

Powder River Basin Total Maximum Daily Load Rule Advisory Committee Meeting #1



Watershed Management

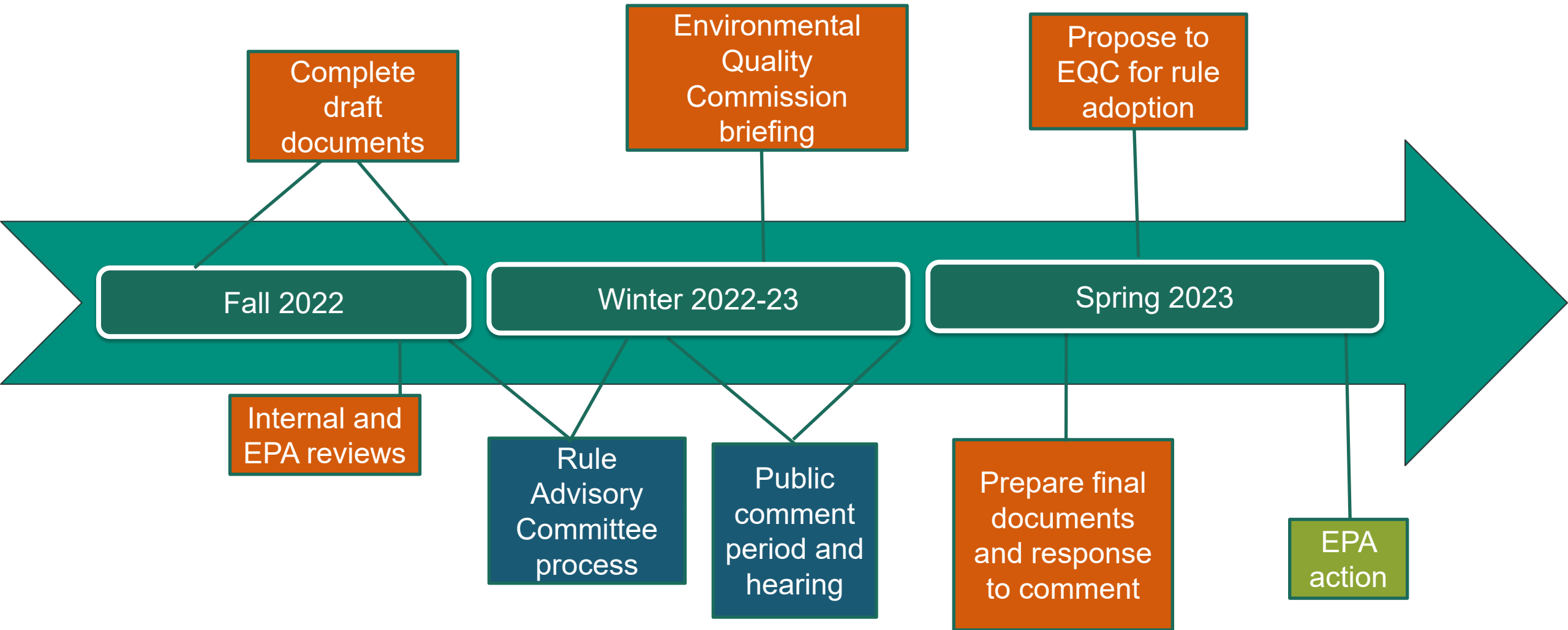
Nov. 9, 2022
1 p.m. – 4 p.m.
Virtual Meeting



Meeting agenda

1. Powder River Basin TMDL issuance process
2. Rule Advisory Committee charter review
3. TMDL basics, Powder Basin overview
4. Bacteria analyses, source assessment and allocations
5. Water quality management strategies
6. Fiscal impact statement
7. Next steps, rule process and schedule

Powder River Basin TMDL process



Rule Advisory Committee charter review

- Objectives and Scope
- Roles
- DEQ Support and Website
- Committee Meetings
- Membership
- Public Records and Confidentiality
- Information Exchange
- Public Involvement

Charter - objectives and scope

Policy Objectives

DEQ is conducting a rulemaking to establish a Total Maximum Daily Load to address the impairments to water quality standards and beneficial uses caused by excess bacteria in surface waters in the Powder River Basin. The TMDL process identifies and quantifies pollutant sources. This rule will also establish a water quality management plan that includes implementable management strategies, a list of parties responsible for implementing strategies or developing management plans and a timeline to reduce pollutant contributions and attain water quality standards.

Fiscal and Economic Impact

ORS 183.333 requires that DEQ ask the committee to consider the fiscal and economic impact of the proposed rules including:

- Whether the rules will have a fiscal impact, and if so, what the extent of that impact will be.
- Whether the rules will have a significant adverse impact on small businesses, and if so, how DEQ can reduce the rules' negative fiscal impact on small businesses.

Charter – DEQ roles

DEQ Facilitator

The facilitator:

- Encourages open, candid and robust dialogue;
- Starts and ends the meetings and agenda items on time;
- Encourages innovation by listening to all ideas;
- Tries not to lose good ideas to the consensus process; and
- Recognizes when the discussion is outside the scope of the meeting and steers the discussion back to the focus of the meeting.

DEQ Staff

DEQ is committed to making the most effective use of committee member's time by:

- Establishing clear committee goals, meeting objectives and agendas;
- Giving committee members reasonable access to staff;
- Encouraging all members to take part in discussions; and
- Providing a clear description of members' roles, the committee timeline, the level of agreement expected and feedback on how members' input is used.

DEQ staff also avoids representing to the public or media the views of any other committee member or the committee as a whole.

Charter – committee roles

Committee Members

Advisory committee members must attend each meeting to ensure continuity throughout the process. An alternate may be assigned if needed. However, it is each committee member's responsibility to fully brief their alternate on all relevant issues and prior committee discussions in order to meet the meeting objectives and keep the project on schedule. The primary and alternate members of the committee cannot participate in the same meeting. If a member's absence is unavoidable, please notify the DEQ project manager.

The committee member:

- Prepares for and sets aside time for the meetings;
- Provides DEQ staff with copies of relevant research and documentation cited during the meeting;
- Stays focused on the specific agenda topics for each meeting;
- Comments constructively and in good faith;
- Consults regularly with constituencies to inform them on the process and gather their input;
- Treats everyone and his or her opinions with respect;
- Allows one person to speak at a time;
- Is courteous by not engaging in sidebar discussions;
- Avoids representing to the public or media the views of any other committee member or the committee as a whole.

Charter – other roles

Non-Committee Member Attendees

Those who attend the committee meetings but are not members of the committee are there only to observe and not to actively participate. If non-committee members are present at a meeting, DEQ may allow time during the meeting for their comments.

DEQ Support and Website

DEQ will post agenda and meeting materials on the advisory committee website at least one week in advance. DEQ administrative staff will provide meeting summaries that highlight committee discussions, different perspectives and input of committee members. DEQ will not prepare a formal committee report.

DEQ will send draft meeting summaries to the advisory committee for review and input. Final meeting minutes will be posted to the advisory committee website and will be part of the public record.

The advisory committee charter, a full roster of the committee, meeting agendas and minutes, and background materials will all be located on the advisory committee webpage.

Charter - committee meetings

Committee Meetings

1. All committee meetings will be:
 - Open to the public, although the committee can choose whether the public can actively participate in committee meetings
 - Advertised on DEQ's webpage calendar two weeks before the meeting at: DEQ Event Calendar
 - Noticed by email using GovDelivery lists for rulemaking and TMDLs
 - Accessible via a call-in number or webinar
2. The committee is expected to meet two times virtually using the Zoom or MS Teams platform. The meeting duration times may vary depending on topics and committee progress.
3. Meeting materials and agenda will be posted to the advisory committee webpage

Decision Making

The committee's discussions will be used by DEQ in forming its draft rule, which will then be proposed for broader public review and comment as part of DEQ's rulemaking process.

When DEQ shares information with the group, DEQ will allow a reasonable timeframe for comments.

Charter - advisory committee membership

| Name | Affiliation | Title or Role | Interest Represented |
|------------------------|--|---|--------------------------------|
| Doni Bruland | Baker County | Natural Resource Coordinator | County |
| Joe Aragon | Bureau of Land Management | Field Manager | Federal land management agency |
| Tom Demianew | Oregon Department of Agriculture | Eastern Region Water Quality Specialist | State agency, agriculture |
| Joe Lemanski | Oregon Department of Fish and Wildlife | District Fish Biologist | State agency, fisheries |
| Jana Peterson | Oregon Department of Forestry | Stewardship Forester | State agency, forestry |
| Shawn Klaus | Burnt River Irrigation District | District Manager | Water resources, agriculture |
| Curtis Martin | Powder Basin Watershed Council | PBWC Board of Directors | Watershed council, agriculture |
| Whitney Collins | Baker Soil and Water Conservation District | District Manager | Environmental, agriculture |
| Karen Riener | Private landowner | Private landowner | Environmental |
| John Rademacher | Bureau of Land Management | Supervisory Natural Resource Specialist | Federal Agency |

Charter Review (cont.)

Public Records and Confidentiality

Committee communications and records, such as formal documents, discussion drafts, meeting summaries and exhibits are public records and are available for public inspection and copying. DEQ does not assume responsibility for protecting proprietary or confidential business information shared during committee or subcommittee meetings. However, the private documents of individual committee members generally are not considered public records if DEQ does not have copies.

Information Exchange

Committee members will provide information as much in advance as possible of the meeting at which such information is used. The members will also share all relevant information with each other to the maximum extent possible. If a member believes the relevant information is proprietary in nature, the member will provide a general description of the information and the reason for not providing it.

Public Involvement

All meetings will be open to the public. The committee can choose whether to allow public input during a committee meeting. DEQ may set aside time for the public to speak.

Once the committee process is complete, DEQ will develop draft rules and conduct a public rulemaking process. That process will include a specified period during which the public can submit comments on the proposed rules. DEQ will also hold a public hearing during which any member of the public can submit written or verbal comments. Individual committee members may provide comments to DEQ on the full draft rule at this time. DEQ may modify the final proposed rules based on public comment. DEQ intends to take a final proposed rule to the EQC for consideration at its meeting.

Charter affirmation

- Any questions or discussion?
- Members all affirm charter?

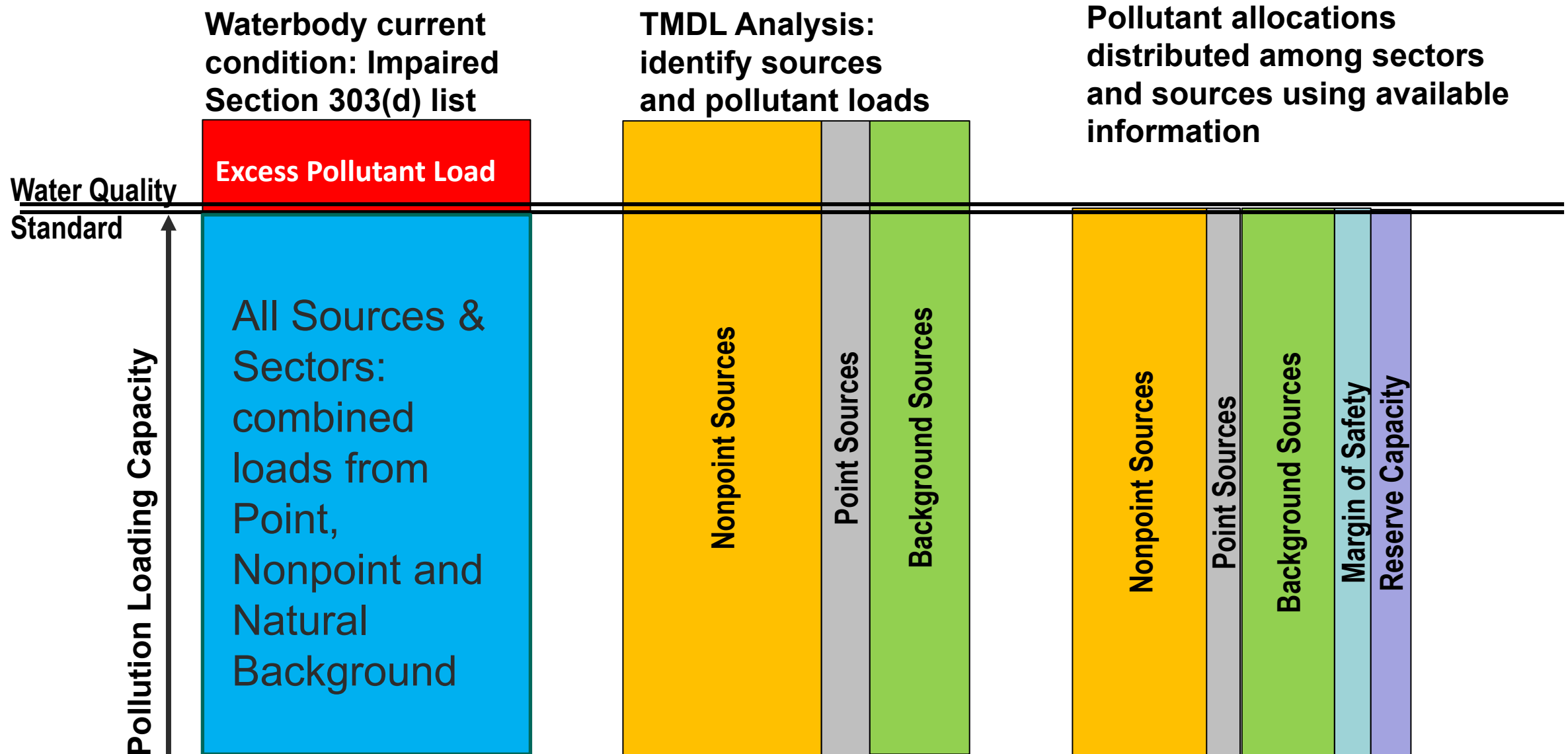


TMDL definition in rule

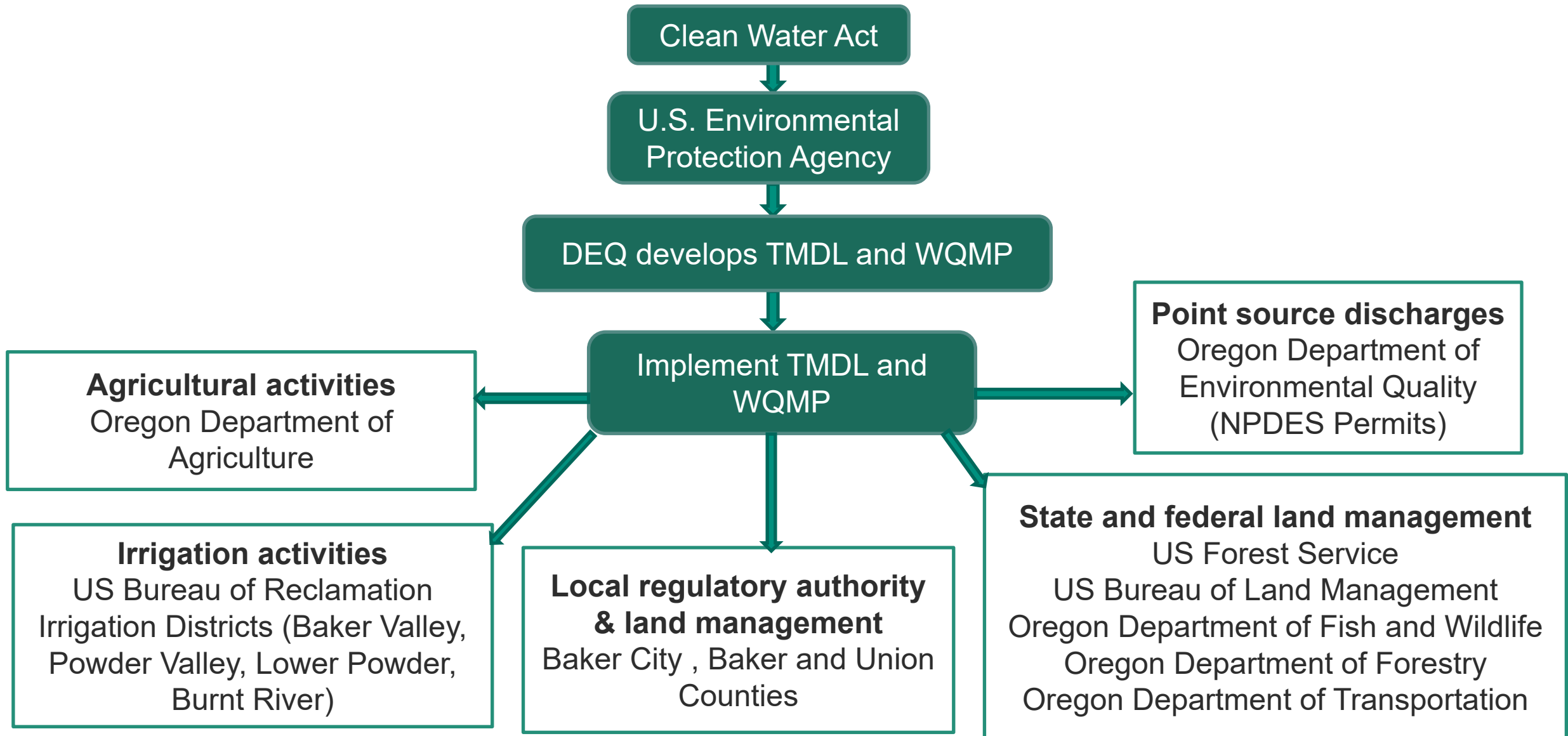
“Total Maximum Daily Load (TMDL)” means a written quantitative plan and analysis for attaining and maintaining water quality standards and includes the elements described in OAR 340-042-0040.

These elements include a **daily load calculation of the maximum amount of a pollutant** that a waterbody can receive and still meet state water quality standards, **allocations** of portions of that amount to the pollutant sources or sectors, and a **Water Quality Management Plan** to achieve water quality standards.

TMDL - conceptual illustration



TMDL Authorities and Responsibilities

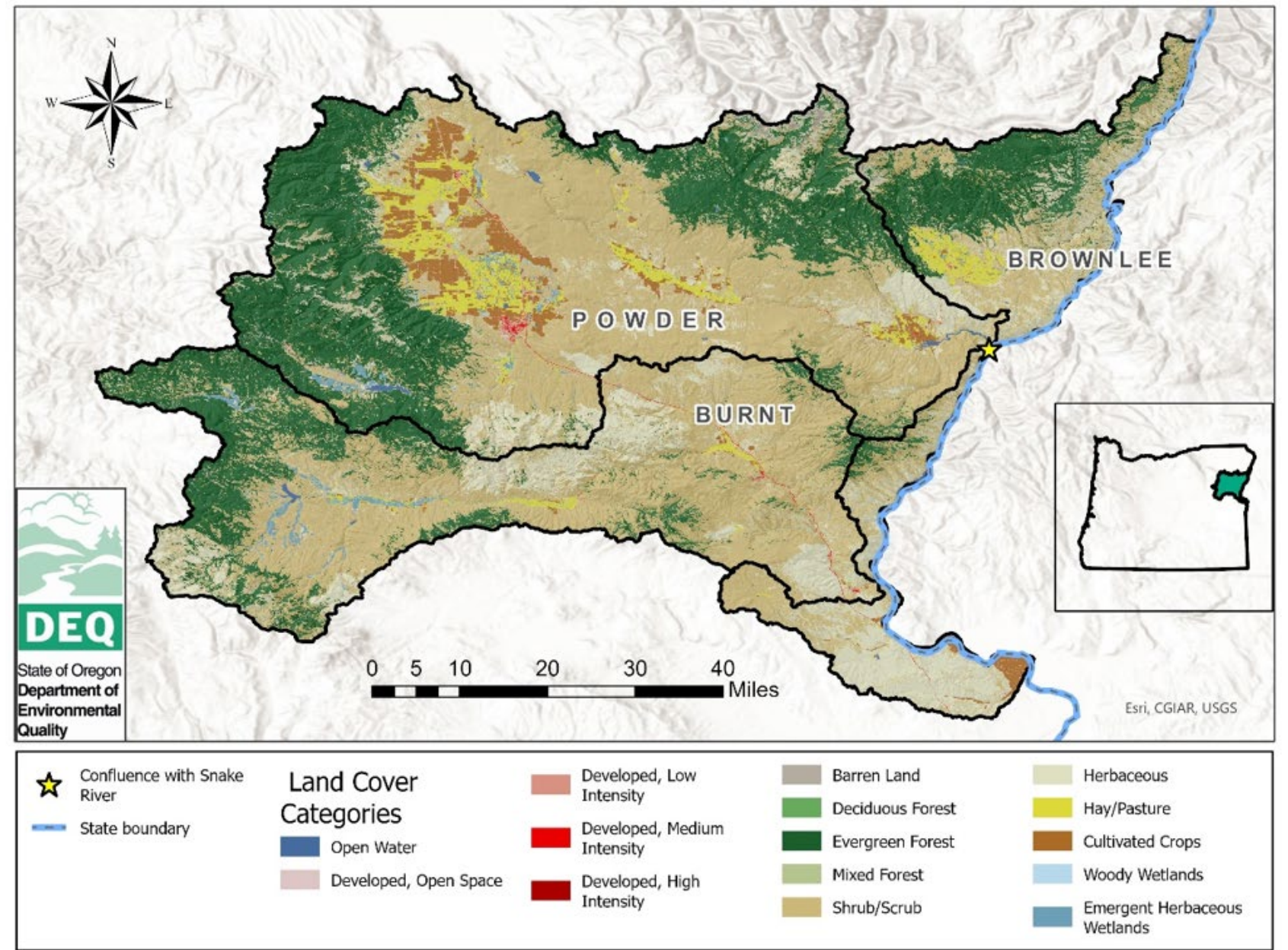


Questions on TMDLs generally or elements?



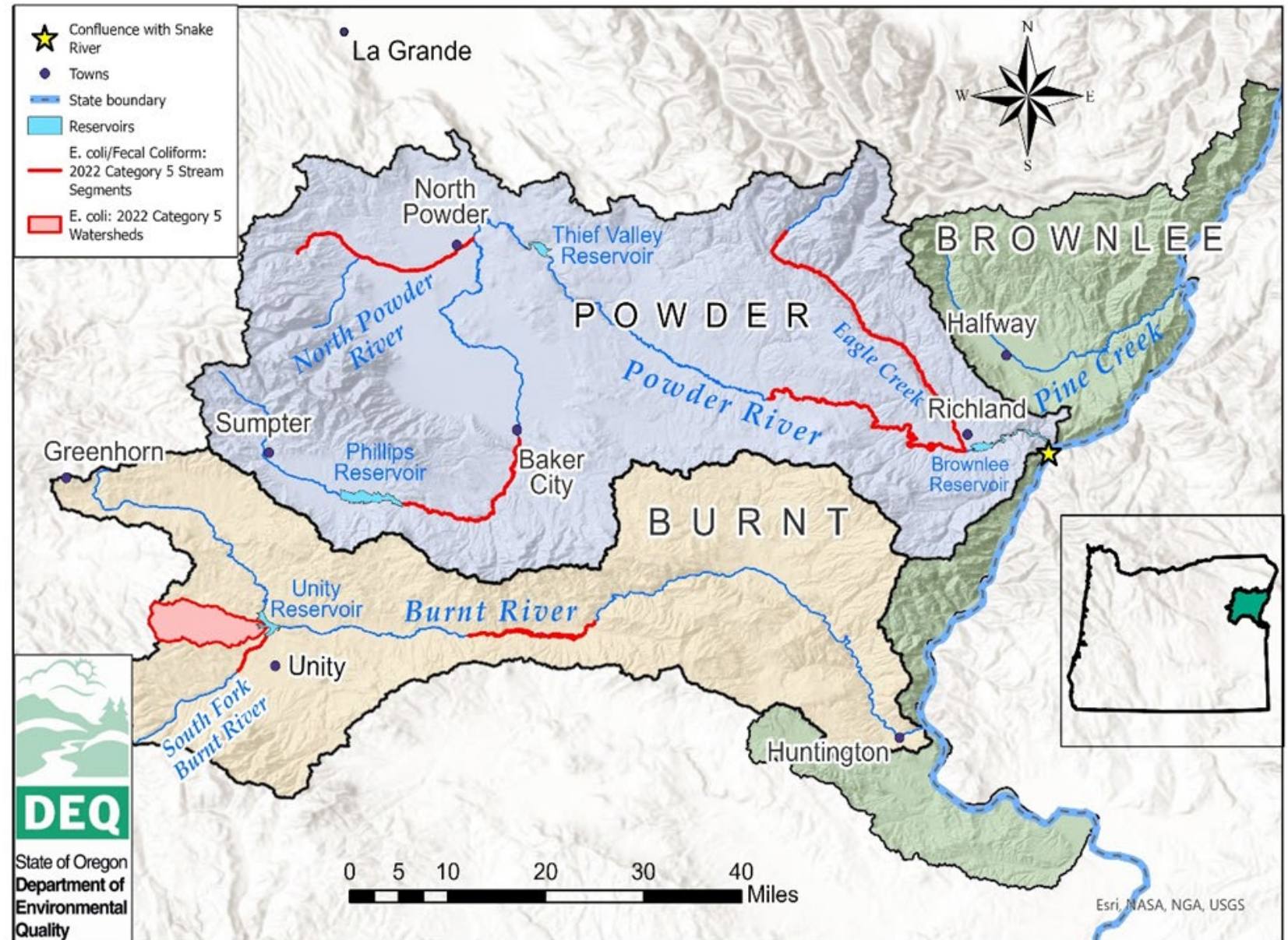
Powder River Basin

Geographic setting and land use

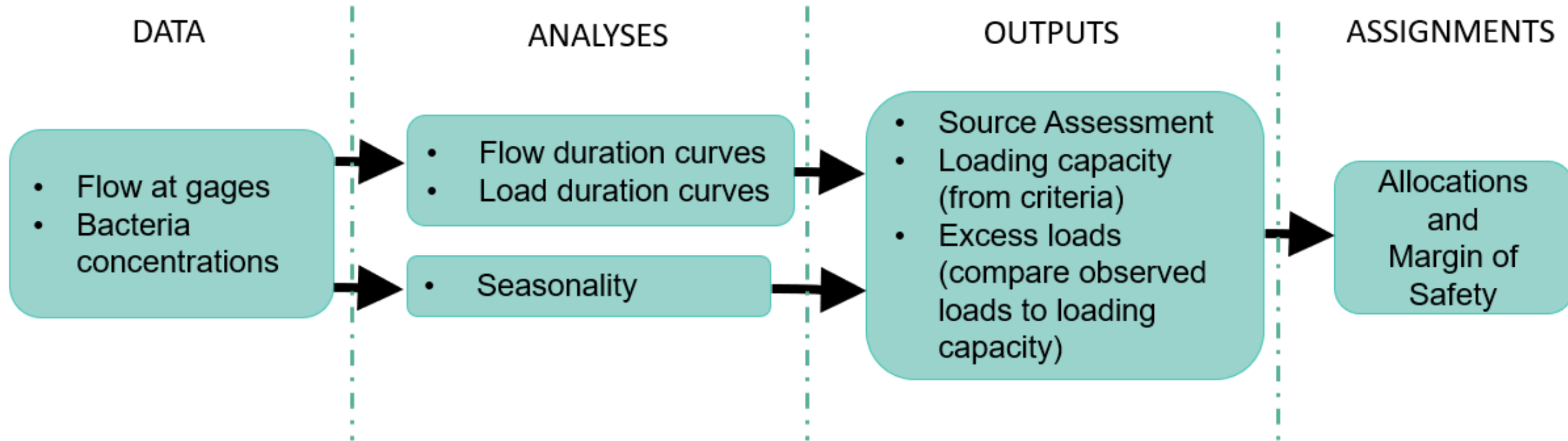


Powder River Basin

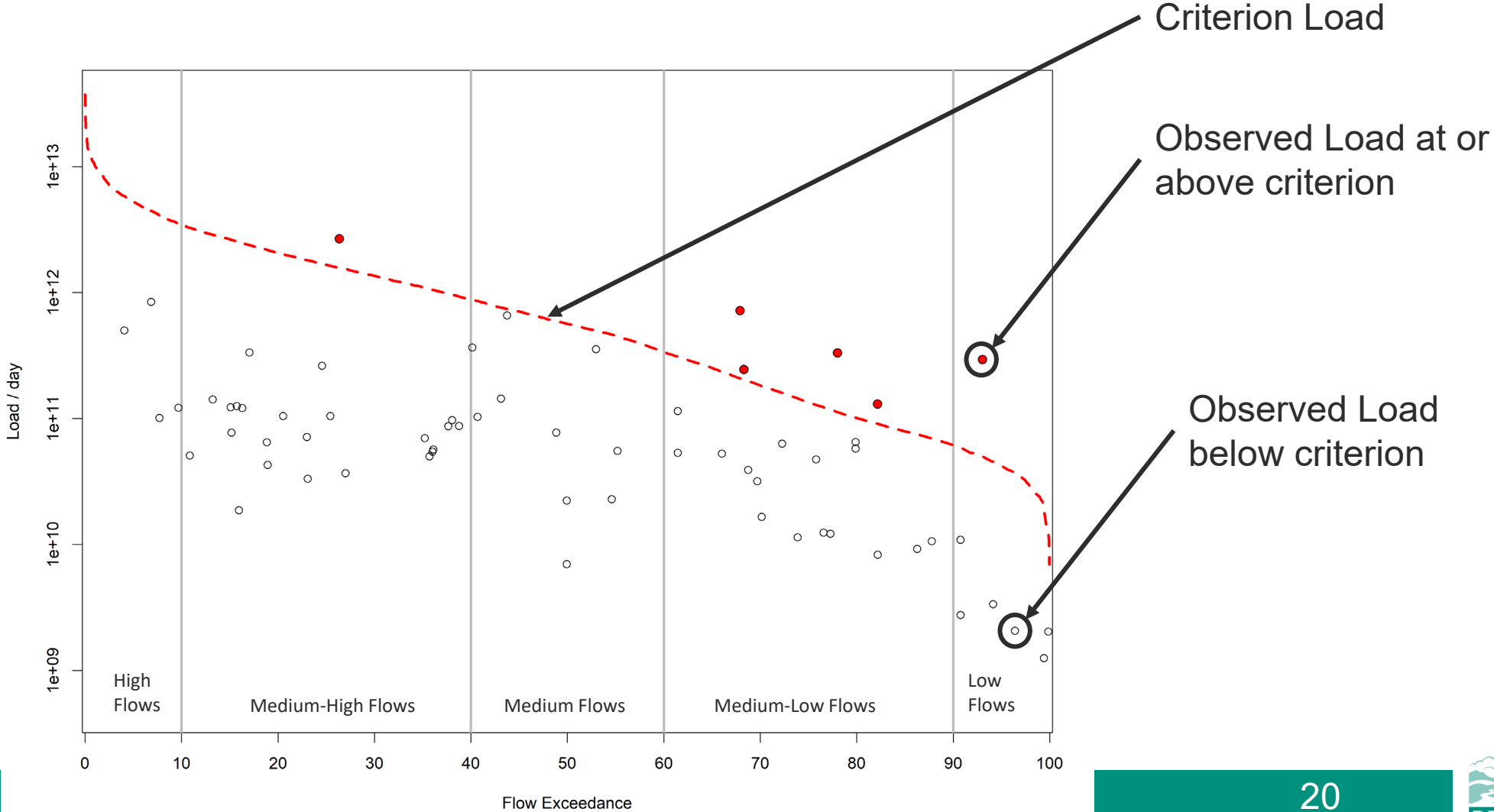
303(d) List - E.coli and Fecal Coliform



Bacteria (E. coli) analyses overview

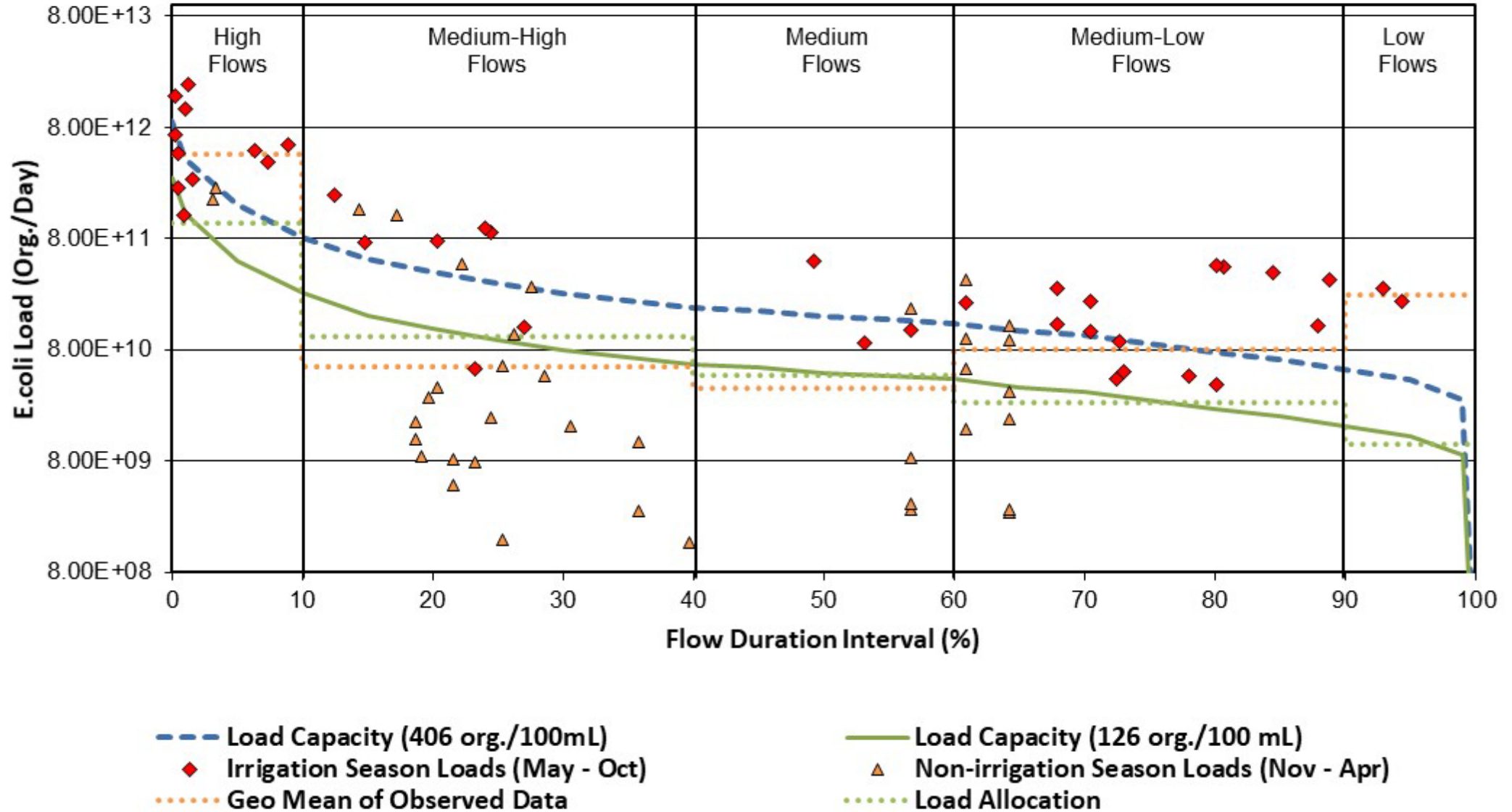


Example Load Duration Curve



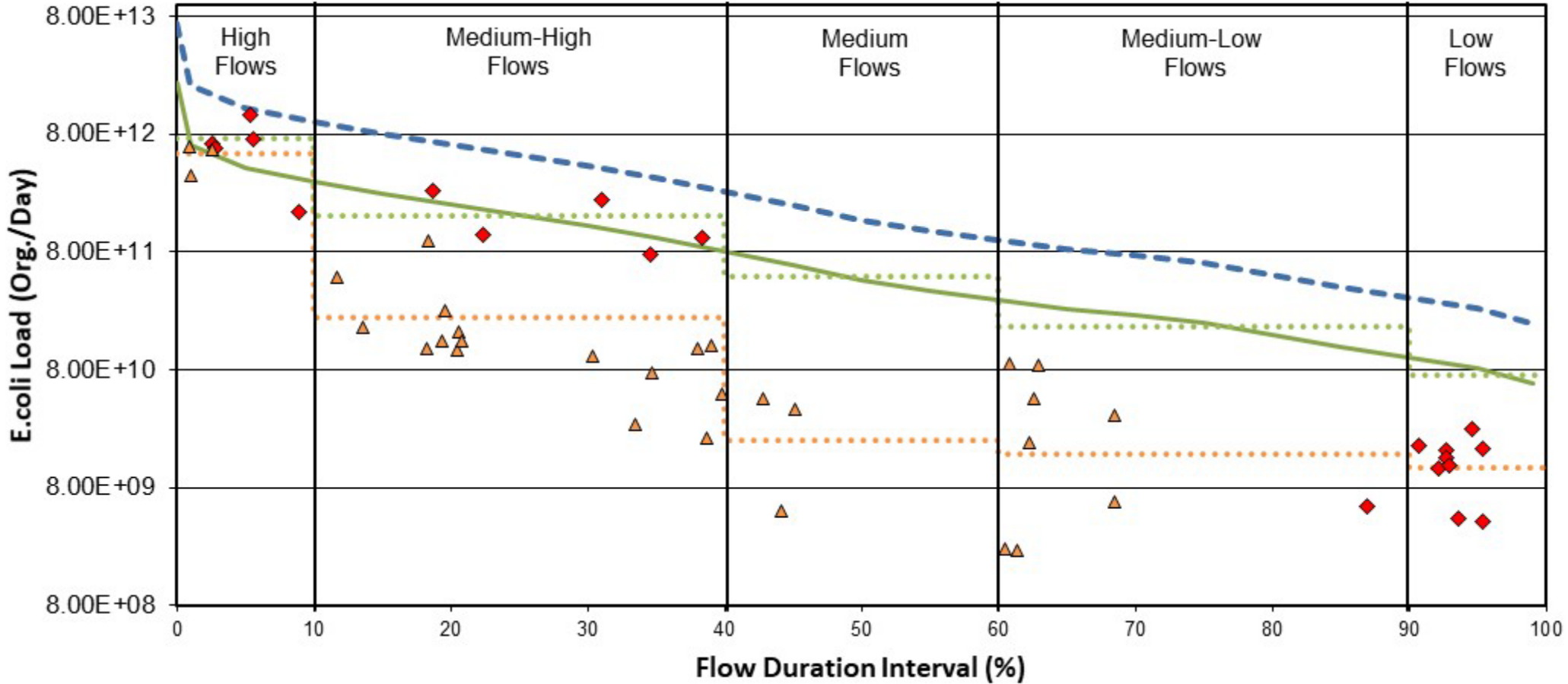
Example Load Duration Curve

North Powder River at Hwy 30
WQ Station #36191
E.coli Load Duration Curve



Example Load Duration Curve

Pine Creek at Hwy 71
WQ Station #36382
E.coli Load Duration Curve



- Load Capacity (406 org./100mL)
- Load Capacity (126 org./100 mL)
- ◆ Irrigation Season Loads (May - Oct)
- ▲ Non-irrigation Season Loads (Nov - Apr)
- ⋯ Geo Mean of Observed Data
- ⋯ Load Allocation

Bacteria draft allocations

| Sources | | Relative allocation of load capacity |
|---------------------------------|---|--------------------------------------|
| Nonpoint and background sources | Irrigation return water and stormwater runoff in contact with livestock and wildlife grazing areas (including reservoirs during dry down) | 87%-89% |
| | Failing or improper septic systems | 0% |
| Permitted point sources | ODOT MS4 Stormwater Permit | 1% |
| | Permitted Wastewater Treatment Systems | 0%-2% |
| Reserve Capacity | | 0% |
| Margin of Safety | | 10% |
| TOTAL | | 100% |

E. coli reductions needed - Summary

| Reach | Percent reduction | Criterion based upon | Season based upon | Flow category based upon |
|--|-------------------|--------------------------------|-----------------------------|--------------------------|
| Powder River at Baker City | 83% | Single Sample | Non-Irrigation | Medium |
| Powder River near Richland | 75% | Geometric Mean | Irrigation | Medium-Low |
| Eagle Creek near Richland | 64% | Geometric Mean | Irrigation | Low |
| North Powder River at Hwy 30 | 95% | Geometric Mean | Irrigation | Low |
| North Powder River at Miller Rd | 83% | Single Sample | Irrigation | Medium-High & Medium-Low |
| Burnt River at Clarks Creek Rd | 83% | Single Sample | Irrigation | Medium High |
| Burnt River at Huntington | 39% | Geometric Mean | Irrigation | High |
| Powder River above Phillips Reservoir | 0% | Geometric Mean & Single Sample | Irrigation & Non-Irrigation | All |
| Pine Creek at Hwy 71 | 0% | Geometric Mean & Single Sample | Irrigation & Non-Irrigation | All |
| Burnt River at Unity Reservoir Discharge | 0% | Geometric Mean & Single Sample | Irrigation & Non-Irrigation | All |

Pollutant sources and sectors - conclusions

- Load duration curve analysis alone does not distinguish among sources
- Upstream **land use and locations of exceedances** shows:
 - Irrigated pastures, fields and livestock grazing areas prone to exceedances of criteria
- **Significant sources of bacteria loading:**
 - Non-point sources are largest source of fecal contamination
 - Primarily livestock (cattle) land use

Pollutant sources and sectors - conclusions

- **Not contributing significant bacteria loads to surface waters**
 - Elk wildlife feeding sites
 - Rural septic systems
 - ODOT stormwater
 - Wastewater treatment plants

Bacteria reductions and allocations

- Questions?



Water Quality Management Plan

“Water Quality Management Plan (WQMP)” means the element of a TMDL describing strategies to achieve allocations identified in the TMDL to attain water quality standards. The elements of a WQMP are described in OAR 340-042-0040(4)(I)

- A framework of management strategies to attain and maintain water quality standards.

Water Quality Management Plan – Key pieces for Rulemaking Advisory Committee

- **Identify people responsible for implementing management strategies** and developing and revising sector-specific or source-specific implementation plans.
- **General discussion of costs and funding for implementing management strategies.**
 - Covered in draft fiscal impact statement discussion
- **Proposed management strategies to meet the allocations in the TMDL**
 - Priority strategies and best management practices
 - Categorization of sources and a description of the strategies proposed for each source category
- **Administrative requirements:** Plan revision, periodic reporting, schedules, timelines

Implementation responsibility

Land ownership or jurisdiction

Legend

Streams

Railroads

ODOT Highways

County Boundary

Land Ownership or Jurisdiction

City

County

Department of Agriculture

Department of Fish and Wildlife

Department of Forestry - Private

Department of Geology and Mineral Industries

Department of State Lands

Department of Transportation

Railroad

Parks and Recreation Department

Road

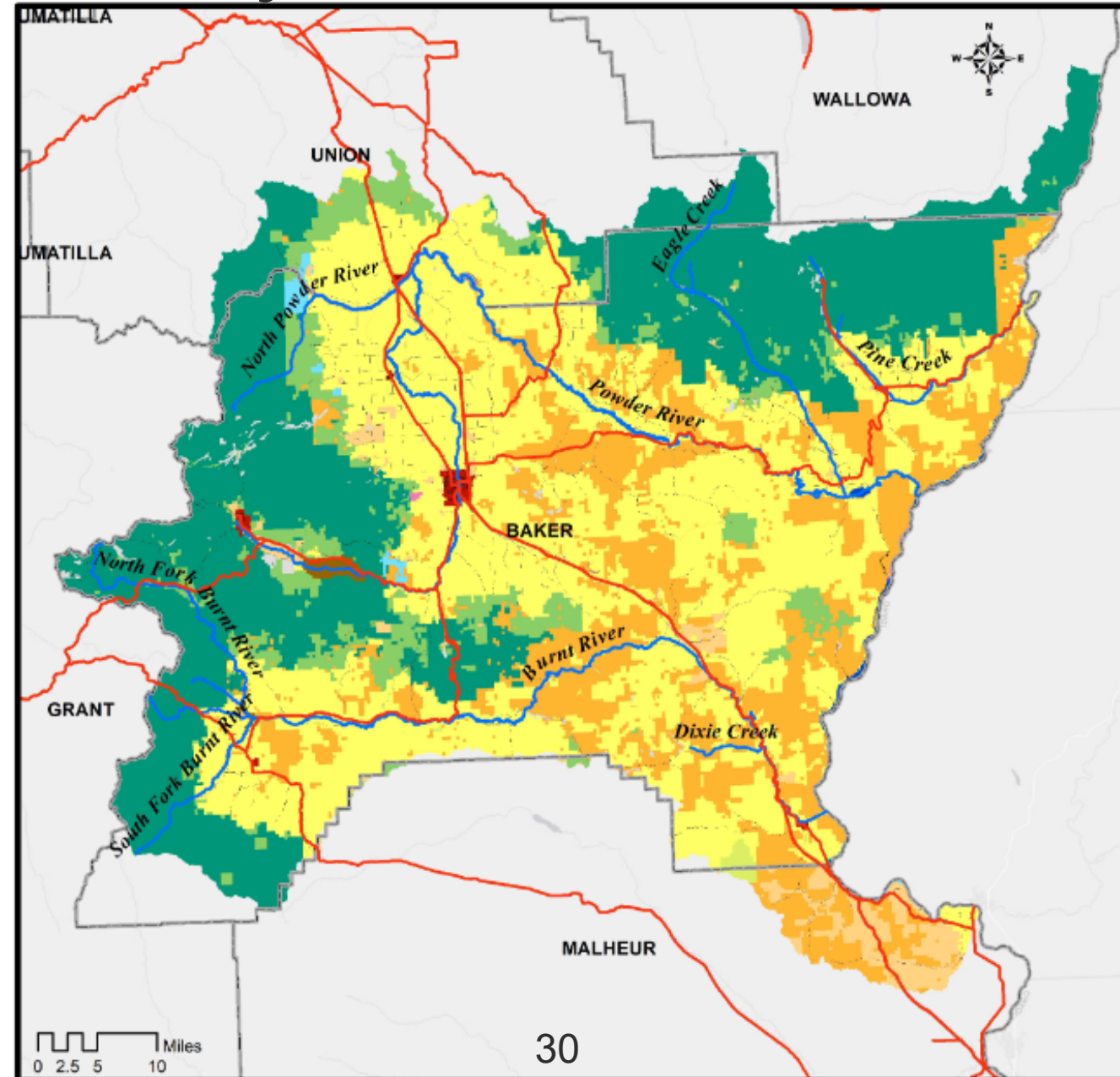
State of Oregon

Water

U.S. Bureau of Land Management

U.S. Bureau of Reclamation

U.S. Forest Service



Entities to develop TMDL implementation plans

| Entity | Jurisdiction |
|------------------------------------|--|
| US Bureau of Land Management | BLM managed lands |
| US Bureau of Reclamation | Management of reservoir lands |
| US Forest Service | Wallowa-Whitman National Forest managed lands |
| OR Department of Forestry | Non-federal forestlands: State and private forest operations, practices and activities (including roads) |
| OR Department of Agriculture | Agricultural lands and activities |
| OR Department of Transportation | Highways, rights-of-way and facilities |
| OR Department of Fish and Wildlife | Wildlife feeding sites - Elkhorn Wildlife Areas |
| Baker County | County-owned lands, county roads and rural land use |
| Union County | County-owned lands, county roads and rural land use |
| Baker City | Municipal stormwater control, road maintenance |
| Irrigation Districts | Irrigation systems operated by water management districts |

Summary of management strategies

Reduce direct and indirect inputs of livestock manure

- Grazing and pasture mgt, manure mgt
- Riparian fencing (or other livestock exclusion methods)
- Develop off-channel watering
- Stream crossing improvements
- Provide adequate landscape filtration capacity (vegetated buffer)

Summary of management strategies

Reduce surface erosion and runoff

- Irrigation system improvements, conversions
 - Irrigation pipeline, microirrigation, sprinkler irrigation, irrigation tailwater recovery, wetlands and sediment ponds
- Septic system repairs; maintain roads, stormwater, parks
- (PS) Compliance with permits, maintenance as needed

Summary of management strategies

| Malheur River Basin Proven Practices |
|---|
| Irrigation Schedule Optimization |
| Sediment Basin and Tail Water Recovery (Pump-Back Systems) |
| Polyacrylamide (PAM) |
| Mechanical Straw Mulching |
| Water Conservation Methods |
| Filter Strips |
| Gated Pipe |
| Surge Irrigation |
| Laser Leveling |
| Turbulent Fountain Weed Screens |
| Underground Outlets for Field Tail Water |
| Nutrient Management |
| Improved Confined Animal Feeding Operation Practices |
| Constructed wetlands |

WQMP and TMDL implementation summary

- Questions?



Break (10 min)



Draft fiscal impact statement - overview

- No fees or housing costs are involved.
- Fiscal and economic impacts are anticipated for some farms/ranches, forestlands, railroad and road rights-of-way and county, state and federal lands.
- Impacts are not different for the TMDL issued by rule or order.
- On-going costs of impairment not quantified.

Costs of compliance

- Borne by landowners or operators that contribute to bacteria impairments
- Lack of info for determining specific costs which vary due to:
 - Location in watershed
 - Level of controls already in place
 - Level of understanding of sources by sector, not property
 - Significance of contributions
 - Range of organizational capacity to develop/implement plan

Economic analysis methods

- Experience/knowledge of government agency practices
- Review of Oregon Employment Dept. business database
 - No large business locations
 - Few small businesses registered
 - Small farms/ranches and woodlots considered
- USDA and NRCS Agricultural statistics
- Identified sources of funding available for nonpoint source and restoration projects

Racial equity and environmental justice

- ORS 183.335(2)(a)(F) is a new requirement to identify how rule adoption will affect racial equity in Oregon
- Environmental Justice considerations also now required for rulemaking in Oregon

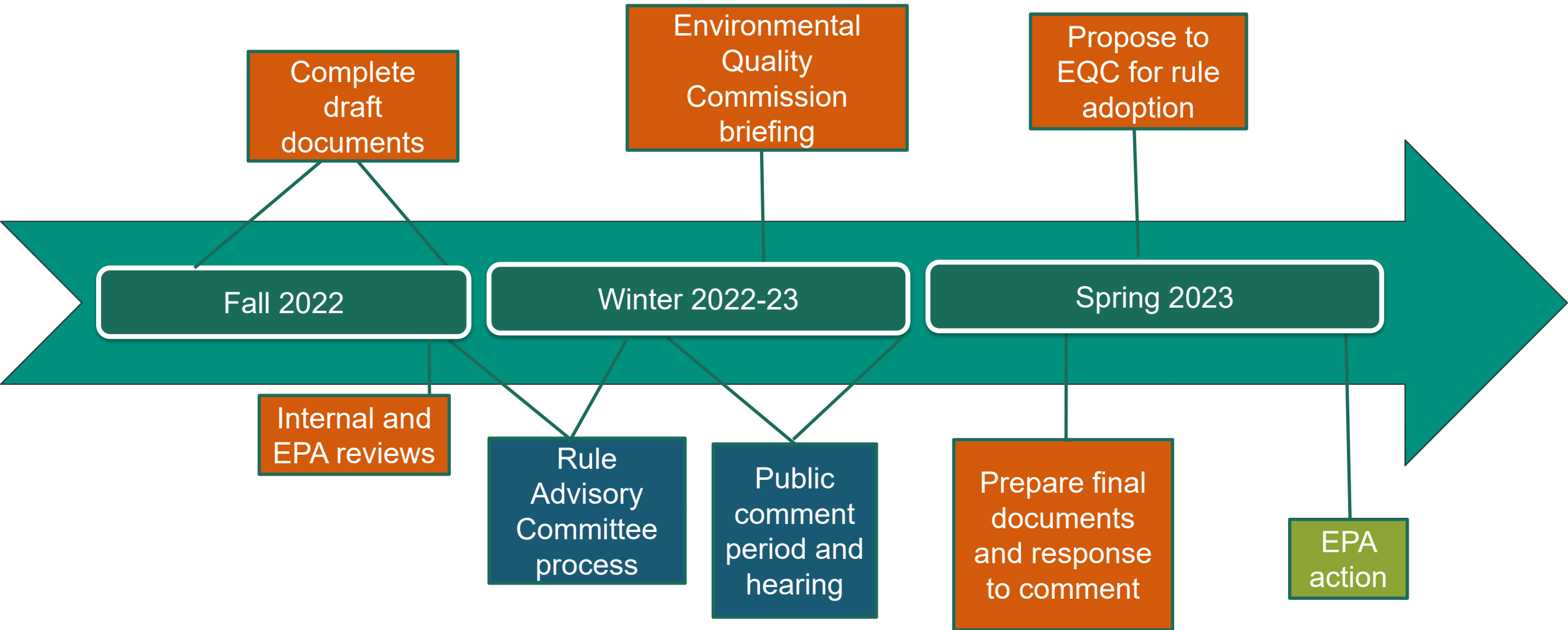
Request for Rule Advisory Committee input

- Are the sources and sectors accounted for in the TMDLs ?
- Are the factors considered for the allocations clear?
- Are additional management strategies/practices needed?
- Do you have specific economic information or comments for consideration in the draft fiscal impact statement?
 - Whether the proposed rules would have a fiscal impact,
 - The extent of the impact, and
 - Whether the proposed rules would have a significant adverse impact on small businesses; if so, then how to reduce that impact.
- Anything else you need?

Next steps

- Provide input within two weeks of the meeting (Nov. 23rd).
- 2nd RAC meeting to discuss RAC input received and how it will be incorporated into the process.
- DEQ will consider all input from the RAC.
- DEQ will brief the EQC on the process.
- DEQ will publish draft TMDL documents for public comment.

Powder River Basin TMDL process



DEQ contacts

- Powder Basin TMDL Rulemaking webpage:

<https://www.oregon.gov/deq/rulemaking/Pages/PowderTMDL.aspx>

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