

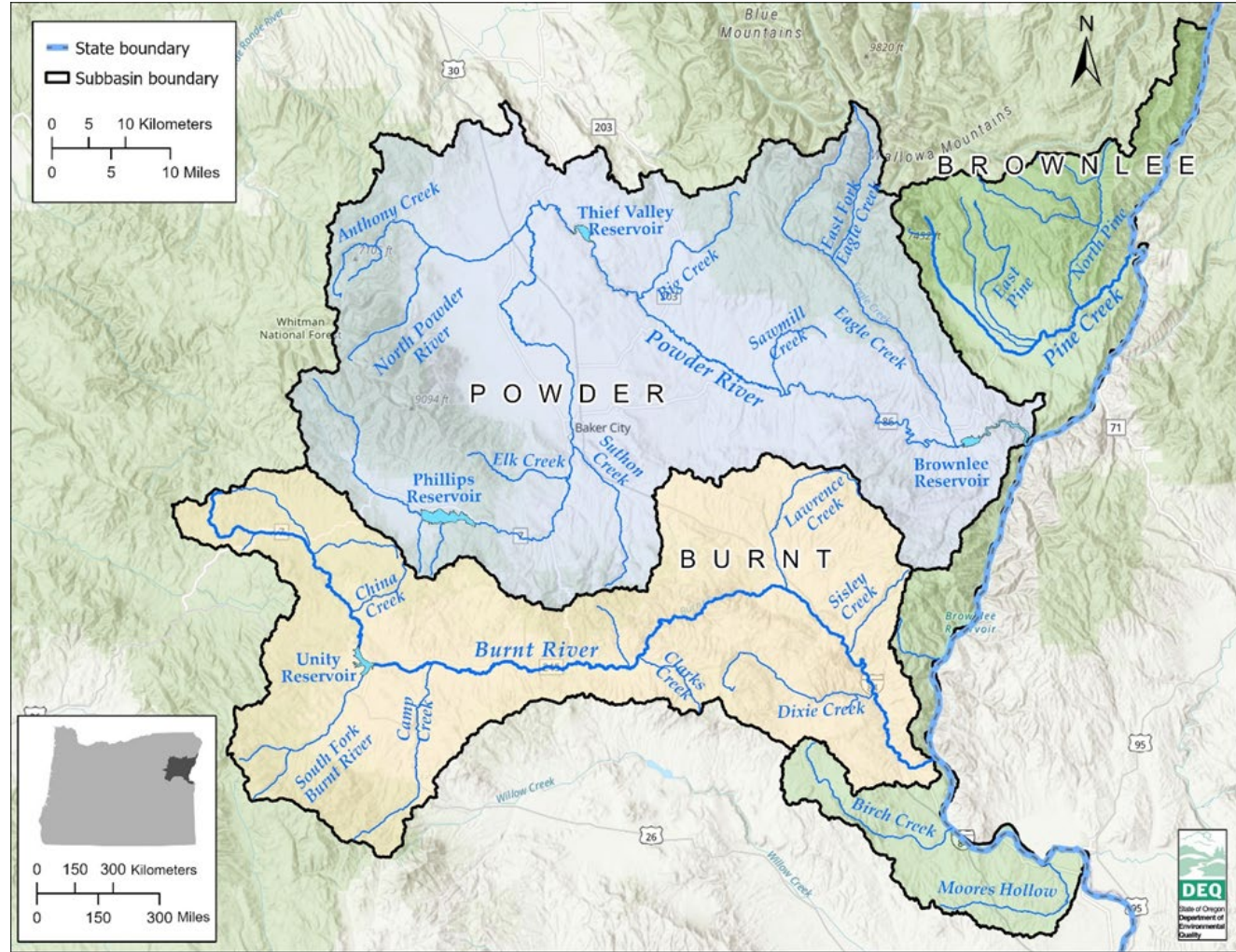
Item E: Powder River Basin Total Maximum Daily Load, bacteria (*E. coli*)

Environmental Quality Commission Meeting
May 23, 2024

Context for proposed rule

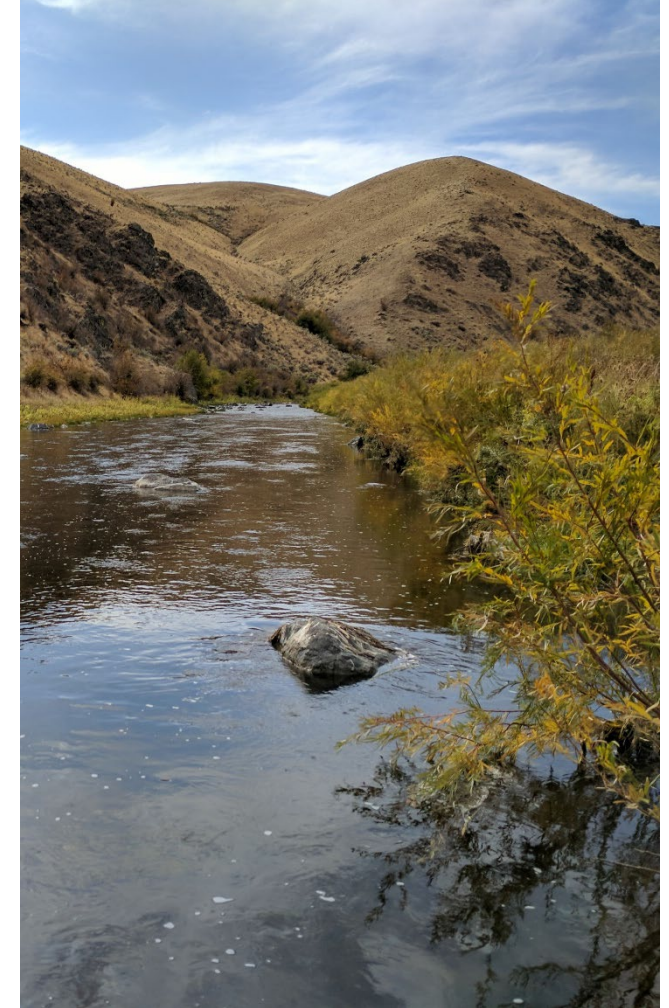
- Designated beneficial uses of freshwaters affected by fecal pathogens:
 - Water contact recreation
 - Domestic water (public and private supplies with adequate filtration and disinfection)
 - Livestock watering
- Water quality standard to protect contact recreation:
 - Indicator: *Escherichia coli* (*E. coli*)
 - A 90-day geometric mean of 126 *E. coli* organisms per 100 milliliters
 - No single sample may exceed 406 *E. coli* organisms per 100 milliliters

Powder River Basin



Fecal pathogens in waters of the Powder River Basin

- 11 designated beneficial uses
 - Includes water contact recreation
- Exceedances of criteria recorded since 1998
 - Six waterbodies exceeded *E. coli* criteria as of 2022
- DEQ developed an approach to meet *E. coli* criteria
 - Total Maximum Daily Load (TMDL)
 - Water Quality Management Plan (WQMP)



Powder River Basin TMDL for *E. coli*

- TMDL = allocations + margin of safety + reserve capacity
- Allocations set allowable limits from point and nonpoint sources

Distribution of *E. coli* allocations in stream reaches of the Powder River Basin as a percent of the TMDL

Presence of wastewater treatment plant(s)	Nonpoint sources	Point sources	Margin of safety	Reserve capacity	Total
No	89.0%	1.0%	10.0%	0.0%	100.0%
Yes	42.9-88.8%	1.2-47.1%	10.0%	0.0%	100.0%

TMDL purpose

- An approach to restore and maintain water quality
- Establishes an allowable limit for pollutants of concern
 - Point sources (wasteloads)
 - Nonpoint sources (loads)
- WQMP identifies possible sources of pollutants that can be managed

TMDL Water Quality Management Plan (WQMP)

- DEQ framework for implementation and gaging progress of TMDLs
- Guides development and tracking of implementation plans by:
 - Designated Management Agencies (DMAs)
 - Responsible Persons (RPs)



WQMP accountability framework

- WQMP requires:
 - Permit limits for point sources
 - Implementation plans and reporting for nonpoint sources
- WQMP provides strategies and funding sources
- Submitted plans may include:
 - Assessments, monitoring methods, and timelines
 - Outreach, irrigation modernization, or riparian buffers



Powder River Basin TMDL for *E. coli* timeline

- **1998 – 2022** Waterbodies listed as exceeding fecal pathogen criteria (currently *E. coli*).
- **1996 – present** DEQ samples *E. coli* every two months at three locations in the basin.
- **2007 – 2013** DEQ TMDL monitoring project for *E. coli* throughout the basin.
- **2016 – 2019** DEQ and EPA analyzed available data and modeled *E. coli* loads.
- **2021 – 2022** Results of DEQ-EPA analyses presented at watershed council meetings and ODA local advisory committee meetings.
- **2021 – 2022** DEQ developed TMDL elements and source assessment.
- **2022 – 2024** DEQ public rulemaking process.

Rulemaking Advisory Committee and public participation

Date	Event
Nov. 9, 2022, and Apr. 18, 2023	Rule advisory committee meetings
June 2, 2023 – Aug. 31, 2023, and Jan. 3, 2024 – Mar. 22, 2024	Public notices
July 5, 2023	Analysis and data virtual workshop
Aug. 15, 2023	Public meeting, Baker City
Jan. 31, 2024	Public meeting, Baker City
Feb. 1, 2024	Community open house, Baker City

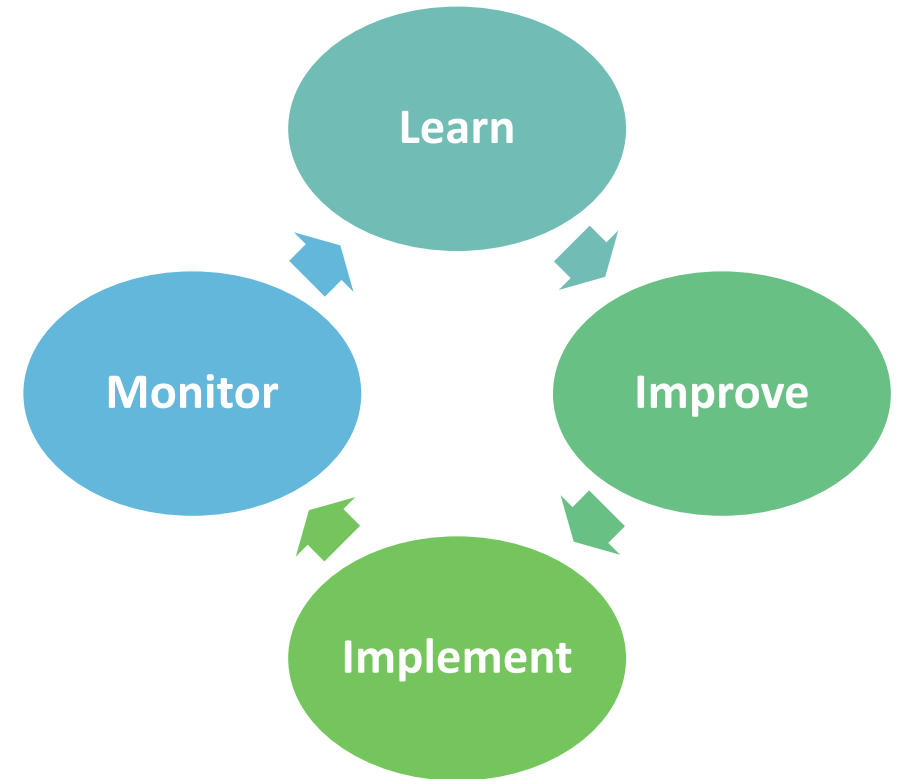
Additional meetings with Designated Management Agencies, permittees, and individuals.

Changes to proposed TMDL rule based on public comments

- Extensive comments received during public notice, the hearing, and open house
- Recurring themes in public comments:
 - Beneficial uses protected: recreational contact vs. other beneficial uses
 - Quality, age, and scope of data
 - Focus on agriculture
 - Additional time requested for data collection and additional source assessments
 - Concern for water quality, recreational use, and timely progress
- Resulted in substantive changes to TMDL, WQMP, and TSD

Powder River Basin *E. coli* TMDL implementation

- Implementation plan development
 - DEQ supports engagement with DMAs and RPs
- Basin-wide *E. coli* monitoring strategy
 - Work with agencies, groups, and communities
- Adaptive watershed management
 - Ongoing community involvement vital to success



Proposed motion language

“I move that the Environmental Quality 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 Loads (Attachment B) and Water Quality Management Plan (Attachment C) for bacteria.”

Title VI and alternative formats

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