Upper Yaquina River Watershed TMDLs

Status of rulemaking for the Upper Yaquina River Watershed dissolved oxygen and bacteria Total Maximum Daily Loads

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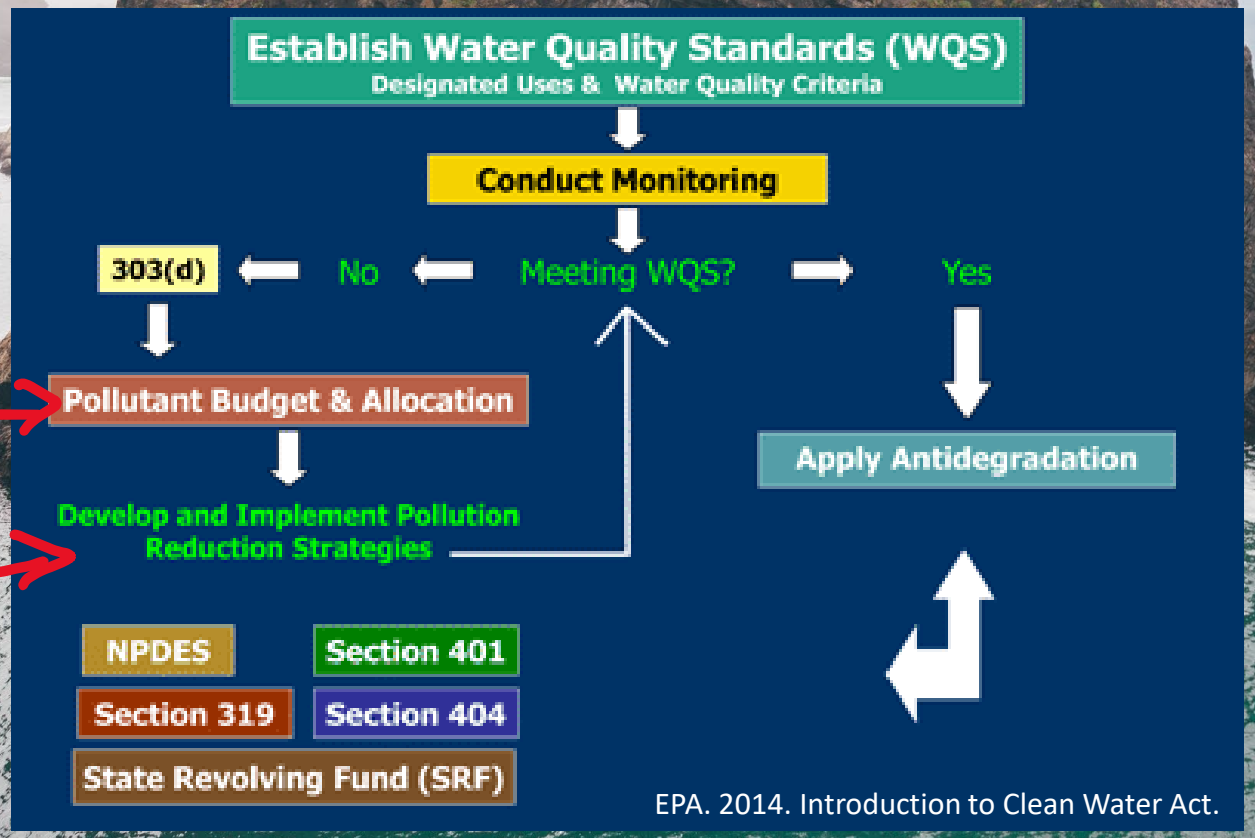
State of Oregon
DEQ Department of Environmental Quality

Presentation Outline

- TMDL process refresher
- Upper Yaquina River Watershed TMDLs
  - Rulemaking process steps and status
  - Watershed setting, land uses, bacteria and dissolved oxygen impairments
  - Overview of DEQ's analyses and consideration of local input
- Active discussions of input and policy considerations
- Next steps - rule advisory committee and public engagement

Clean Water Act Programs General Process

- Clean Water Act requires biennial listing of impaired waters
  - DEQ's 2022 Integrated Report = overall assessment of waters (305(b)) and impairments (303(d))
  - Total Maximum Daily Loads (or alternatives) must be developed for impaired waters



TMDL

WQMP

EPA. 2014. Introduction to Clean Water Act.

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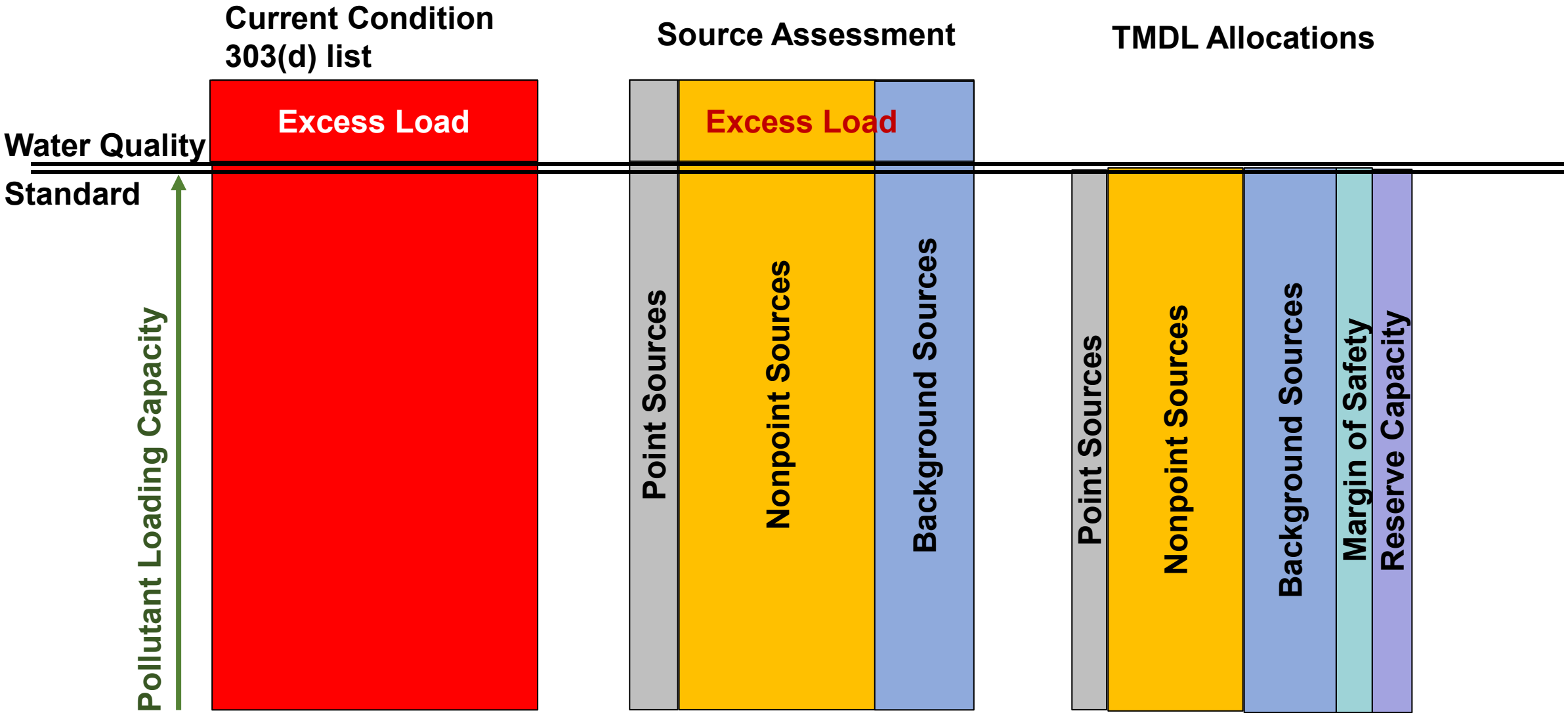
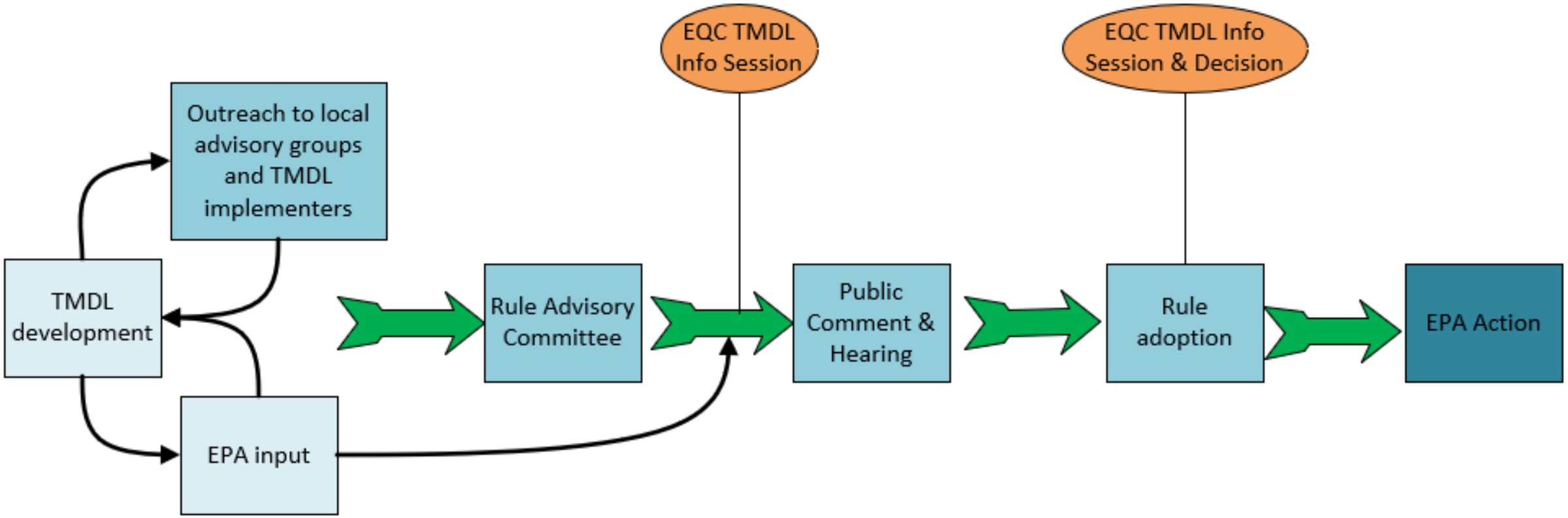
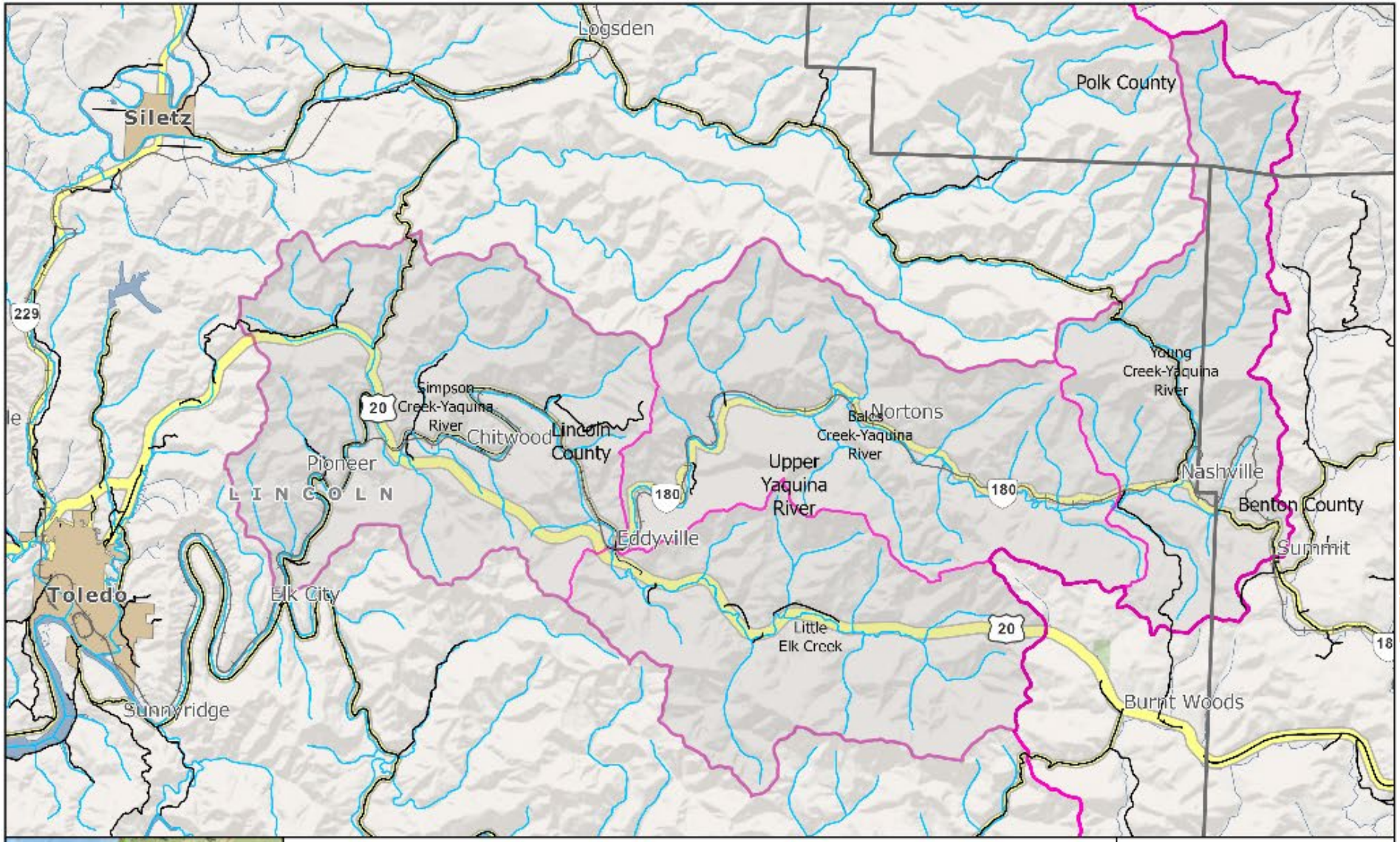
TMDL Approach



TMDL rulemaking process



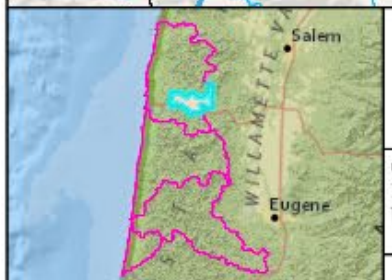


Upper Yaquina Watershed

- OR_County
- railroads_2013
- Lincoln Co_Rds
- Benton_Rd_2020
- Upper Yaquina_HUC12
- NHD_plus-flowline
- citylimits_2012

Subwatersheds

- Young Creek-Yaquina River
- Bales Creek-Yaquina River
- Little Elk Creek
- Simpson Creek-Yaquina River



Upper Yaquina River Watershed
MidCoast Basin, Oregon

Oregon Department of Transportation, Oregon Department of Transportation, Geographic Information Services Unit, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, FSA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Oregon DEQ, April 2022

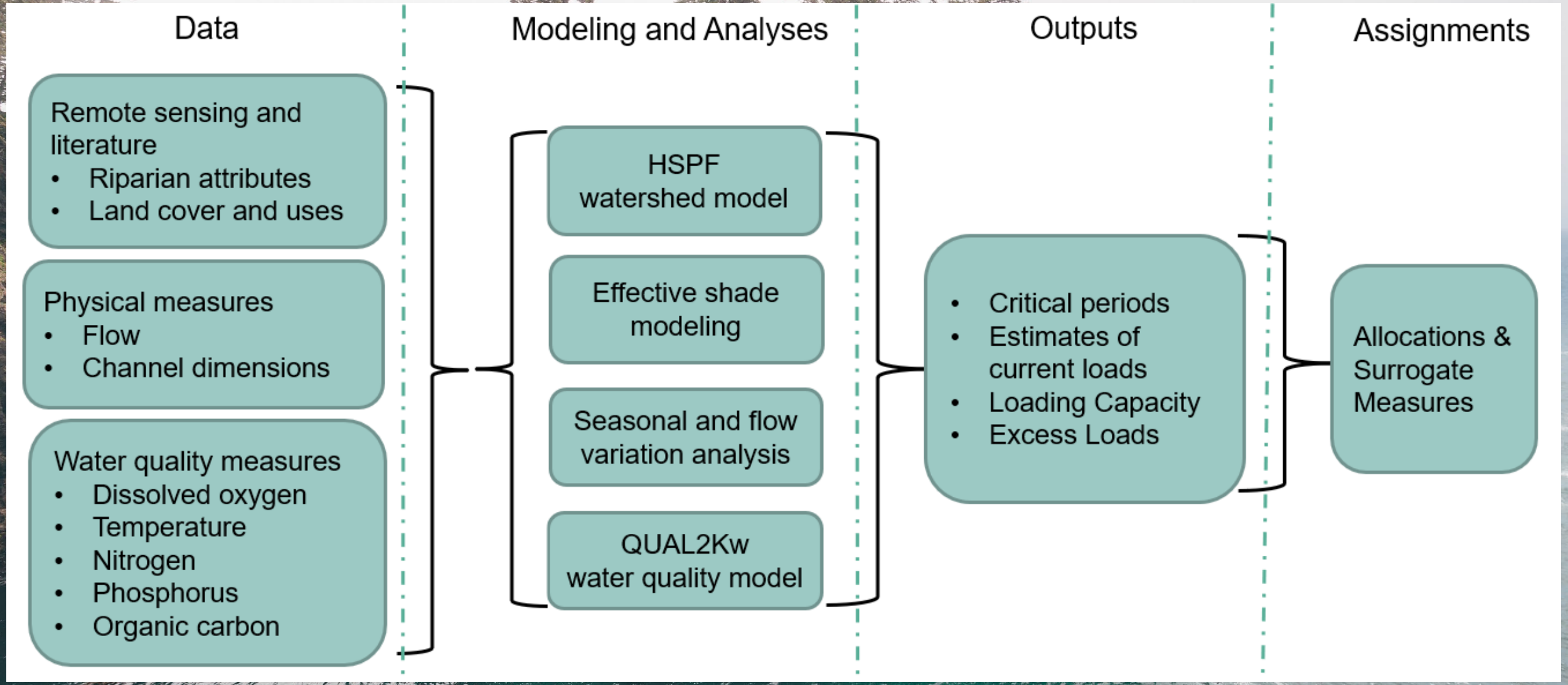
Coordinate System: NAD 1983 HARN Oregon Statewide Lambert Feet Intl

N

0 1.25 2.5 Mi

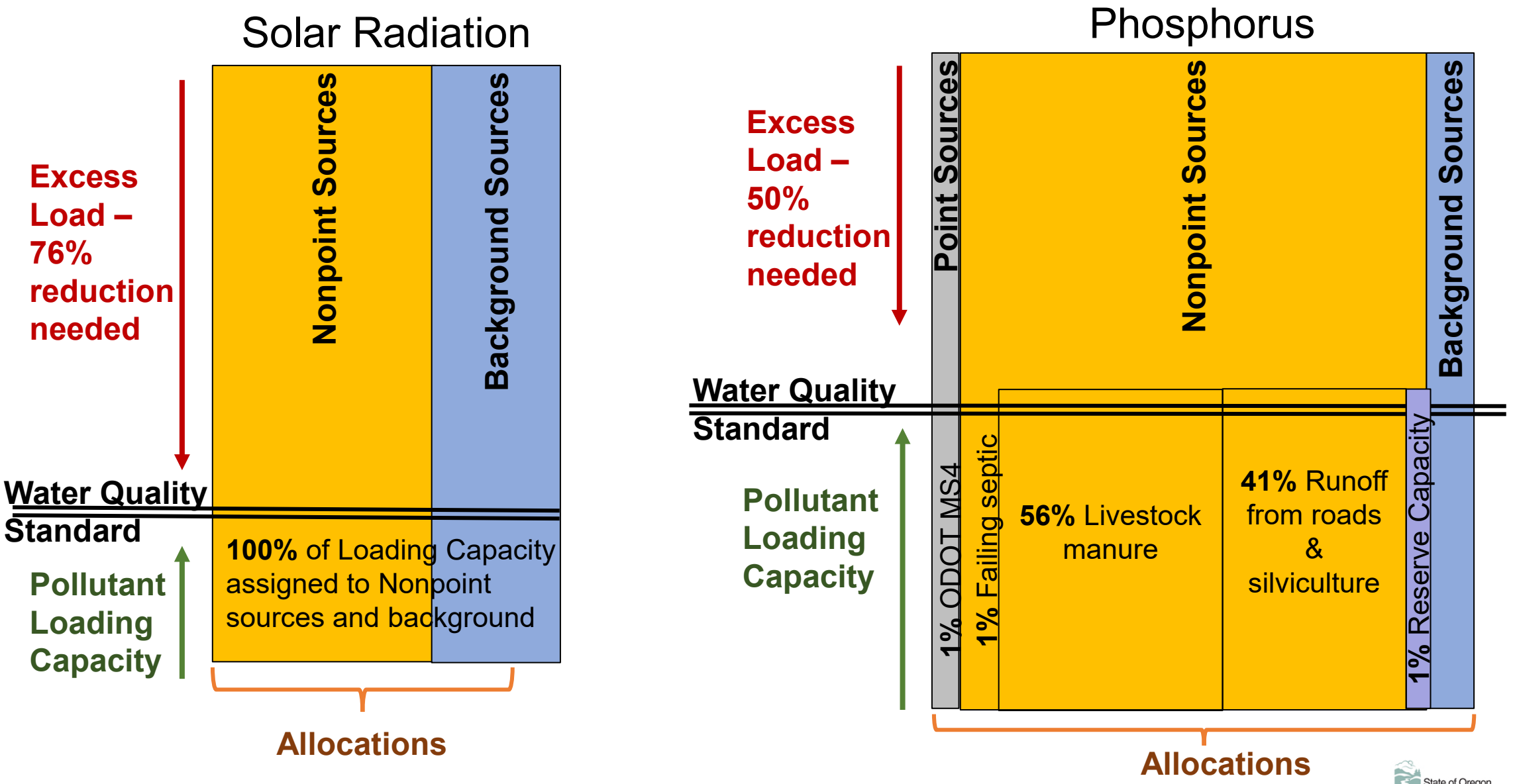
0 2.5 Km

Dissolved oxygen analysis overview



Yaquina River above Chitwood

Dissolved Oxygen surrogates - contributions and allocations



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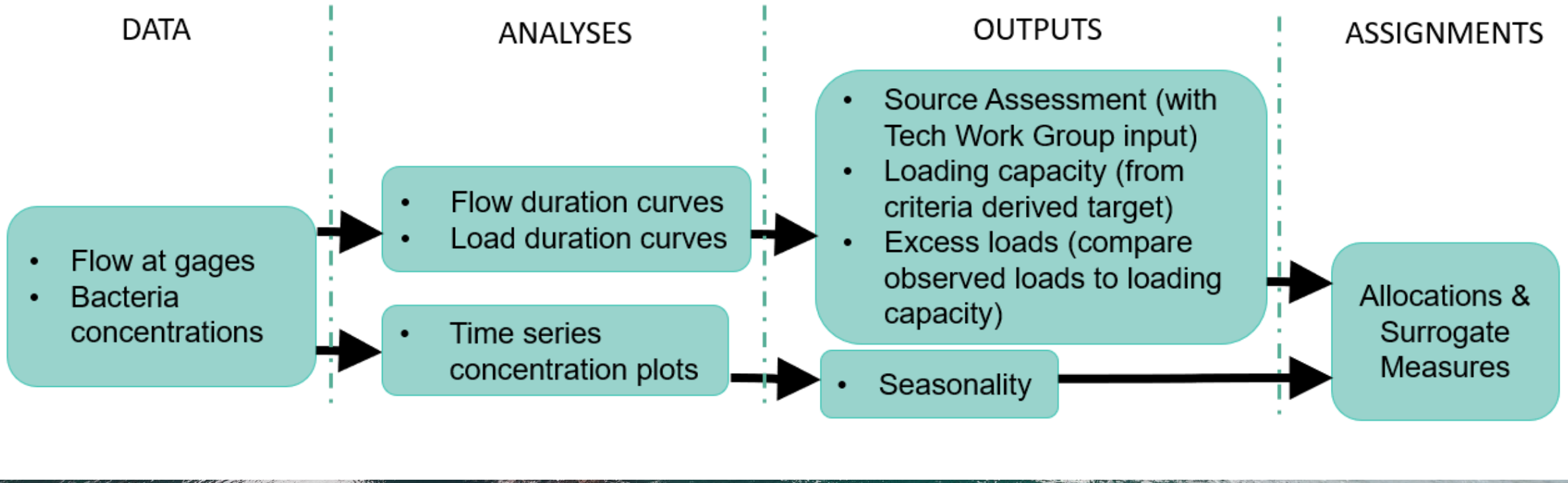
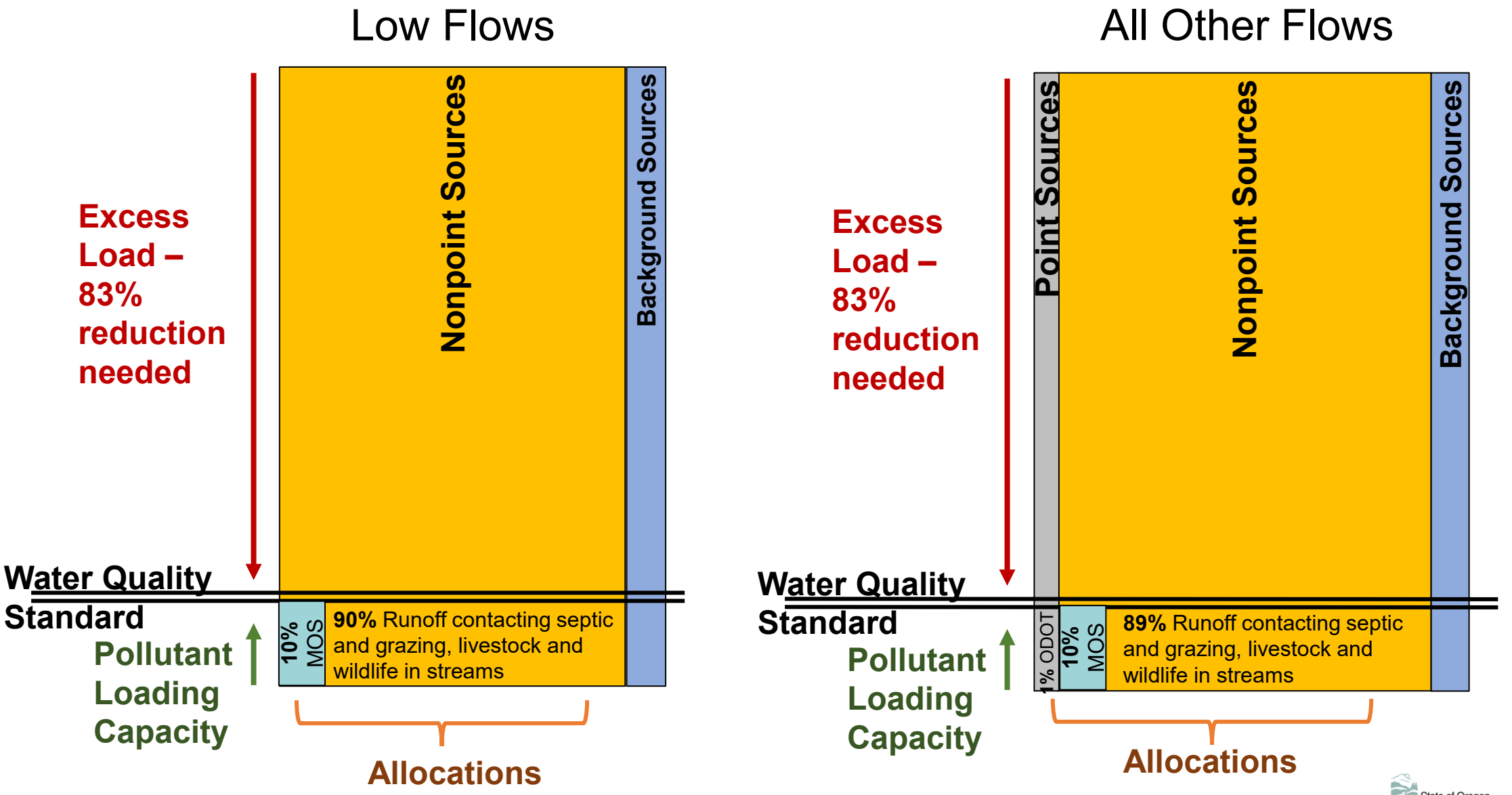
Bacteria Analysis Overview



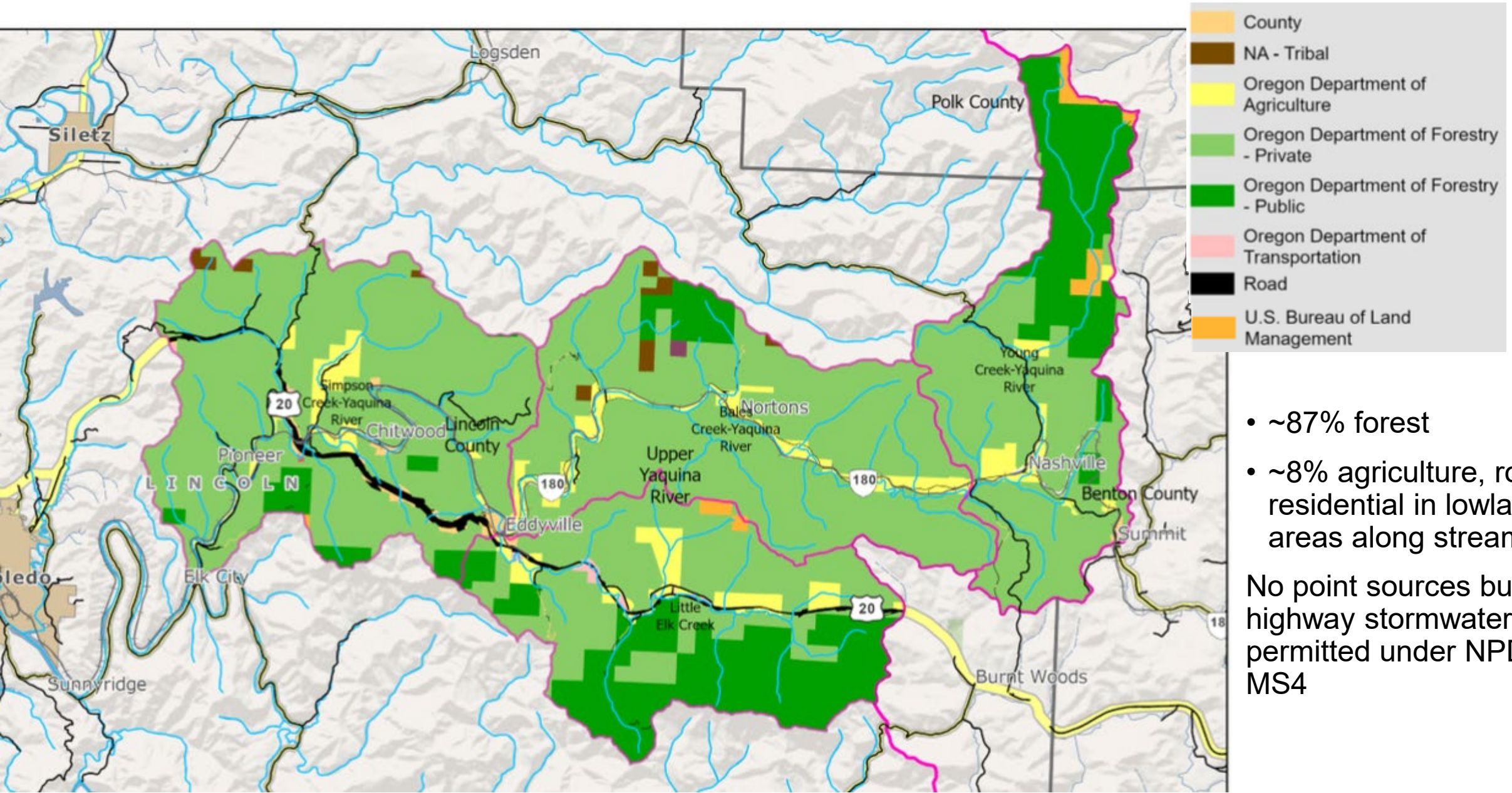
Bacteria contributions and allocations



Identifying Land Use, Jurisdiction and Nonpoint Sources of Pollutants

Yaquina River at bridge on Highway 180 upstream of Eddyville

Upper Yaquina River Watershed Land Use



- ~87% forest
- ~8% agriculture, roads, residential in lowland areas along streams

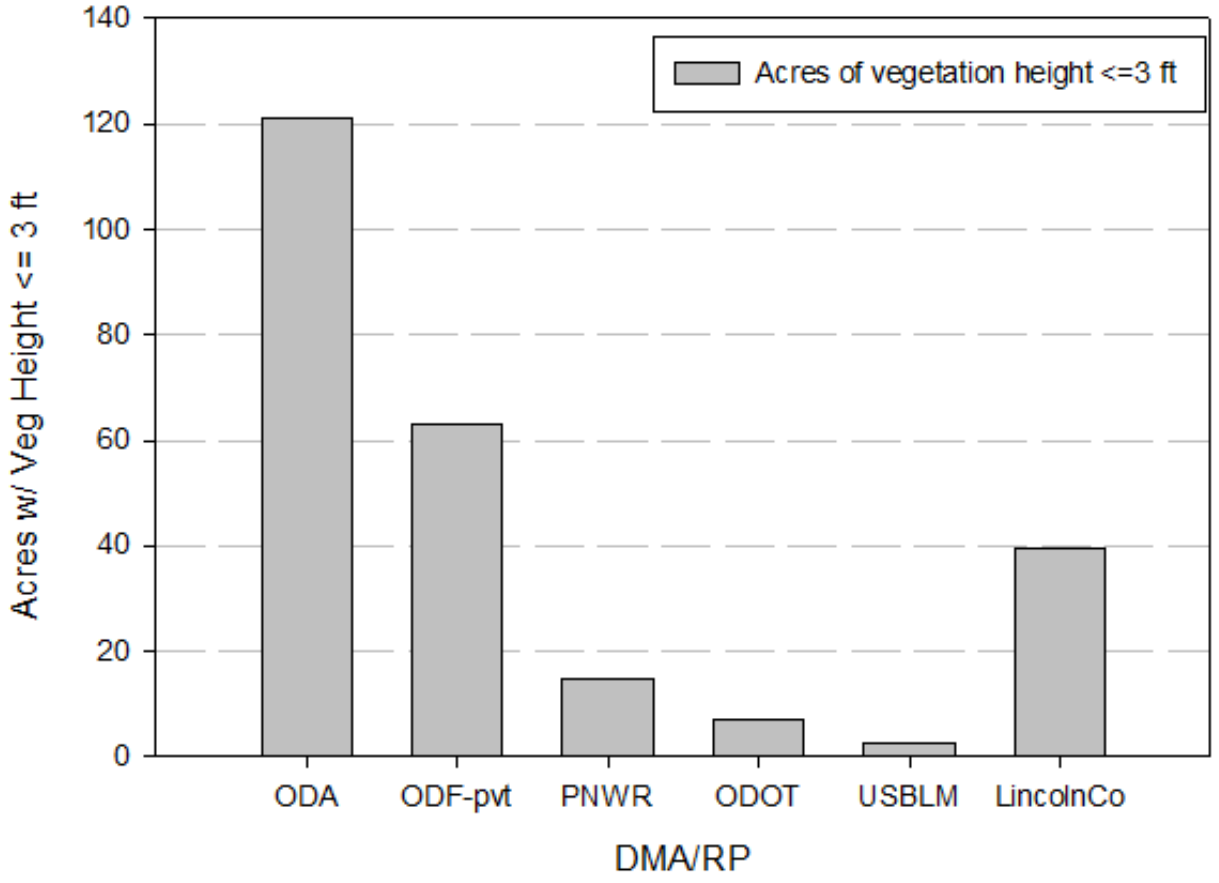
No point sources but highway stormwater permitted under NPDES MS4

Riparian area jurisdiction and condition

Responsible Person	Approximate riparian acreage within 100-feet of Yaquina River	Approximate Percentage of Area
Oregon Department of Agriculture	336	41.2%
Oregon Department of Forestry - Private	315	38.6%
Lincoln County	90	11.0%
Portland & Western Railroad	50	6.1%
Oregon Department of Transportation	20	2.4%
U.S. Bureau of Land Management	6	0.7%
Total	816	100.0%

Stakeholder input on vegetation types and height

Yaquina River riparian acreage with vegetation < 3 feet high



Grazing impacted riparian areas

Yaquina River near Chitwood

Local stakeholder input on bacteria sources

Livestock

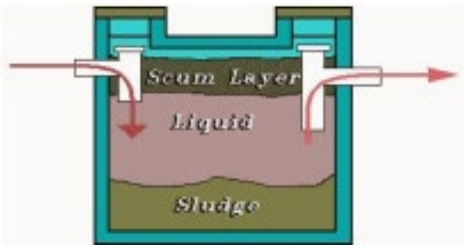
Stormwater runoff from…

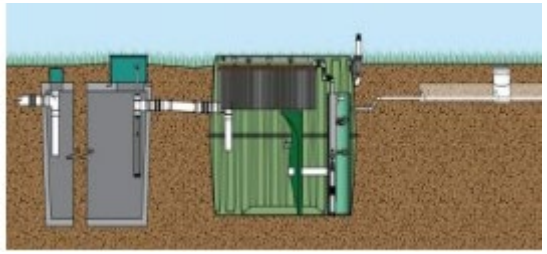
Livestock pastures

Transportation

Wildlife

Failing septic systems





Implementation Planning Tools: Shade Gap Maps and Pollutant Source Areas

Source Area #6
Bacteria exceedances during
Low, Med-Low and Med-High flows
High priority for implementation

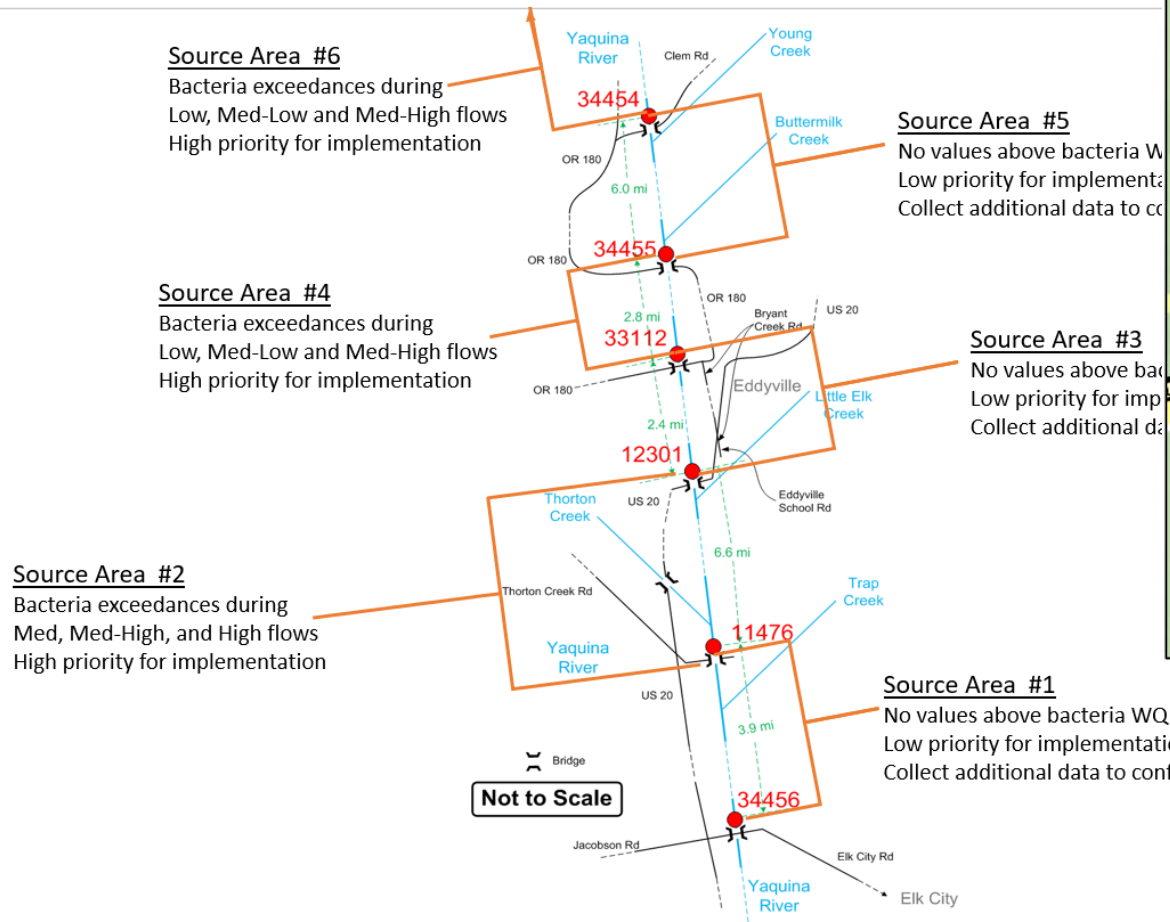
Source Area #5
No values above bacteria W
Low priority for implementa
Collect additional data to cc

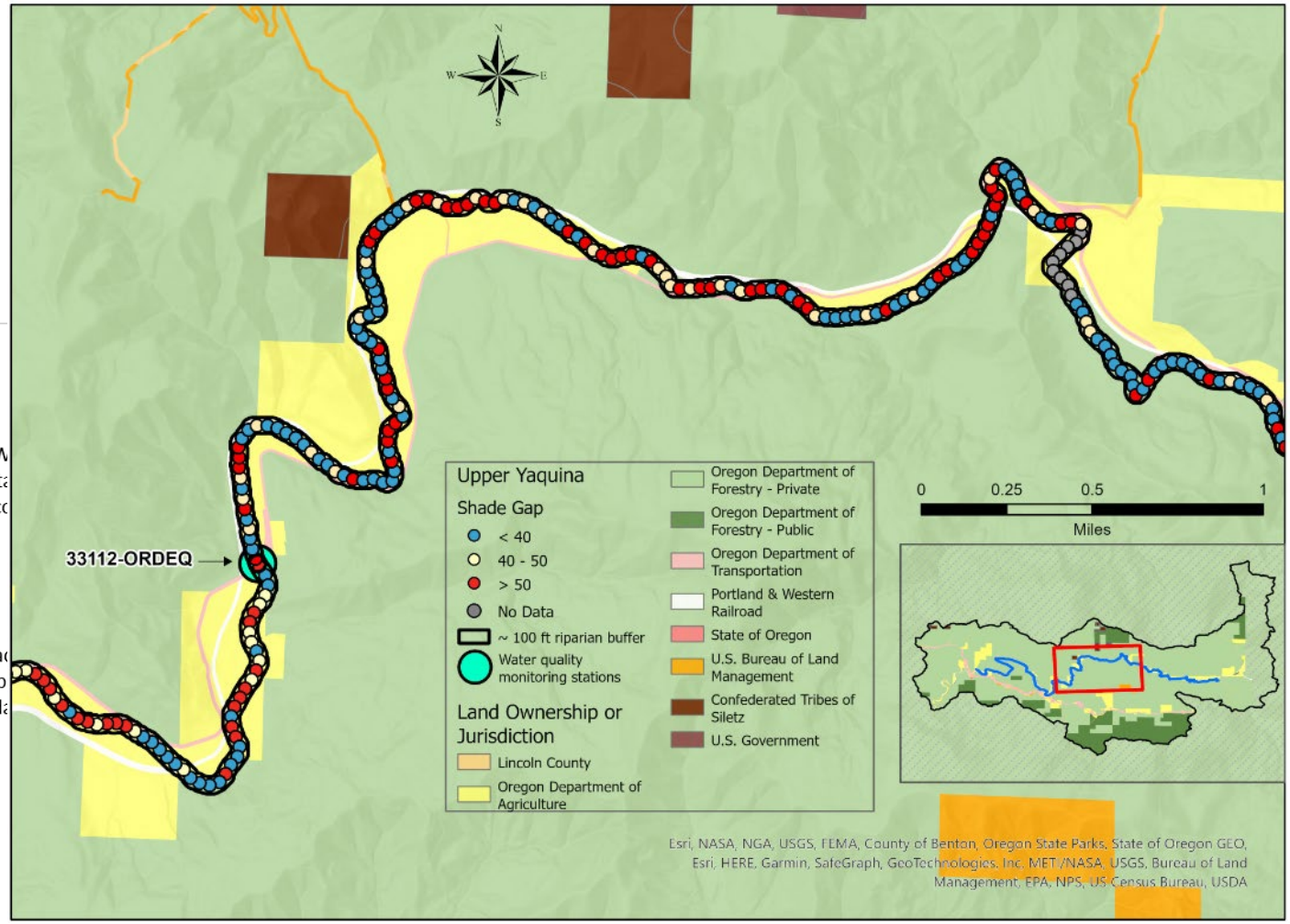
Source Area #4
Bacteria exceedances during
Low, Med-Low and Med-High flows
High priority for implementation

Source Area #3
No values above bac
Low priority for imp
Collect additional da

Source Area #2
Bacteria exceedances during
Med, Med-High, and High flows
High priority for implementation

Source Area #1
No values above bacteria WQ standard
Low priority for implementation
Collect additional data to confirm priority status





Issues and policy discussions

- Analytical methods and policy approaches to improve the pace and scale of water quality restoration
- Determinations of adequacy of existing programs to achieve TMDL load allocations and requiring TMDL implementation plans
- Identifying technical and financial assistance for TMDL implementation
- Evaluation of fiscal impacts, environmental justice and racial equity

Pace and scale of water quality restoration

- DEQ first determined nonpoint sources, in addition to point sources, were drivers of water quality impairment in the MidCoast Basin in the 1970s
- The Oregon Plan for Salmon and Watersheds was published in 1995 and the Oregon Coastal Coho Restoration Initiative in 1997
- Restoration actions funded and the number of projects completed in the Siletz-Yaquina watershed increased under these initiatives, but have declined since 2000
- Clean Water Act Section 319 grant funds were significantly reduced by the 2009 disapproval of Oregon's Coastal Nonpoint Source Control Program

Agriculture, forestry and county responsibilities

- Largest gaps in shade and sources of phosphorous and bacteria are in agricultural and private forest jurisdictions (some in transportation sector)
- Implementation plans from all Designated Management Agencies address gaps:

  Lincoln Co, ODOT, Portland and Western Railroad, BLM

  Mid Coast Agricultural Area Rule and implementation of the current Area Plan will not achieve solar radiation, phosphorus and bacteria TMDL allocations

  Forest Practices Act rules through 2022 were not adequate to achieve solar radiation TMDL allocations -- amended rules will protect shade, but do not require restoration where shade is insufficient due to previous harvests
- DEQ consulted with ODA, ODF, ODOT and other DMAs on determinations of adequacy and TMDL implementation planning

TMDL implementation resources

- Increased available funding
  - Oregon Watershed Enhancement Board grants
  - Natural Resources Conservation Service grants
  - Bipartisan Infrastructure Law through Clean Water State Revolving Fund loans and principal forgiveness
- Leveraging partnerships – TMDL implementation plans represent a watershed strategy – a requirement for OWEB grant applications
- Identification of TMDL requirements may be useful for additional funding requests
- Existing network of support organizations for technical and financial assistance can help landowners with implementation

Fiscal impacts analysis

- On-going costs of water quality impairment (without TMDL implementation) cannot be quantified
- Economic impacts are anticipated for some farms/ranches, forestlands, railroad and road rights-of-way and county, state and federal lands that contribute to impaired DO and bacteria
- DEQ/RAC did not find significant, adverse impacts to small businesses
- A third RAC meeting is scheduled for March 22

Environmental justice and racial equity

- Communities with potential disadvantages related to age, low income and minority status are present in the watershed, but will not be disproportionately impacted by TMDL implementation
- DEQ engaged extensively with tribal, agricultural, forestry, fishery and conservation communities through the local advisory and technical work groups and the Rule Advisory Committee
- Improvements to water quality as a result of TMDL implementation will improve opportunities for fishing, recreating and livestock watering, which may have increased economic and health benefits.

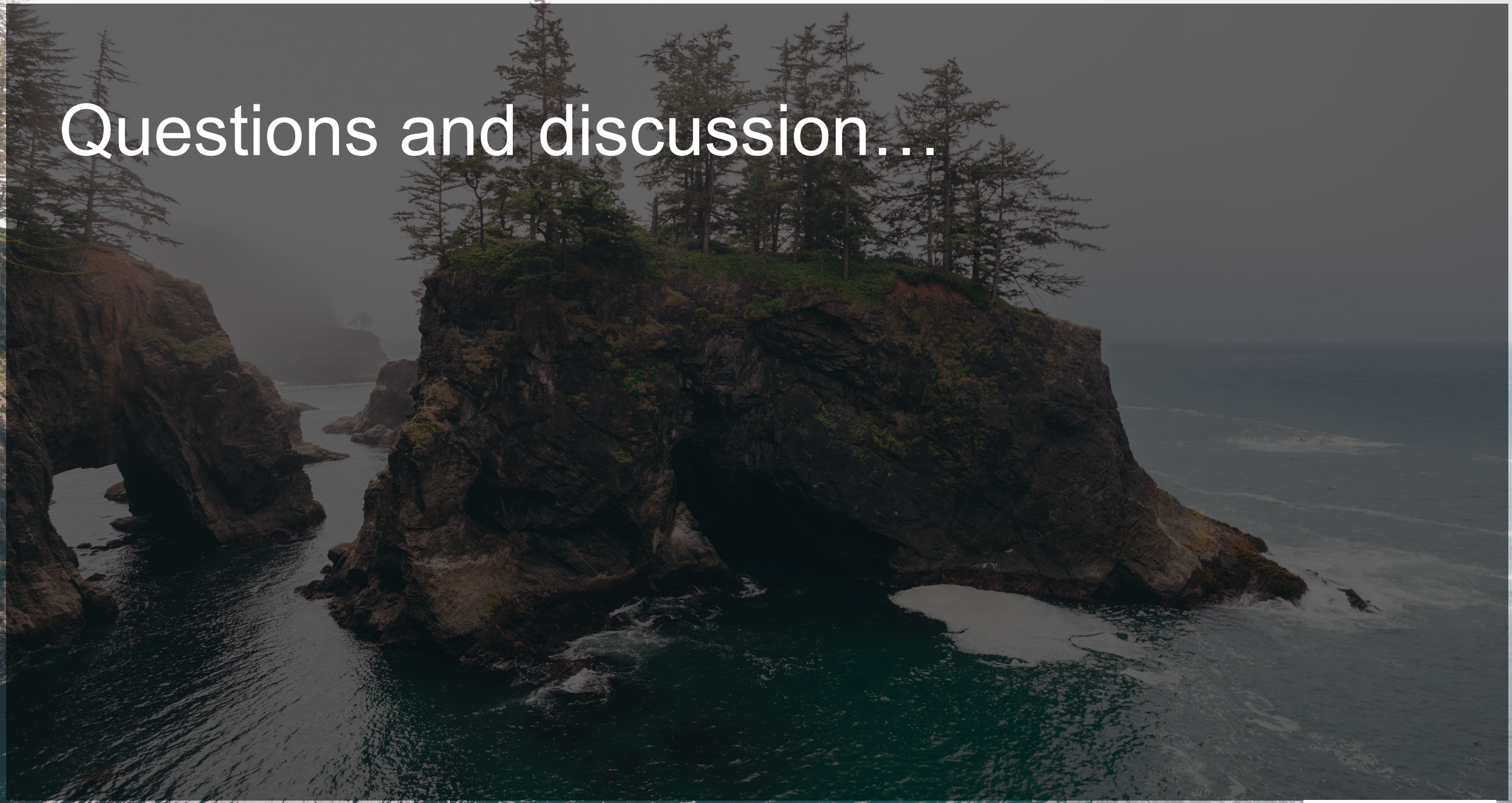
Next steps in Yaquina TMDL process

- 3rd Rule Advisory Committee meeting – March 22nd
- Public comment period and hearing – anticipated for May through June
- Summarize comments/responses and final documents for EQC and request rule adoption – Sep. 2023
- Submit TMDL to EPA – Sep. to Oct. - for EPA action – by Oct. or Nov. 2023

2023 Schedule for EQC TMDL items

May 2023	EQC Informational Item and Decision	**Powder Bacteria TMDL** briefing on technical work, local outreach and rule advisory committee input
	EQC Informational Item	**Willamette Basin (+Clackamas) and Sandy Subbasin Temperature TMDL Replacements** briefings on technical work, EPA input, rule advisory committee process and public process
Sep 2023	EQC Informational Item and Decision	**Upper Yaquina Bacteria & DO TMDLs** briefing on EPA and public process input and proposal for adoption by rule
	EQC Informational Item and Decision	**Powder bacteria TMDL** briefing on EPA and public process input and proposal for adoption by rule
Nov 2023	EQC Informational Item and Decision	**Willamette Subbasins and Sandy Temperature TMDLs** proposal for adoption by rule ***[EPA action court deadline Jan. 2024]***
	EQC Informational Item	**Coquille Subbasin Bacteria, DO, Temperature, pH TMDLs** briefing on technical work, local outreach and rule advisory committee input

Questions and discussion…



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