatic resource management programs.

US Bureau of Land Management is responsible for developing plans for management strategies and implementing practices to achieve nonpoint source pollutant load allocations on forest land owned by the federal government, which makes up approximately one percent of the land area within the watershed. The BLM's current Resource Management Plan dictates how Riparian Reserves are managed. Administrative costs for implementing these existing rules and programs are not dependent on TMDLs, but BLM will incur administrative costs for development of a TMDL implementation plan. These costs are not different for implementing TMDLs issued by department order than TMDLs adopted as rules.

Local governments

Lincoln and Benton counties will be responsible for developing plans and implementing practices to achieve pollutant load allocations for rural residential planning and development, building code administration and enforcement, onsite septic system permitting and compliance and operation of the county transportation systems within the watershed. The counties will incur administrative costs for development of a TMDL implementation plan. Administrative and implementation costs are not different for these entities for implementing TMDLs issued by department order than TMDLs adopted as rules. Financial incentives and technical assistance programs are available to assist local governments and private landowners. Grant or low interest loan funding are available to support implementation of assessment, pollution controls and watershed restoration actions or [landscapes](#) [condition](#) improvements that may be necessary to meet TMDL requirements.

Public

The proposed rule does not have a direct economic cost to the public at large. As a result of the proposed rule, DEQ expects that currently impaired beneficial uses of waters in the Upper Yaquina River Watershed will be restored. These improvements would provide an overall positive direct economic impact to the public who live, work and recreate in the watershed [and downstream](#).

The proposed rule supports the Oregon Plan mission: "Restoring our native fish populations and the aquatic systems that support them to productive and sustainable levels that will provide substantial environmental, cultural, and economic benefits."

The Oregon Plan is a comprehensive partnership between government, communities, private landowners, industry and citizens funded by the Oregon Legislature. Efforts under the

Oregon Plan include regulatory and non-regulatory programs designed to restore native salmon runs, improve water quality and maintain healthy watersheds and human communities throughout Oregon. TMDLs are the primary regulatory approach to addressing water bodies that do not meet water quality standards.

Commercial and recreational fishing is a major driver in the Oregon economy, especially in smaller rural communities. Water quality is a limiting factor that imperils the Yaquina population of Oregon coastal coho, which is significant in the culture and employment of the Oregon central coast that is severely depleted³. The proposed rules support state and federal conservation or recovery plans to restore or maintain healthy fisheries and will also help improve water contact recreation and livestock watering opportunities. Small Oregon coastal communities downstream of the watershed, which once relied heavily on commercial salmon fishing for their income, may experience a positive economic impact due to the proposed rules, if salmonid populations increase.

The statewide economic contribution of recreational anglers to Oregon's economy as of 2018 was \$1.5 billion dollars, supporting 13,120 jobs. It was estimated that 569,600 Oregon recreational anglers spent \$871.8 million in 2018 ([Pacific Salmon Commission, 2017](#)). The proposed rules may have a positive economic impact on income from recreational anglers if salmonid populations increase. Improvements in recreational salmon fishing may also have a positive economic impact on the public who can use the salmon as a food source.

Commercial salmon fishing generates thousands of jobs in smaller coastal Pacific Northwest communities. The Oregon Department of Fish and Wildlife, estimates that Oregon's coastal commercial salmon fisheries generated an average of 396,728 landed pounds of salmon from 2010-2017 in its multiple coastal ports, an average of approximately \$2,073,481. This was estimated to have created more than \$5,000,000 in net economic impacts to Oregon's coastal communities through commerce ([ODFW, 2019](#)).

Large businesses - businesses with more than 50 employees

The large businesses that operate within the watershed are private industrial timber companies and one railroad company. These entities do not have captive locations in the watershed with greater than 50 employees but manage significant tracts of land and/or operate extensive transportation networks. The rule could impose costs associated with achieving required reductions in pollutant contributions to waterways from these lands or operations. ~~Within several years~~ [Starting in July 2023](#), compliance costs for natural resource protections for industrial forestland owners may be associated with Forest Practices Act rules ~~currently being developed from~~ [revised in October 2022 due to](#) legislation associated with the Private Forests Accord, rather than this [TMDL](#) rule.

Administrative and implementation costs will be incurred by the railroad for implementation plan development, periodic reporting and periodic assessment of riparian conditions in the railroad right-of-way. DEQ does not anticipate different economic impacts to any large businesses as a result of the rule, compared to costs for administration or implementation of TMDLs issued by department order.

Small businesses – businesses with 50 or fewer employees

The rule could impose costs associated with achieving required reductions in pollutant contributions to waterways from five small agricultural and timber-related businesses (non-industrial private forestlands), as well as an unquantified number of small woodlands owners and small livestock and farm operations, which are not identified as small businesses in Oregon’s database. The rule could also impose costs on four small businesses unrelated to agriculture and forestry if repairs or upgrades to septic systems are needed.

Although the proposed rule does not place specific requirements on small businesses in aggregate, the proposed rule identifies management strategies and practices for the agricultural and forestry sectors that are necessary to reduce pollutant loads. These activities may require changes in certain management practices or improvements in land conditions that could result in capital costs for small landowners. Both Oregon Department of Agriculture and Oregon Department of Forestry have rules in place that [involve](#) a mix of regulatory and voluntary practices by agricultural and forest landowners to protect or improve water quality. [In October 2022](#), ODF [updated](#) its rules based on the 2022 Private Forest Accord report and passage of Senate Bills 1501 and 1502 and House Bill 4055 during the 2022 legislative session. [ODF’s new stream buffer rules begin to take effect in July 2023](#). The authors of the Private Forest Accord anticipated ODF’s new rules would have a greater, but unquantified fiscal impact on small forest landowners. Compliance costs for implementing ODA and ODF rules are not dependent on TMDLs.

Some of these costs may be offset by preventing erosion or improving the productivity of certain agricultural and forest lands. However, administrative and implementation costs are not different for implementing TMDLs issued by department order compared to TMDLs adopted as rules. In addition, grant and low interest loan funding are available to support implementation of pollution controls and watershed restoration actions required for compliance with TMDL requirements. The U.S. Dept of Agriculture, Natural Resource Conservation Service offers a variety of programs to help farmers, ranchers, family forests, Tribes and conservation partners perform voluntary conservation on private lands funded through the Farm Bill. Small rural landowners and agricultural operators are eligible for NRCS Financial Assistance, grant and cost-share programs through, including Environmental Quality Incentives Program, Conservation Innovation Grants, Voluntary Public Access and Habitat Incentives Program, Voluntary Conservation Stewardship Program, Regional Conservation Partnership Program, Conservation Easements, and Agricultural Conservation Easements Program. The Oregon Watershed Enhancement Board offers multiple grant types, including Oregon Agricultural Heritage Program grants, the only grant type specific to agricultural lands.

ORS 183.336 Cost of Compliance Effect on Small Businesses

1. Estimated number of small businesses and types of businesses and industries with small businesses subject to proposed rule.

DEQ searched the Oregon Employment Department database (2021) list of all businesses registered in Oregon, using NAICS codes and zip codes for the watershed and nearby. DEQ

identified one registered small agricultural business (non-cattle), four registered small timber or logging businesses and four registered small businesses unrelated to forestry or agriculture within the watershed. Based on this review and input from the Upper Yaquina TMDL Rule Advisory Committee, there are small agricultural producers and small woodlot operations that do not appear to be identified as “small businesses” as defined in ORS 183.310, but instead report their farm or forestry income in federal tax reporting.

2. Projected reporting, recordkeeping and other administrative activities, including costs of professional services, required for small businesses to comply with the proposed rule.

The proposed rule does not place specific administrative activities or requirements on small businesses because implementation plan development and annual reporting responsibilities are assigned to state and local governments as Designated Management Agencies. Therefore, DEQ does not anticipate any significant costs of these types to small businesses.

3. Projected equipment, supplies, labor and increased administration required for small businesses to comply with the proposed rule.

Although the proposed rule does not place specific requirements on small businesses in aggregate, the proposed rule identifies management strategies and practices for the agricultural and forestry sectors that are necessary to reduce pollutant loads. These activities may require changes in certain management practices or improvements in land conditions that could result in costs to small agricultural or timber-producing operations. Although compliance costs for implementing ODA and ODF rules are not dependent on TMDLs, addressing TMDL requirements may require additional supplies, labor or administration for these businesses, including those that provide in-kind match to publicly funded restoration grants. Some capital costs may be offset by preventing erosion or improving the productivity of certain agricultural and timber lands through grant funded conservation projects.

4. Describe how DEQ involved small businesses in developing this proposed rule.

DEQ included individual landowners and representatives from agricultural and forestry interest groups on the Rule Advisory Committee to advise DEQ on economic impacts and costs of compliance for small businesses. DEQ also provided rulemaking notice to a statewide list of individuals and organizations interested in TMDLs and nonpoint source actions. These groups included small businesses.

Documents relied on for fiscal and economic impact

Document title	Document location
DEQ’s Oregon Administrative Rules 340-042-0080 Implementing a Total Maximum Daily Load	https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1459

Economic Impacts of Pacific Salmon Fisheries – Pacific Salmon Commission (2017)	https://www.psc.org/download/333/special-reports/9337/economic-impacts-of-pacific-salmon-fisheries.pdf
Oregon’s Ocean Commercial Fisheries – Oregon Department of Fish and Wildlife (2019)	https://www.dfw.state.or.us/MRP/docs/Backgrounder_Comm_Fishing.pdf
Oregon Coast Coho Conservation Plan for the State of Oregon - Oregon Department of Fish and Wildlife, in partnership with state and federal natural resource agencies (2007)	https://www.dfw.state.or.us/fish/crp/docs/coastal_coho/final/coho_plan.pdf
The Oregon Coast Coho Conservation Plan for the State of Oregon: 12-year Assessment (ODFW 2019)	https://www.dfw.state.or.us/fish/CRP/docs/coastal_coho/economic_reports/OCCCP%202019%2012-Year%20Plan%20Assessment.pdf
Natural Resource Conservation Service programs page	https://www.nrcs.usda.gov/wps/portal/nrcs/main/or/programs/
Natural Resource Conservation Service Riparian Forest Buffer Code 391 (2022)	https://efotg.sc.egov.usda.gov/api/CPSFile/39232/391_OR_CPS_Riparian_Forest_Buffer_2022
DEQ’s Cost Estimate to Restore Riparian Forest Buffers and Improve Stream Habitat in the Willamette Basin, Oregon (2010)	https://www.oregon.gov/deq/wq/Documents/willRipCostRev2.pdf
Oregon Employment Department Small Business database (2021)	Note: We are confirming whether this list contains confidential business information or can be released. Oregon Employment Department: Request public records: https://www.oregon.gov/employ/Agency/Pages/Request-a-Public-Record.aspx
Oregon State University - Small Farms Program	https://smallfarms.oregonstate.edu/
Oregon Department of Forestry- Forest resources: Helping landowners	https://www.oregon.gov/odf/working/Pages/helpinglandowners.aspx
Oregon Department of Agriculture - Grants, Loans, and Technical Assistance	https://www.oregon.gov/oda/agriculture/Pages/Grants.aspx
Oregon Watershed Enhancement Board (OWEB) - Grant Programs	https://www.oregon.gov/oweb/grants/Pages/grant-programs.aspx
Private Forest Accord Report (2022)	https://www.oregon.gov/odf/Pages/private-forest-accord.aspx
Resource Management Plans for Western Oregon (U.S. Bureau of Land Management)	https://eplanning.blm.gov/public_projects/lup/57902/79046/91311/NCO_ROD_RMP_ePlanning.pdf
Agricultural Statistics – ODA, USDA Census of Agriculture	https://www.oregon.gov/oda/agriculture/pages/statistics.aspx

US Environmental Protection Agency Environmental Justice Screening Tool	https://www.epa.gov/sites/production/files/2021-04/documents/ejscreen_technical_document.pdf
Oregon Department of Human Services data and reports	https://www.oregon.gov/dhs/ABOUTDHS/Pages/Data.aspx
Oregon Department of Human Services – County Quick Facts 2018	https://www.oregon.gov/dhs/ABOUTDHS/DataDocuments/County-Quick-Facts-2018.pdf
US Census Bureau – 2020 Census – Census Tract Reference Map	https://www.census.gov/geographies/reference-maps/2020/geo/2020pl-maps/2020-census-tract.html
Written input from Upper Yaquina TMDL Rule Advisory Committee	Available from DEQ, upon request

Advisory committee fiscal review

DEQ appointed an advisory committee.

As ORS 183.33 requires, DEQ asked for the committee’s recommendations on:

- Whether the proposed rules would have a fiscal or economic impact,
- The extent of the impact, and
- Whether the proposed rules would have a significant adverse impact on small businesses; if so, how DEQ can comply with ORS 183.540 to reduce that impact.

If a significant impact is identified by the committee, as ORS 183.333 and 183.540 requires, the committee will consider how DEQ could reduce the rules’ fiscal impact on small business.

Advisory committee recommendations on whether the proposed rule will have a fiscal or economic impact and extent of impact

Two members of the Upper Yaquina TMDL Rule Advisory Committee recommended that the fiscal analysis focus less on costs of actions needed to meet the TMDL regulatory targets and more on consideration of economic and other societal benefits of restoring water quality in the watershed and downstream. One RAC member recommended following federal guidelines (from the National Environmental Policy Act and Updated Principles and Requirements for Federal Investments in Water Resources) and using findings from studies on the economics of climate change, biodiversity and ecosystems services (including a 2019 study on non-market benefits of improving Oregon Coast Coho habitat conditions) to quantify the potential positive direct and indirect economic impacts of TMDL required actions to improve and protect water quality in the watershed. Neither RAC member quantified the economic benefits of implementing the TMDLs in the Yaquina watershed, but both posited that the positive economic impacts of restoring water quality in the watershed will benefit many people and far exceed the negative economic impacts to individual landowners and businesses.

DEQ concluded that the RAC member input summarized above raises important questions about the inseparable relationships among watershed function, aquatic habitat, water quality,

climatic changes and other environmental considerations. However, this larger synthesis of ecosystem services and economics and the federal guidance recommended are beyond the scope of fiscal analysis of this TMDLs rule.

However, in response to this input, DEQ identified information specific to coastal coho recovery for the Yaquina population, based on review of Oregon Coast Coho Conservation Plan (ODFW 2007) documentation, The Oregon Coast Coho Conservation Plan for the State of Oregon: 12-year Assessment (ODFW 2019) and in discussions with Oregon Department of Fish and Wildlife. DEQ summarized information from these documents in the TMDL Technical Support Document, which can be used to estimate the costs of habitat restoration and the status of progress towards achieving the high-quality habitat targets for each population within the Oregon Coast Coho Evolutionary Significant Unit.

Advisory committee recommendations on whether the proposed rule will have significant adverse impact on small businesses

Upper Yaquina TMDL Rule Advisory Committee members provided the following additional information for consideration regarding impacts to small businesses:

- There are many small farms in the watershed that are not registered as small businesses and report farm income on individual federal income tax filings.
- ~~An unquantified number of~~ Certain investments in rural land ownership, land lease agreements or land management contracts in the watershed ~~could also~~ may be ~~considered to be~~ represent small businesses, but neither the number nor the potential impacts on these entities were quantified.

Two Upper Yaquina TMDL Rule Advisory Committee members indicated that their small agricultural and timber businesses could incur adverse economic impacts due to implementing the TMDL, including loss of future timber harvest income. However, neither member quantified the extent of the impacts and both acknowledged that some portion of their predicted economic losses (up to 25% of retirement investment) would be due to implementation of amended forest practices rules, rather than the TMDL rule.

One RAC member indicated that there are negative property tax implications for small farms that take land out of production, which could include certain types of conservation easement or status. DEQ evaluated this issue and concluded that while does occur, it is only one of several possible outcomes. Some County tax assessors can and have determined that land in Natural Resource Conservation Service Farm Services Agency “CREP” contract status is no longer in agricultural production and is therefore the property is taxed at a higher rate. However, DEQ also concluded that most riparian improvements and conservation actions can be conducted using a mix of funding mechanisms that allow a “working lands” approach, while providing opportunity for establishment of woody overstory vegetation. The change in property tax assessment status applies to the specific case where land is taken out of production. However, actions to restore a functioning riparian zone can provide opportunities including rotational grazing or certain harvesting, thereby supporting future agricultural uses. The Natural Resource Conservation Service Riparian Forest Buffer Code 391 states: “Periodic removal of some forest products such as high value trees and medicinal herbs, nuts, and fruits is permitted provided the intended purpose is not compromised by the

loss of vegetation or harvesting disturbance” (NRCS, 2022). Based on the Oregon Department of Agriculture’s 2021 Strategic Implementation Area evaluation and DEQ’s vegetation height and shade assessment, a substantial portion of the near-stream area on land zoned for agriculture adjacent the Yaquina River (and Little Elk Creek) is either dominated by invasive species and is therefore not productive agricultural land, or the land is not providing woodlot products. Within the area covered by DEQ’s assessment, approximately 49% of the acreage adjacent to the Yaquina River exhibits vegetation height less than or equal to 3 feet and approximately 49% of the stream miles adjacent to the Yaquina River exhibits vegetation height less than or equal to 3 feet. Restoration of these near-stream areas could provide a mix of agricultural use and water quality benefits as well as fish and wildlife habitat. DEQ concluded that it is inaccurate to presume that the riparian improvements necessary to meet the TMDL shade allocations would preclude agricultural uses over time.

Oregon Department of Agriculture commented that there may be a fiscal impact for some agricultural landowners for improvements needed to achieve conditions consistent with TMDL load allocations that are above and beyond compliance with the existing Agricultural Water Quality Area Rules. Fiscal impacts could include taking some land out of production for riparian improvements and/or cost-share or match for implementing changes. But ODA could not quantify these impacts or determine whether they were significant or adverse.

The Pacific Coast Federation of Fishermen’s Associations concluded that there is no cost to landowners for providing or protecting shade producing vegetation due to issuance of the Upper Yaquina River Watershed TMDLs, because maintaining or restoring riparian area is required under the existing Agricultural Water Quality Management and Forest Practices rules.

Although the committee agreed there could be economic impacts to some individual small businesses, none of the committee members provided sufficient information to support the conclusion that the TMDLs rule would cause significant, adverse impacts to small businesses.

Advisory committee recommendations on how to reduce impacts

One RAC member suggested that certain potential impacts to small businesses could be reduced by increased funding or capacity for implementation of restoration projects or changes in land management practices. DEQ agrees with RAC member input that incentives to participate in Oregon Plan for Salmon and Watersheds projects need to be expanded to recruit more landowners.

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rules would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square foot detached, single-family dwelling on that parcel. DEQ determined the proposed rules would have no effect on direct or indirect development costs.

Racial Equity

ORS 183.335(2)(a)(F) requires state agencies to provide a statement identifying how adoption of this rule will affect racial equity in this state.

Tribal nations were made aware of the rulemaking process and invited to consult on this matter. Representatives from the Confederated Tribes of the Siletz Indians participated in the local and technical advisory groups convened in 2012 and on the Rule Advisory Committee.

DEQ also engaged extensively with agricultural, forestry, fishery and conservation communities through the local and technical advisory groups convened in 2012 and the Rule Advisory Committee.

DEQ expects t~~The proposed rules are expected~~ to have a positive impact on and help promote racial equity, particularly in benefitting tribal interests. The externalized costs of water pollution often negatively affect poor, rural, indigenous and minority communities in Oregon and some underserved communities may not have equal access to technical and financial assistance or other resources. By reducing water column bacteria and phosphorus and increasing dissolved oxygen, t~~The proposed rules~~ will help restore and maintain healthy and abundant fisheries (including subsistence salmonid fisheries common to poor, rural, indigenous and minority communities) and will also restore and protect beneficial uses including water contact recreation and livestock watering.

Environmental Justice Considerations

ORS 182.545 requires natural resource agencies to consider the effects of their actions on environmental justice issues.

182.545 Duties of natural resource agencies. In order to provide greater public participation and to ensure that all persons affected by decisions of the natural resource agencies have a voice in those decisions, each natural resource agency shall:

(1) In making a determination whether and how to act, consider the effects of the action on environmental justice issues.

(2) Hold hearings at times and in locations that are convenient for people in the communities that will be affected by the decisions stemming from the hearings.

(3) Engage in public outreach activities in the communities that will be affected by decisions of the agency.

(4) Create a citizen advocate position that is responsible for:

(a) Encouraging public participation;

(b) Ensuring that the agency considers environmental justice issues; and

(c) Informing the agency of the effect of its decisions on communities traditionally underrepresented in public processes.

ORS 182.545 requires natural resource agencies to consider the effects of their actions on environmental justice issues. DEQ considered these effects by:

- Using available socioeconomic and demographic information to evaluate whether overburdened or disadvantaged communities are present in the watershed;
- Evaluating the potential impacts of TMDL issuance on the pollutant burden on communities in the watershed;
- Evaluating whether any disadvantaged communities would be disproportionately impacted by TMDL implementation; and,
- Conducting outreach to solicit input on TMDL development and implementation from the different communities living, working and recreating within the watershed.

DEQ used EPA's Environmental Justice screening tool and Oregon Health Authority data and reports (including the 2018 County Quick Facts) on a range of demographic, economic and health and wellbeing indicators to evaluate Lincoln County populations. DEQ concluded that Lincoln County residents, including those within the watershed, are on average older and less ethnically diverse with a higher percentage on social security and a slightly higher poverty rate than state averages. At three percent, the percentage of non-Hispanic Indian and Alaskan native population is higher than the state average of 0.9 percent. This is likely due to the locations of the Confederated Tribes of the Siletz Indians' governmental, cultural and residential centers being in the City of Siletz. While Siletz is outside of the watershed, the Tribes manage lands affected by impaired water quality within the watershed. As such, communities with potential disadvantages related to age, low income and minority status are present in the watershed.

DEQ also used EPA's EJ Screen to compile census and other data as indicators of the potential for increased impacts from exposure to pollutants. In addition, DEQ evaluated information from conversations with people living and working in the watershed and surrounding areas to assess whether the TMDL would increase pollutant exposure, economic burdens or diminished recreational or subsistence fishing opportunities.

All pollutant exposure indicators were below state averages, with the exception of lead paint assumed to be in pre-1960s housing, which is not impacted by issuance of the TMDL.

Some citizens residing in the broader Mid Coast Basin expressed concern for: exposure to aerially applied pesticides associated with private forest operations and risks to human health, water quality and aquatic life from land application of biosolids from municipal sewage treatment operations. The well-documented concerns of direct airborne and drinking water exposure pathways and indirect food chain exposures were the subject of a failed county ban on aerial pesticide application. Amendments to forest practices rules are intended to better inform the public of aerial applications. The TMDL requires controls for nutrient components of pesticides that could reach waterways. Although one property is currently approved for land application of biosolids, currently biosolids are not applied within the watershed. If the site became active, the TMDL includes required controls from agricultural areas to prevent mobilization of bacteria and nutrients from biosolids from the land where it is applied. Thus, the TMDL would not increase any nutrient pollutant exposures from application of pesticides and biosolids.

DEQ's analysis of fiscal and economic impacts found that there could be costs associated with required TMDL implementation incurred by businesses and individuals that contribute bacteria, phosphorus and solar radiation to waterways within the watershed. However, improvements to water quality as a result of TMDL implementation will improve economic opportunities for fishing, recreating and livestock watering, which may have increased economic and health benefits. Lincoln County staff shared with DEQ concerns about costs being a barrier for rural, low-income residents in replacing failing septic systems, which may be needed in some areas of the watershed to meet TMDL bacteria allocations. However, DEQ determined that TMDL issuance can help focus resources to address pollutant loads from failing onsite wastewater treatment systems and provide assistance to residents that qualify for low-interest loans.

DEQ concluded that economic costs of TMDL implementation would not disproportionately impact disadvantaged communities. This is because communities with potential disadvantages related to age, low income and minority status are likely to realize proportionately higher benefit from water quality improvements increasing opportunities for subsistence fishing, recreation and livestock watering. In addition, Lincoln County can play an active role under existing regulations to support community-based loan programs and access federal resources to ease economic burdens for replacing failing septic systems, as needed.

As noted in the Racial Equity section of this Fiscal Impact Statement, DEQ engaged extensively with tribes and agricultural, forestry, fishery and conservation communities through the local and technical advisory groups since 2012 and the rule advisory committee in 2022. DEQ also engaged with Lincoln County representatives and people living and working in the watershed, including some older and low-income residents. In addition, DEQ will publish the rule package for a 60-day public comment period and hold a public hearing to engage people living, working or recreating in the watershed. All input received will be considered for revisions to the TMDLs, WQMP and Fiscal Impact Statement, prior to their finalization and request for rule adoption by the Oregon Environmental Quality Commission.

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