



State of Oregon Department of Environmental Quality

Oregon Environmental Quality

Commission Meeting

May 23, 2024

Rulemaking Action Item E

Powder River Basin Total Maximum Daily Load for Bacteria

Table of Contents

DEQ Recommendation to the EQC.....	3
Overview	3
Statement of need	4
Rules affected, authorities, supporting documents.....	5
Documents relied on for rulemaking.....	5
Fee Analysis.....	6
Statement of fiscal and economic impact.....	7
Housing cost	16
Racial Equity	17
Environmental Justice Considerations	18
Federal relationship.....	21
Land use	21
EQC Prior Involvement.....	23
Advisory Committee	24
Public Engagement	26
Implementation.....	30
Five-Year Review	31
Supporting document	32

Accessibility Information..... 33

Attachment A: Draft Rules – Edits Highlighted 34

Supporting documents 35

DEQ Recommendation to the EQC

The Oregon Department of Environmental Quality recommends that the Environmental Quality Commission adopt the proposed rules in Attachment A as part of Chapter 340, Division 42 of the Oregon Administrative Rules and to incorporate, by reference, the Powder River Basin Total Maximum Daily Load (Attachment B) and Water Quality Maintenance Plan (Attachment C) for *Escherichia coli*; hereafter *E. coli*.

Language of Proposed EQC motion:

“I move that the commission adopt the proposed rules as seen in Attachment A as part of Chapter 340, Division 42 of the Oregon Administrative Rules and to incorporate, by reference, the Powder River Basin Total Maximum Daily Load (Attachment B) and Water Quality Maintenance Plan (Attachment C) for bacteria.”

Overview

The federal Clean Water Act and implementing regulations requires Oregon to biennially submit, for U.S. Environmental Protection Agency approval, a list of all impaired waterways in the state. The act also requires Oregon to establish Total Maximum Daily Loads for pollutants in waters listed as impaired. The biennial list submittal must include a priority ranking of TMDL development and identify waters targeted for TMDL development.

DEQ is conducting this rulemaking to establish a TMDL to address the impairments to water quality standards and beneficial uses in surface waters in the Powder River Basin, which is comprised of the Brownlee, Burnt, and Powder River Subbasins that drain into the Snake River along the border of Oregon and Idaho. These impairments are caused by excess *E. coli* and are addressed by implementing Oregon Administrative Rules Chapter 340, Division 42. The proposed rules identify and quantify sources of *E. coli* and establish a Water Quality Management Plan that includes pollutant management strategies, a list of persons and agencies responsible for developing management plans and implementing strategies, and a timeline to reduce pollutant loads and attain water quality standards.

Rule adoption 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, reservoirs, irrigation conveyances, and federal, state, and county lands or operations within the Powder River Basin. Without issuance and implementation of the TMDL, the economic and health costs of on-going water pollution would continue, and Oregon would not meet the federal requirement of establishing TMDLs to restore impaired waters to meet Oregon’s water quality standards.

Statement of need

What need would the proposed rules address?

The proposed rules address stream and river segments in the Powder River Basin that are listed as impaired for *E. coli* affecting beneficial uses. Section 303 of the federal Clean Water Act, implementing regulations 40 C.F.R. Part 130 and Oregon Administrative Rules Chapter 340, Division 42 require Oregon to establish Total Maximum Daily Loads for pollutants impairing the beneficial use(s) of waterways in the state.

How would the proposed rules address the need?

Implementation of OAR Chapter 340, Division 42, under authorities granted in Oregon Revised Statute 468 and 468B allow DEQ to satisfy the state and federal requirements to establish a TMDL for *E. coli* bacteria that contributes to impairments of bacteria within the streams of the Powder River Basin.

How will DEQ know the rules addressed the need?

Adoption of the Powder River Basin TMDL rules by Oregon's Environmental Quality Commission will confirm that state requirements for establishing TMDLs for waters listed as impaired will be met. Approval of the TMDL by EPA will confirm that federal requirements for developing TMDLs for waters listed as impaired will be met.

Rules affected, authorities, supporting documents

Lead division

Water Quality

Program or activity

Watersheds Management

Chapter 340 action

Amend: 340-042-0090

Statutory Authority - ORS				
468.020	468.065	468B.020	468B.030	468B.035
468B.110				

Statutes Implemented - ORS				
468B.020	468B.110			

Documents relied on for rulemaking

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
Powder River Basin TMDL Technical Support Document	Appendix D

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 TMDL and WQMP may have fiscal or economic impacts on current and future operators of some farms and ranches, reservoirs, irrigation conveyances, and federal, state, and county lands or operations within the Powder River Basin.

This fiscal impact statement does not quantify the costs of on-going water quality impairment to beneficial uses of waters of the state, including impacts to livestock watering and recreational tourism. In 2022, farm employment for agricultural production, including livestock operations represented 9.3% of the jobs in Baker County (Headwaters, 2024). In a preliminary report prepared in 2022, it was estimated that visitor spending impacts in Baker County for total earnings and employment in the county were \$410 million, employing an estimated 900 jobs related to travel or tourism (Dean Runyan Assoc, 2023).

Implementation of this TMDL 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 basin, as well as those downstream. The externalized costs of existing water pollution may disproportionately and negatively affect poor, rural, indigenous and traditionally underrepresented communities in the Powder River Basin.

In contrast, costs of TMDL implementation are borne only by those entities contributing sources of pollutants to waterways. These costs can be reduced by these entities by choosing pollutant control or reduction strategies or options that align with their circumstances, perspective, or business needs.

Statement of Cost of Compliance

Costs of compliance with this TMDL rule can include administrative and implementation costs. DEQ does not have specific information for potentially affected operations within the basin to determine economic impacts to individual landowners or business operators. Such impacts are expected to vary by pollutant sources, sizes, and locations of activities and affected lands, as well as the extent of any existing and effective site-specific controls. Estimates were provided by Bureau of Land Management for administrative and implementation costs on federal lands managed by BLM.

The BLM estimates that the cost of producing a management plan for the proposed TMDL would be \$75,000 if done internally and \$200,000 if contracted to a private company.

Implementation of the plan will also result in monetary cost. Fencing riparian areas would have initial cost of approximately \$12,000 to \$15,000 per mile and a maintenance cost of \$100 to \$150 a mile/per year. Developing off-site watering sites would likely range from \$4,000 to \$6,000 per development. The BLM would likely enter into cooperative agreement with the livestock permittee with each paying for half of the costs. Costs associated with hiring seasonal employees to maintain fences is expected to range between \$25,000 and \$50,000. It is unclear how often fence maintenance would need to occur.

Baker County, as a member of the Powder River TMDL Rule Advisory Committee, estimated riparian fencing costs at \$12,000 to \$15,000 per mile.

A member of the Powder River TMDL Rule Advisory Committee representing Soil Water Conservation Districts provided costs expended on past projects to install riparian fencing and to convert flood irrigation to sprinklers within the basin. Reported costs for one fencing project along 11,466 feet of riparian area (in conjunction with a bank stabilization project) was estimated to be \$15,840 per mile, or \$3 per foot. Reported costs for three sprinkler conversion projects covering 60 to 100 acres ranged from approximately \$3,310 to \$4,433 per acre.

Members of the Powder River Basin TMDL Rule Advisory Committee identified the following potential costs in the economic analysis for TMDL implementation. The following potential costs did not include monetary cost estimates or number of implementers potentially affected:

- Transportation costs of bringing project materials to rural areas.
- “Match” costs for grant funded projects.
- Maintenance or reconstruction costs of existing riparian fencing.
- Costs of plan development and implementation for smaller entities, such as special districts.

For the cost of compliance sections below, potential fiscal or economic impacts for implementing pollutant controls are highly variable for the following reasons:

- Locations and seasonality of pollution sources and activities can vary between locations and seasonality for *E. coli* impairments.
- Pollution controls or activities may already be in place in some locations that prevent or reduce exceedances of water quality standards.
- 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.
- Acreage sizes and locations of pollutant sources and significance of pollutant contributions.

- Varying organizational capacity for implementation plan development and differing levels of complexity that may be required for a plan.

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 Clean Water Act Section 319 nonpoint source implementation grants) and below-market interest rate loans for public entities (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](#).

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. Costs incurred for complying with TMDLs may increase administrative costs for the Oregon Department of Agriculture. Grant 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 water quality permits called National Pollutant Discharge Elimination System permits. Since 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 basin. ODF will also perform annual reporting and participate in monitoring and periodic progress reviews. Aside from livestock grazing, forestland activities were not determined to be a source of *E. coli* to basin waterways. Because grazing on non-federal forest lands is regulated by ODA, management strategies to reduce bacteria from non-federal forestlands in the basin are not required. Potential fiscal impacts are not anticipated for ODF because of this rule.

Oregon Department of Agriculture is responsible for developing plans for management strategies and overseeing implementation of practices to achieve nonpoint source bacteria load allocations and meet bacteria water quality standards on private or state lands for all agricultural activities within the basin, 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 and land condition that impacts water quality. 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. At least one Powder River Basin TMDL Rule Advisory Committee member recommended additional education on land management impacts to water quality for agricultural owners and operators of land proximal to creeks, ditches, and wetlands. ODA would incur additional administrative or implementation costs for such education. Financial incentives and technical assistance programs are available to aid private landowners. Grant funding is available to ODA, SWCDs, and individual landowners/operators to support implementation of assessments, 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 bacteria allocations related to highways within the basin. ODOT is required to comply with its DEQ-issued Municipal Separate Storm Sewer System 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 other applicable nonpoint source discharges.

Oregon Department of Fish and Wildlife ODFW manages the Elkhorn Wildlife Area and operates 10 ungulate feeding stations along the foothills of the Elkhorn Mountains, with two of the stations located adjacent to perennial waterways (i.e., Anthony Creek and North Powder River). During development of a TMDL implementation plan, ODFW will incur administrative and implementation costs.

U.S. Bureau of Reclamation is responsible for managing operation of three federal dams and reservoirs and the associated water delivery and drainage facilities, which represent sources of bacteria, to achieve nonpoint source bacteria load allocations. BOR will incur administrative and implementation costs in developing and implementing management strategies described in a TMDL implementation plan.

U.S. Forest Service and US Bureau of Land Management are responsible for managing livestock grazing to achieve nonpoint source bacteria load allocations on forest land owned by the federal government. USFS and BLM lands make up approximately 32% and 18%, respectively, of the land area within the basin. Neither agency currently has a water quality restoration plan in place for lands under their jurisdiction in the basin that could meet the requirements of a TMDL implementation plan. BLM and USFS will incur administrative costs for development of TMDL implementation plans.

BLM estimated costs of approximately \$75,000 to \$200,000 for plan development. Additionally, implementation costs could include, riparian fencing at \$12,000 to \$15,000 per mile for an unknown number of miles, fence maintenance at \$100 to \$150 per mile for an unknown number of miles, seasonal hiring for fence maintenance at \$25,000 to \$50,000, and off-stream watering site development at \$4000 to \$6000 per site for an unknown number of sites. Approximately half of

implementation costs would likely be borne by livestock grazing allotment permittees who enter into cooperative agreements. These costs would result in improved water quality and riparian health, which would benefit wildlife, fisheries and recreation.

Local governments

Baker and Union Counties are responsible for developing plans and implementing practices to achieve bacteria 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 basin. The counties will incur administrative costs for development of TMDL implementation plans. Financial incentives and technical assistance programs are available to assist local governments and private landowners. Grant or low interest loan funding is available to support implementation of assessment, pollution controls and watershed restoration actions or landscape improvements that may be necessary to meet TMDL requirements.

Baker City is responsible for developing plans and implementing practices to achieve bacteria allocations related to non-permitted municipal separate storm sewer system, including from parks and other municipal properties discharging to waterways. Baker City will incur administrative costs for development of a TMDL implementation plan.

The cities of Huntington, Baker City, and North Powder are required to comply with DEQ-issued permits for the discharge of treated domestic wastewater, which include limits to meet the *E. coli* criteria.

Public

Irrigation Districts – Baker Valley Irrigation District, Powder Valley Water Control District, Lower Powder River Irrigation District and Burnt River Irrigation District are responsible for developing plans and implementing practices to achieve bacteria load allocations related to maintenance and operation of their irrigation water conveyance and return water facilities. Irrigation districts will incur administrative costs for development of a TMDL implementation plan. Financial incentives, technical assistance programs, grant funding and low interest loans with principal forgiveness are available to support implementation of assessment, pollution controls and watershed restoration actions or land condition improvements that may be necessary to meet TMDL requirements.

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 Powder River Basin, including water contact recreation and irrigation and livestock watering will be restored. DEQ expects these improvements to

provide an overall positive direct economic impact to the public who live, work and recreate in the basin.

Large businesses – businesses with more than 50 employees

DEQ evaluated available data from the Oregon Employment Department (2021) and U.S. Department of Agriculture National Agricultural Statistics Service (2017) and did not definitively identify any large businesses in the basin.

Small businesses – businesses with 50 or fewer employees

DEQ evaluated available data from the Oregon Employment Department (2021) and identified 37 small agricultural and three small timber-related businesses (non-industrial private forestlands). However, examination of USDA National Agricultural Statistics Service (2017) indicates there are up to 705 livestock and crop operations in Baker County covering approximately 754,585 acres. The rule could impose costs associated with achieving required reductions in *E. coli* contributions to waterways from 16 small beef cattle ranching and farming operations registered as businesses, and an unquantified number of small livestock and farm operations that may not be identified as small businesses in Oregon's database. Costs from implementation management strategies on federal land may also be passed on to small business that are permitted to use the land for grazing.

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 management practices or improvements in land conditions that could result in capital costs for small livestock operators. ODA has rules that require a mix of regulatory and voluntary practices for agricultural activities (including livestock grazing on private and state forest lands) to improve water quality. Compliance costs for implementing ODA rules are not dependent on TMDLs.

Grant funding is available to support implementation of pollution controls and watershed restoration actions for compliance with TMDL requirements. The U.S. Department of Agriculture, Natural Resource Conservation Service, offers a variety of programs to help farmers, producers, ranchers, family forests, tribes, and conservation partners to perform voluntary conservation on private lands funded through the Farm Bill. Grants may be available for small rural landowners and agricultural operators through a variety of financial assistance programs from USDA Natural Resource Conservation Service, EPA, Oregon Water Resources Department, Oregon Watershed Enhancement Board, DEQ, and other opportunities listed in section 5 of the WQMP.

ORS 183.336 Cost of Compliance Effect on Small Businesses

a. 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 basin. DEQ identified 37 registered small agricultural business and three registered small timber-related businesses. Based on this review, there may be small agricultural and timber producers that do not appear to be identified as “small businesses” as defined in ORS 183.310.

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

DEQ does not anticipate any significant costs for project reporting, recordkeeping, or other administrative activities for small businesses. 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 federal agencies, local governments, and irrigation districts that are Designated Management Agencies.

c. 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 sector that are necessary to reduce pollutant loads. These activities may require changes in management practices or improvements in land conditions that could result in costs to small agricultural operations. Addressing TMDL requirements may require additional supplies, labor, or administration for these businesses.

d. 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 notices 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
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
Natural Resource Conservation Service programs page	https://www.nrcs.usda.gov/programs-initiatives
U.S. Department of Agriculture National Agricultural Statistics Service	https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1_Chapter_2_County_Level/Oregon/
Oregon Employment Department Small Business database (2021)	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 Agriculture - Grants, Loans, and Technical Assistance	https://www.oregon.gov/oda/agriculture/Pages/Grants.aspx
Oregon Watershed Enhancement Board - Grant Programs	https://www.oregon.gov/oweb/grants/Pages/grant-programs.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/ABOUT/DHS/Pages/Data.aspx
Oregon Department of Human Services – County Quick Facts 2018	https://www.oregon.gov/dhs/ABOUT/DHS/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
The Economic Impact of Travel in Oregon, 2022 – prepared for Travel Oregon by Dean Runyan Associates (2023)	https://industry.traveloregon.com/wp-content/uploads/2023/06/OR_2022_2023-05-24.pdf
A Profile of Agriculture – Baker County, Oregon – prepared by Headwaters Economics in conjunction with US	https://headwaterseconomics.org/apps/economic-profile-system/41001

Bureaus of Land Management and U.S. Forest Service (2024)	
Rule Advisory Committee meeting #2, Apr. 18, 2023 <i>Written Comments</i>	https://www.oregon.gov/deq/rulemaking/Pages/PowderTMDL.aspx

Advisory committee fiscal review

DEQ appointed an advisory committee.

As ORS 183.33 requires, DEQ will ask 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.

The committee reviewed and provided input on the findings in the draft fiscal and economic impact statement. A revised draft fiscal and economic impact statement was prepared in response to committee input.

One member of the committee expressed concern for negative financial impacts to current and future agricultural producers, irrigation districts and other natural resource-based users and land managers in Baker County as a result of implementing the TMDL. However, the committee member did not quantify any specific economic impacts and acknowledged that grants and loans would be available to help defray some, though not all, costs.

Aside from the additional considerations for potential economic impacts and cost estimates recounted in the costs of compliance section above, committee members did not make recommendations for determining the extent of fiscal impacts. As noted in the Cost of Compliance section above, designated management agencies are responsible for developing implementation plans that may show site-specific assessments with quantification of costs to individual small businesses (and other landowners).

Although some members of the committee agreed there would be economic impacts to some individual small businesses, committee members did not provide sufficient cost estimates for individual operations to support the conclusion that the TMDL rule would cause significant, adverse impacts to small businesses.

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.

The Nez Perce Tribe and the Confederated Tribes of the Umatilla Indian Reservation were contacted about the rulemaking process and invited to consult on this matter and participate in the Rule Advisory Committee.

DEQ also engaged extensively with agricultural and forestry communities through local outreach, especially through ODA Local Advisory Committee forums, and through the TMDL Rule Advisory Committee.

The proposed rules are expected to have a positive impact on and help promote racial equity, regarding improved water quality and access to beneficial uses. This is because the externalized costs of water pollution often negatively affect poor, rural, indigenous and minority communities in Oregon. The proposed rules will help restore and maintain healthy water quality and will also restore and protect beneficial uses including water contact recreation, irrigation 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:

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

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.

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

Create a citizen advocate position that is responsible for:

Encouraging public participation;

Ensuring that the agency considers environmental justice issues; and,

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, health and wellbeing indicators to evaluate populations within Baker County and a small portion of Union County located in the Powder River Basin. The small portions of Wallowa County and Malheur County that fall within the Powder River Basin were not included in the Environmental Justice screening. The northeast portion of the basin in Wallowa County is comprised of national forest land (Wallowa Whitman National Forest). The southeast portion of the basin within Malheur County is sparsely populated. Census blocks or tracts available for these areas include extensive portions of both counties. Although very

small portions of the population of the basin may not be captured, this analysis is representative of the general basin population.

DEQ concluded that Baker and Union County residents within the basin are on average older, of lower income, less ethnically diverse, with a greater percentage of non-Hispanic white, and with a higher unemployment rate than state averages. The demographic breakdown of Baker County's population is 91.4% non-Hispanic White, 3.8% Hispanic, 1.3% non-Hispanic Indian or Alaskan Native, and less than 1% for each of the following categories: non-Hispanic African American, Asian, and Native Hawaiian and Other Pacific Islander. According to the Oregon Department of Human Services report, people living in Baker County are also on average less likely to have a college degree and more likely to be on social security income than the state average. Union County has a greater percentage of people living in poverty than the state average. As such, communities with potential disadvantages related to age and low-income status are present in the basin.

There are parts of the Powder River Basin that are within the Nez Perce ceded lands where the tribe can hunt and fish. The Powder River Basin, which feeds into the Snake River ecosystem, holds significant importance for the Nez Perce tribe, serving as a resource for their social, spiritual, and economic needs. Reducing *E. coli* levels in the surface waters of the Powder River Basin has a direct impact on the overall health of the Snake River ecosystem and the ability of people to safely be in or engage in activities that result in contact with the water, such as fishing of salmon, sturgeon, and lamprey. The Nez Perce also require availability of local water resources for ceremonies, medicinal plants, hunting, and spiritual practices in the downstream ecosystems connected to the Powder River Basin.

DEQ used EPA's Environmental Justice Screen tool to compile census and other data as indicators of the potential for increased impacts from exposure to pollutants. All pollutant exposure indicators were below state averages, with the exceptions of lead paint and ozone. Lead paint exposure is likely higher due to the age of rural housing compared to newer homes in urban and suburban areas. EPA's Ozone Basics website indicates that ground level ozone pollution results from chemical reactions between air pollutants emitted by cars, industrial facilities, power plants and other sources and is mediated by sunlight. Potential reasons for this pollutant to be higher in Baker County and Union County are complex and beyond the scope of this analysis. The Powder River Basin Bacteria TMDL will not affect human exposure to lead paint or ozone.

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 *E. coli* to waterways within the basin. However, improvements to water quality resulting from TMDL implementation may improve economic opportunities such as recreation, irrigation and livestock watering. These benefits may increase the economic and overall health for those who live, work, and recreate in the basin.

DEQ considered costs to be a barrier for rural, low-income residents to replace failing septic systems, which may be needed in some areas of the basin to meet TMDL bacteria allocations. However, DEQ determined that TMDL issuance can help to focus resources toward addressing pollutant loads from failing onsite wastewater treatment systems and to aid residents who qualify for assistance in applying for low-interest loans.

DEQ concluded that economic costs of TMDL implementation would not disproportionately impact disadvantaged communities. Additionally, Baker County and Union County have the ability under current regulations to support community-based loan programs and access federal resources to potentially alleviate economic challenges associated with replacing failing septic systems that may need maintenance and service.

DEQ acknowledges the importance of understanding demographic and socioeconomic results when conducting outreach to local communities and when providing education about the environmental effects of the rules. Limited resources can create barriers in use of technology or electronic data systems and may indicate locations within the counties in need of additional technical assistance. During the development of this rule, DEQ provided outreach opportunities in person, and virtually through phone conversations and other methods of communication.

DEQ engaged extensively with agricultural and forestry communities through local outreach using the Oregon Department of Agriculture Local Advisory Committee forums, and through the TMDL Rule Advisory Committee. These forums included local citizens from varying income levels and ages. Tribal nations were informed of the rulemaking process and invited to consult on this draft rule and participate on the Rulemaking Advisory Committee.

Federal relationship

Relationship to federal requirements

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so.

The proposed rules implement federal requirements found in 40 CFR 130.7(c). Under the federal Clean Water Act, the state is required to establish TMDLs for water quality limited segments of waterways listed on the submittal required by Clean Water Act Section 303(d).

Land use

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with statewide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
 - Resources, objects, or areas identified in the statewide planning goals, or
 - Present or future land uses identified in acknowledge comprehensive plans

DEQ determined whether the proposed rules involve programs or actions that affect land use by reviewing its Statewide Agency Coordination plan. The plan describes the programs that DEQ determined significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Natural Resources, Scenic and Historic Areas, and Open Spaces
6	Air, Water and Land Resources Quality
11	Public Facilities and Services
16	Estuarine Resources
19	Ocean Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that these proposed rules do not affect land use under OAR 340-018-0030 or DEQ's State Agency Coordination Program.

EQC Prior Involvement

DEQ provided information about the scope and timing of this rulemaking during informational items provided at commission meetings in April and May 2022.

DEQ provided a status update to the EQC in May 2023, which included an overview of the basin conditions, TMDL elements and discussion topics during engagement with the community, local and technical advisory groups, designated management agencies, rule advisory committee and Tribes.

Advisory Committee

Background

DEQ convened a Powder River Basin TMDL Rulemaking Advisory Committee that met twice between November 2022 and April 2023. The committee’s purpose was to advise DEQ on the economic and fiscal impacts and benefits of the proposed TMDL and WQMP.

DEQ appointed members from organizations that represent local interests of multiple diverse communities that could be affected by the proposed rules. The [rulemaking web page](#) provides meeting agendas, presentations, materials, and summaries.

Committee members are listed on the table below:

Powder River Basin TMDL Advisory Committee Membership			
Name	Affiliation	Title or Role	Interest Represented
Tom Demianew, Rob Hibbs	Oregon Dept. of Agriculture	Water Quality Specialist	State agency, agriculture
Joseph Lemanski, Rebecca Anthony	Oregon Dept. of Fish and Wildlife	District Fish Biologist	State agency, fisheries
Jana Peterson	Oregon Dept. of Forestry	Stewardship Forester	State agency, forestry
Whitney Collins	Baker County SWCDs	Districts Manager	Special district, conservation
Shawn Klaus	Burnt River Irrigation District	District Manager	Special district, water resources
Joseph Aragon	US Bureau of Land Management	Field Manager	Federal land management agency
Curtis Martin	Powder Basin Watershed Council (PBWC), local landowner	Director at Large, local landowner	PBWC Board of Directors, agricultural landowners
John Rademacher	US Bureau of Land Management	Supervisory Natural Resource Specialist	Federal land management agency
Karen Reiner	Local landowner	Local landowner	Environmental, organic farmers

Doni Bruland	Baker County	Natural Resources/Parks Coordinator	Local Government
--------------	--------------	-------------------------------------	------------------

Meeting notifications

To notify people about the advisory committee's activities, DEQ:

- Sent GovDelivery bulletins, a free e-mail subscription service, to the following lists:
 - Rulemaking
 - Total Maximum Daily Loads
 - Nonpoint Source
- Posted meeting information and materials on the web page for this rulemaking
- Added advisory committee announcements to DEQ's calendar of public meetings at [DEQ Calendar](#).

Committee discussions

Committee recommendations are described in the Statement of Fiscal and Economic Impact section above and in this section about committee discussions. Material presented and discussed with the committee included, among other items, descriptions of the proposed rule, the rulemaking process and timeline, the committee charter, the Powder River Basin geography and water quality conditions, bacteria pollutant analyses, assessment of pollutant sources, pollutant reduction strategies, environmental justice considerations, the racial equity statement, any revisions to draft documents from the initial committee meeting.

Committee meetings were open to the public. In addition to gathering input from committee members during the meetings, DEQ accepted written input from committee members after the meetings over a period of 30 days for additional input from committee member constituencies. All committee input was compiled and posted on the rulemaking webpage.

For additional information on advisory committee presentations and meeting summaries, see the advisory committee section of the [rulemaking web page](#).

Public Engagement

Public notice

DEQ provided notice of the proposed rulemaking and rulemaking hearing by:

- On June 2, 2023, DEQ sent a notice of the public comment period open until Aug. 2, 2023, and public hearing on July 26, 2023, to approximately 24,713 interested parties. DEQ held another public comment period from Jan. 3, 2024, through March 22, 2024, until 4 p.m. using the following DEQ lists through GovDelivery:
 - Rulemaking
 - DEQ Public Notices
 - Total Maximum Daily Loads
 - Nonpoint Source
- On June 2, 2023, filing a notice with the Oregon Secretary of State for publication in the July 2023 Oregon Bulletin;
- Notifying the EPA by email;
- Posting the Notice, Invitation to Comment and Draft Rules on the [web page for this rulemaking](#).
- Emailing advisory committee members and commenters
- Emailing the following key legislators required under [ORS 183.335](#):
 - Senator Jeff Golden, Chair, Senate Committee on Natural Resources
 - Senator Fred Girod, Vice-Chair, Senate Committee on Natural Resources
 - Representative Ken Helm, Chair, House Committee on Agriculture, Land Use, Natural Resources and Water
 - Representative Mark Owens, Vice-Chair, House Committee on Agriculture, Land Use, Natural Resources and Water
 - Representative Annessa Hartman, Vice-Chair, House Committee on Agriculture, Land Use, Natural Resources and Water
 - Senator Bill Hansell
 - Representative Bobby Levy
- Posting on the [DEQ event calendar](#).

Using the same lists and methods as above, DEQ also provided the following notices of public meetings and comment opportunities:

- June 28, 2023, DEQ sent notice of an informational technical meeting for July 5, 2023.
- July 19, 2023, DEQ sent notice to reschedule the public hearing to Aug. 15, 2023, in Baker City (with a virtual option). The comment period was extended through Aug. 31, 2023.
- Jan. 3, 2024, DEQ sent notice for a second public comment opportunity through Feb. 9, 2024, that included an informational open house opportunity in Baker City on Feb. 1, 2024.
- Jan. 23, 2024, DEQ sent notice that an informational meeting with organizations responsible for developing and implementing the Powder River

Basin Bacteria TMDL Monitoring Strategy would take place on Jan. 31, 2024, and would be open to the public.

- Feb. 7, 2024, DEQ sent notice that the public comment period was extended through March 8, 2024.
- March 5, 2024, DEQ sent notice that the public comment period was extended through March 22, 2024.

DEQ considered all comments and testimony received before the closing dates.

Public Hearing

On Aug. 15, 2023, DEQ held a public hearing with an informative presentation. DEQ received 13 oral comments at the hearing. Sections of this report include a summary of the written comments received during the public comment period, DEQ's responses, and a list of the commenters. Original comments are on file with DEQ.

Presiding Officers' Record Hearing 1

Date	Aug. 15, 2023
Place	Oregon Trail Electric Cooperative in Baker City with a virtual Zoom meeting option
Start Time	6:42 p.m.
End Time	7:24 p.m.
Presiding Officer	Amanda Ondrick

Presiding Officer

The presiding officer convened the hearing, summarized procedures for the hearing, and explained that DEQ was recording the hearing. The presiding officer asked people who wanted to present verbal comments to sign the registration list, or if attending by Zoom, to indicate their intent to present comments.

As Oregon Administrative Rule 137-001-0030 requires, the presiding officer summarized the content of the rulemaking notice.

Summary of Public Comments and DEQ Responses

Public Comment Period

DEQ accepted public comment on the proposed rulemaking from June 2, 2023, through Aug. 2, 2023, until 4 p.m. DEQ held another public comment period from Jan. 3, 2024, through March 22, 2024, until 4 p.m.

DEQ received 152 comment letters from individuals or organizations during the comment period. Written comments were submitted by email with some comments submitted by U.S. Mail or orally at the public hearing on Aug. 15, 2023, and on comment cards at the open house on Feb. 1, 2024.

DEQ changed the proposed rules in response to comments. Responses to comments are included in Attachment F of this staff report. A summary of substantive changes to the TMDL, Technical Support Document, and WQMP are below:

TMDL and Technical Support Document:

1. Removed data interpretation statements that are not supported by the data.
2. Removed inaccurate methods of analysis included in the TMDL and Technical Support Document.
3. Changed language for seasonal classification from “irrigation” and “non-irrigation” to May through October, and November through April, in response to comments.
4. Changed language that could be interpreted as speculative that specifically targets livestock as the primary source of *E. coli* across the basin.
5. Added figures describing stream flow over time for the subbasins in response to comments.
6. Revised summaries of analyses and descriptions to reflect limitations in data and knowledge about specific sources of fecal contamination and their relative contributions.
7. Added information about confined animal feeding operations.
8. Added information about Water Pollution Control Facilities permits.
9. Added content describing potential sources from failing on-site septic systems and approaches to identify and manage septic sources.
10. Added Baker City NPDES Wastewater Treatment Plant in analyses and added a wasteload allocation.
11. Added references about Wild and Scenic Waters in the Powder Basin.
12. Expanded discussion of other potential source categories of *E. coli*.
13. Updated data included in trend analysis (TSD Section 5.1) to include years 2000 through 2024 of DEQ Ambient Monitoring Network data.
14. Updated tables in the Technical Support Document to reflect Baker City Wastewater Treatment Plant contributions to allocations.
15. Updated use of terms for consistency, including naming conventions of spatial units, water quality criteria, and statistics.

16. Clarified methods of analysis in the TMDL and Technical Support Document.
17. Corrected reach descriptions to make clear that the TMDL applied to the entire basin in TMDL and Technical Support Document.
18. Corrected description of analysis methods used to generate loading capacities in TMDL document.

WQMP

1. Removed speculative language about sources and practices.
2. Added statements about permit management for Confined Animal Feeding Operations and WPCF wastewater treatment plants in response to public comments.
3. Added language to allow for future revisions of the TMDL after five years if data support different allocations in response to comments.
4. Added content about the importance of tourism in Baker County economy to the fiscal impact analysis.
5. Updated project maps for clarity and accuracy.

Implementation

Notification

The proposed rules will become effective upon filing on approximately May 23, 2024. DEQ will notify affected parties and persons who provided formal comments on the draft rules according to OAR 340-042-0060(4) within 20 business days of adoption by EQC. DEQ plans to notify affected parties by email and GovDelivery notification.

Compliance and Enforcement

TMDL compliance is provided in OAR 340-042-0080. Compliance and enforcement of TMDLs is described in OAR 340-012-0053 and OAR 340-012-0055. DEQ staff will continue to coordinate with DEQ's Office of Compliance and Enforcement for guidance.

Measuring, sampling, monitoring, and reporting

The WQMP describes planned monitoring, reporting, and the strategy to develop a collaborative assessment and monitoring strategy to periodically evaluate progress on achieving the goals of the TMDL.

Systems

The rules and supporting documents will be posted to [DEQ's website](#), which will periodically be updated as needed.

Training

DEQ staff will continue to provide outreach and technical assistance to affected parties and DEQ will schedule internal trainings, as needed.

Five-Year Review

Requirement

Oregon law requires DEQ to review new rules within five years after EQC adopts them. The law also exempts some rules from review. DEQ determined whether the rules described in this report are subject to the five-year review. DEQ based its analysis on the law in effect when EQC adopted these rules.

Exemption from five-year rule review

The Administrative Procedures Act exempts all the proposed rules from the five-year review because the proposed rules would:

- Amend or repeal an existing rule. ORS 183.405(4).

Supporting document

The Powder River Basin TMDL Technical Support Document is provided as Appendix D and is not included in the rule. This document will be available on DEQ's website to support information presented in the TMDLs and WQMP.

Accessibility Information

[Español](#) | [한국어](#) | [繁體中文](#) | [Русский](#) | [Tiếng Việt](#) | [العربية](#)

Contact: 800-452-4011 | TTY: 711 | deqinfo@deq.state.or.us

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities.

Visit DEQ's [Civil Rights and Environmental Justice page](#).

Attachment A: Draft Rules – Edits Highlighted

Key to Identifying Changed Text:

[New/inserted text](#)

Division 42 TOTAL MAXIMUM DAILY LOADS (TMDLS)

OAR 340-042-0090

Total Maximum Daily Loads and Water Quality Management Plans

The following TMDLs are adopted by EQC by reference in this rule on the dates indicated. The TMDL documents and supporting information for TMDLs adopted as rule or issued by order are available on DEQ's website.

(1) Upper Yaquina River Watershed, USGS watershed of the Northern Oregon Coastal Basin (HUC 1710020401):

(a) TMDL: bacteria and dissolved oxygen, September 14, 2023.

(b) WQMP: bacteria and dissolved oxygen, September 14, 2023.

(2) Powder River Basin, USGS Subbasin of the Middle Snake-Powder Basin (HUC 170502), including the Powder River Subbasin (HUC 17050203), Burnt River Subbasin (HUC 17050202) and Brownlee Subbasin (HUC 17050201):

(a) TMDL: bacteria for *E. coli* (date of EQC adoption)

(b) WQMP: bacteria for *E. coli* (date of EQC adoption)

Statutory/Other Authority: ORS 468.020, 468.065, 468B.030 & 468B.035

Statutes/Other Implemented: ORS 468B.020 & 468B.110

History:

DEQ 14-2023, adopt filed 09/15/2023, effective 09/15/2023

...

Supporting documents

Copies of the supporting documents can be found posted on the [May 23, 2024, Environmental Quality Commission meeting page](#):

- Attachment B: Powder River Basin Total Maximum Daily Loads – Bacteria (adopted, by reference, into rule)
- Attachment C: Powder River Basin Water Quality Management Plan (adopted, by reference, into rule)
- Attachment D: Powder River Basin TMDL Technical Support Document
- Attachment E: Redline of Attachments B, C, and D showing changes from public notice versions
- Attachment F: DEQ's Response to Comments
- Attachment G: Compilation of Comments Received