

Implementing the 2025 Umpqua River Basin TMDL for Temperature

DEQ's Water Quality Management Plan (WQMP)

Sept. 30, 2025

Informational presentation

Umpqua River above Elkton



Today's agenda: Water Quality Management Plans



Why is DEQ issuing
this Water Quality
Management Plan?



Role of the Water
Quality Management
Plan



Who are the
responsible
persons?



Implementation and
management
strategies

A water quality management plan (WQMP) is the element of a TMDL describing strategies to achieve allocations identified in the TMDL to attain water quality standards.

OAR 340-042-0030(17)

**Loading capacity =
credit limit**

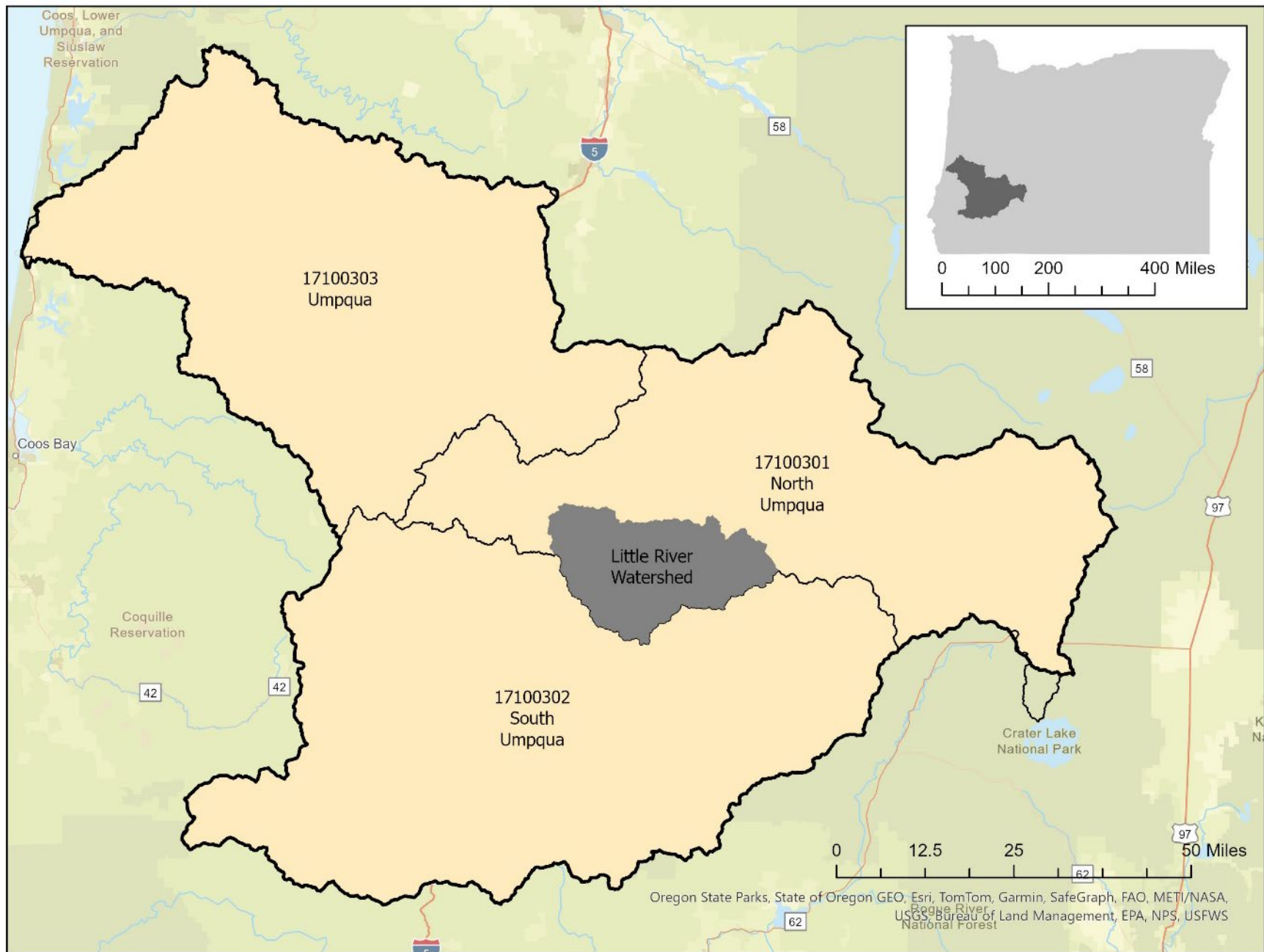


**TMDL allocations =
budget**



**WQMP =
spending plan**





Why the WQMP is being developed

- Implement the 2025 Temperature TMDL replacement
- Address new TMDL elements on spawning impairments
- Provide a consistent implementation framework statewide



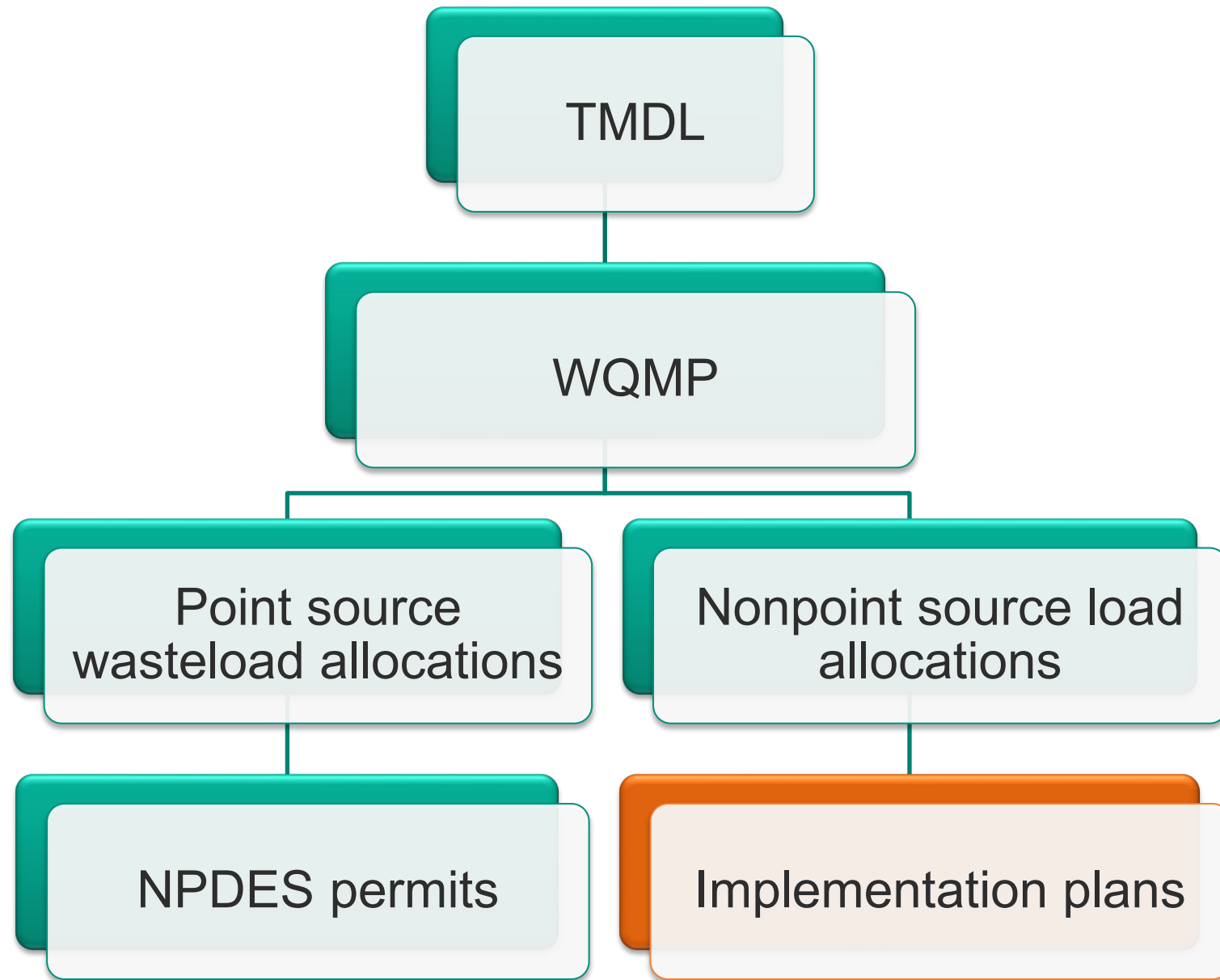
Big Bend Pool

Point Sources



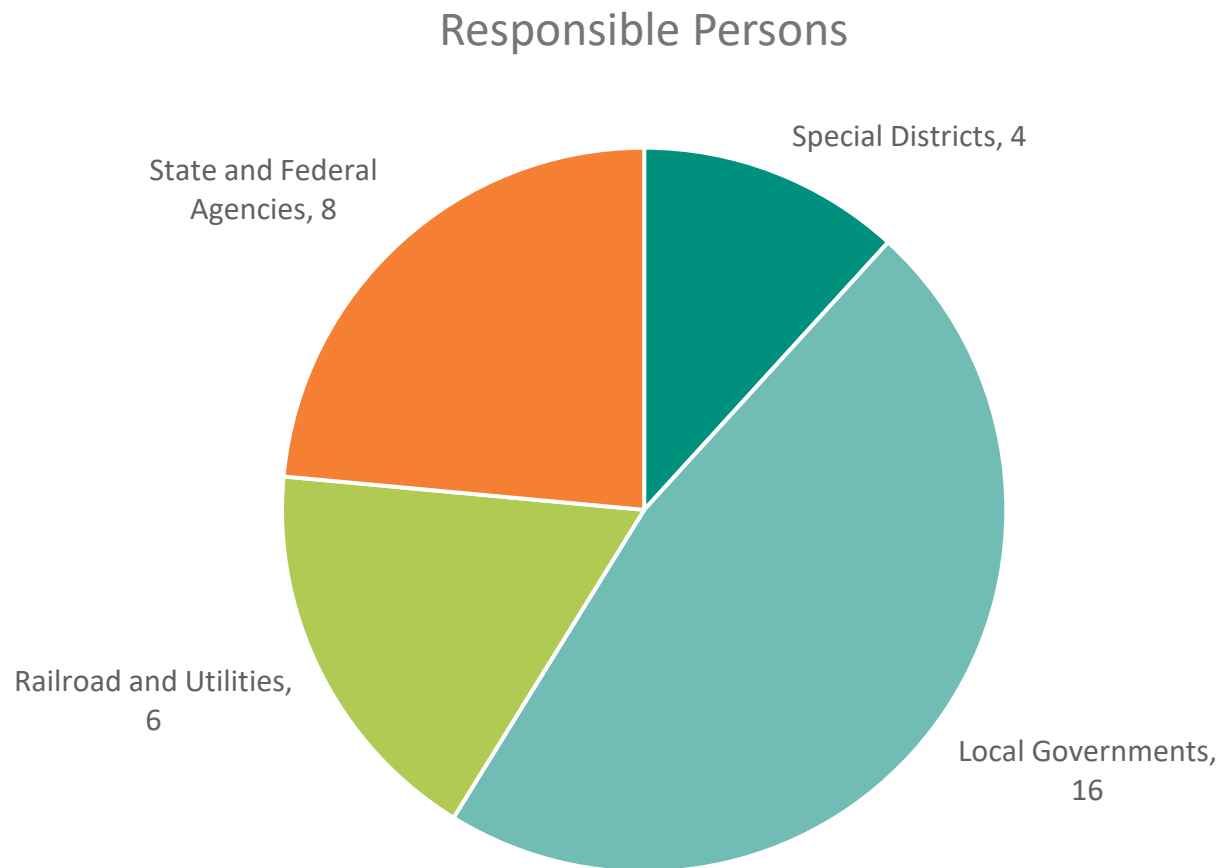
Nonpoint Sources





Who is responsible under the WQMP

- 34 responsible persons
- Includes 25 Designated Management Agencies (DMAs)
- Each responsible person is accountable for sources it manages
- Some responsible persons continue from 2006 WQMP; others are newly added



Responsible persons, including DMAs (nonpoint sources)

Carried forward from 2006

1. City of Canyonville
2. City of Drain
3. City of Elkton
4. City of Glendale
5. City of Myrtle Creek
6. City of Oakland
7. City of Reedsport
8. City of Riddle
9. City of Roseburg
10. City of Sutherlin
11. City of Winston
12. City of Yoncalla
13. Douglas County
14. Oregon Department of Transportation
15. Oregon Department of Forestry
16. Oregon Department of Agriculture
17. U.S. Forest Service
18. U.S. Bureau of Land Management

New responsible persons and DMAs

1. Bonneville Power Administration
2. PacifiCorp
3. Central Oregon & Pacific Railroad
4. Coos Bay Rail Link
5. Longview, Portland & Northern Railroad
6. Union Pacific Railroad
7. Port of Umpqua
8. Klamath County (new to this TMDL)
9. Lane County (new to this TMDL)
10. Highland Ditch Irrigation District
11. Jackson County (new to this TMDL)
12. Sutherlin Water Control District
13. Winchester Water Control District
14. Oregon Department of State Lands
15. Oregon Department of Fish & Wildlife
16. Oregon Parks and Recreation Department

Who Is Required (and Not Required) to Submit Plans

Required

- Major land managers:
 - Oregon Department of Agriculture
 - Oregon Department of Forestry
 - U.S. Bureau of Land Management
 - U.S. Forest Service
- Oregon Department of State Lands
- Oregon Department of Fish and Wildlife
- Oregon Parks and Recreation Department
- PacifiCorp
- Previously named in 2006 WQMP

Not Required

- Already covered under another TMDL
- Regulated through discharge permits
- Limited opportunity for stream restoration activities
- Limited streamside land under jurisdiction
- Small private reservoirs

Under OAR 340-042-0080(4), persons identified in the WQMP as responsible must prepare implementation plans that:



Identify strategies to meet load allocations and reduce pollutant loading



Provide timelines and measurable milestones



Include performance monitoring with periodic review and revision



Provide other analysis or information specified in the WQMP



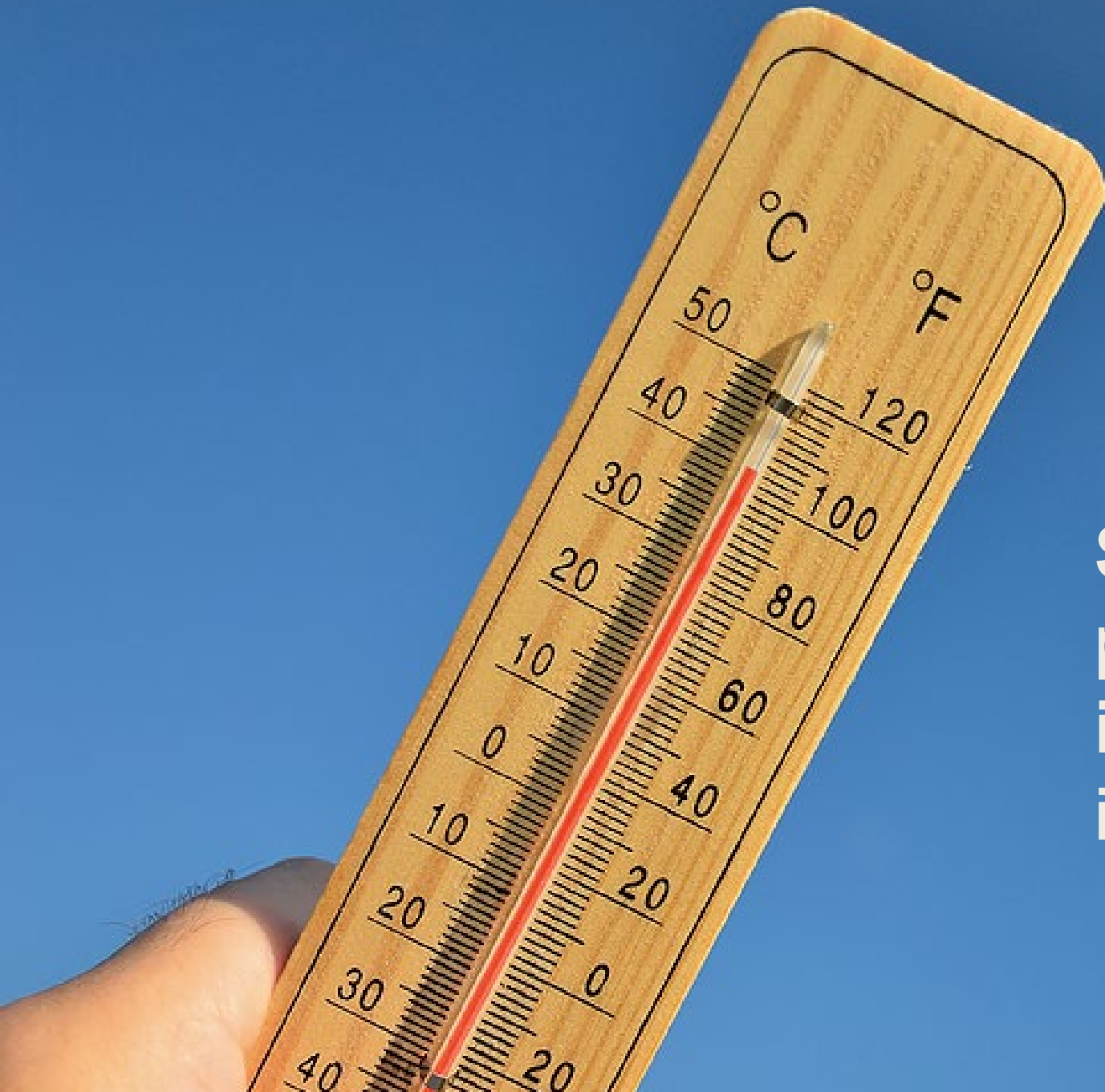
Implement and revise the plan as needed

Management Strategies in the WQMP

- WQMP provides a menu of strategies for temperature sources named in the TMDL
- Implementation plans must show how each responsible person will apply them
- Examples:
 - Streamside vegetation: restore vegetation (e.g., invasive removal, livestock exclusion)
 - Channel modification: stabilize banks, reconnect floodplains
 - Flow modifications: improve efficiency, protect instream flows
 - Dams/reservoirs: adjust storage, release practices



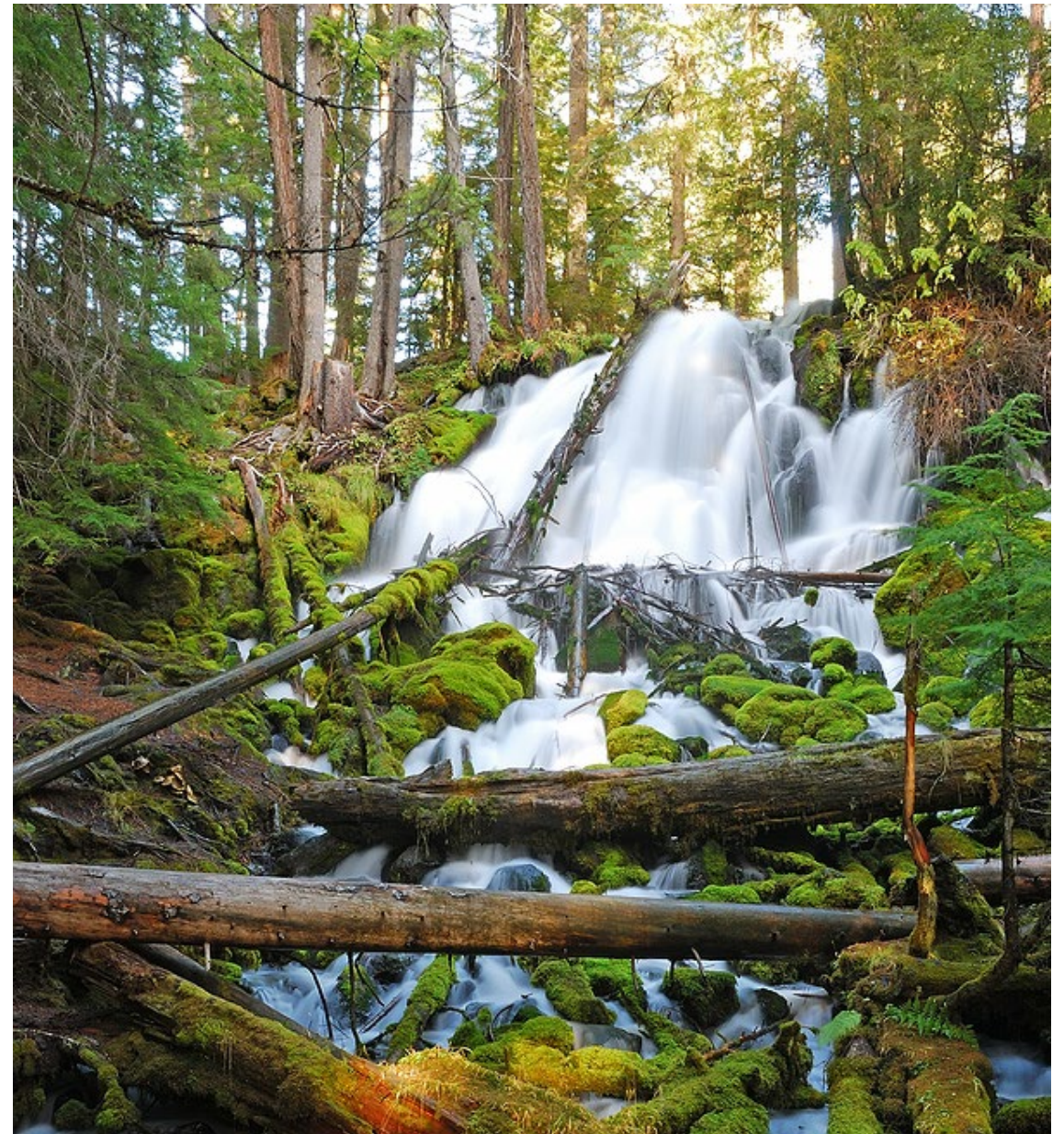
Buckhorn Creek



Surrogate measures
provide clear, **trackable**
indicators that guide
implementation

Surrogate shade targets and shade curves

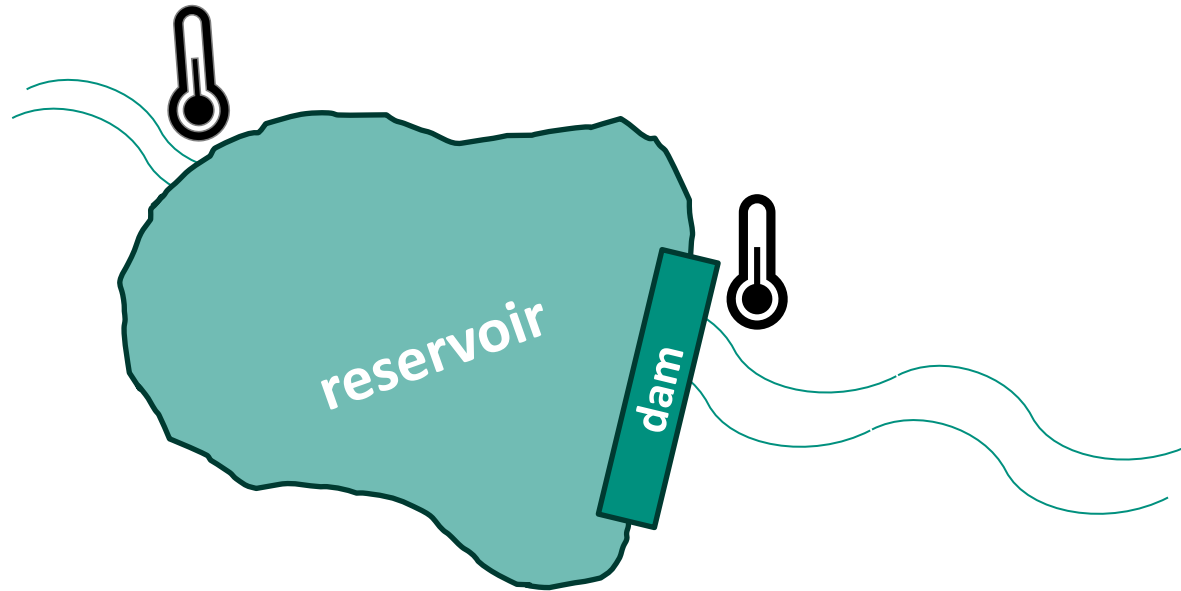
- Represent full streamside vegetation restoration potential
- Two forms:
 - Site-specific effective shade targets
 - Shade curves by ecoregion (based on vegetation, stream width, orientation)
- Curves apply only where site-specific targets are not available



Clearwater Falls

Reservoir surrogate measures

- Surrogate measure: downstream water should be no warmer than upstream
- Tracked using a 7-day average daily maximum temperature (7DADM)
- Verifies reservoirs are not adding heat downstream



Additional information and analysis to guide implementation



South Umpqua Falls

- Establish baseline conditions
- Track progress toward surrogate targets and allocations
- Three key elements:
 - Streamside evaluations
 - Shade gap analyses
 - Reservoir monitoring and assessments

Streamside evaluations

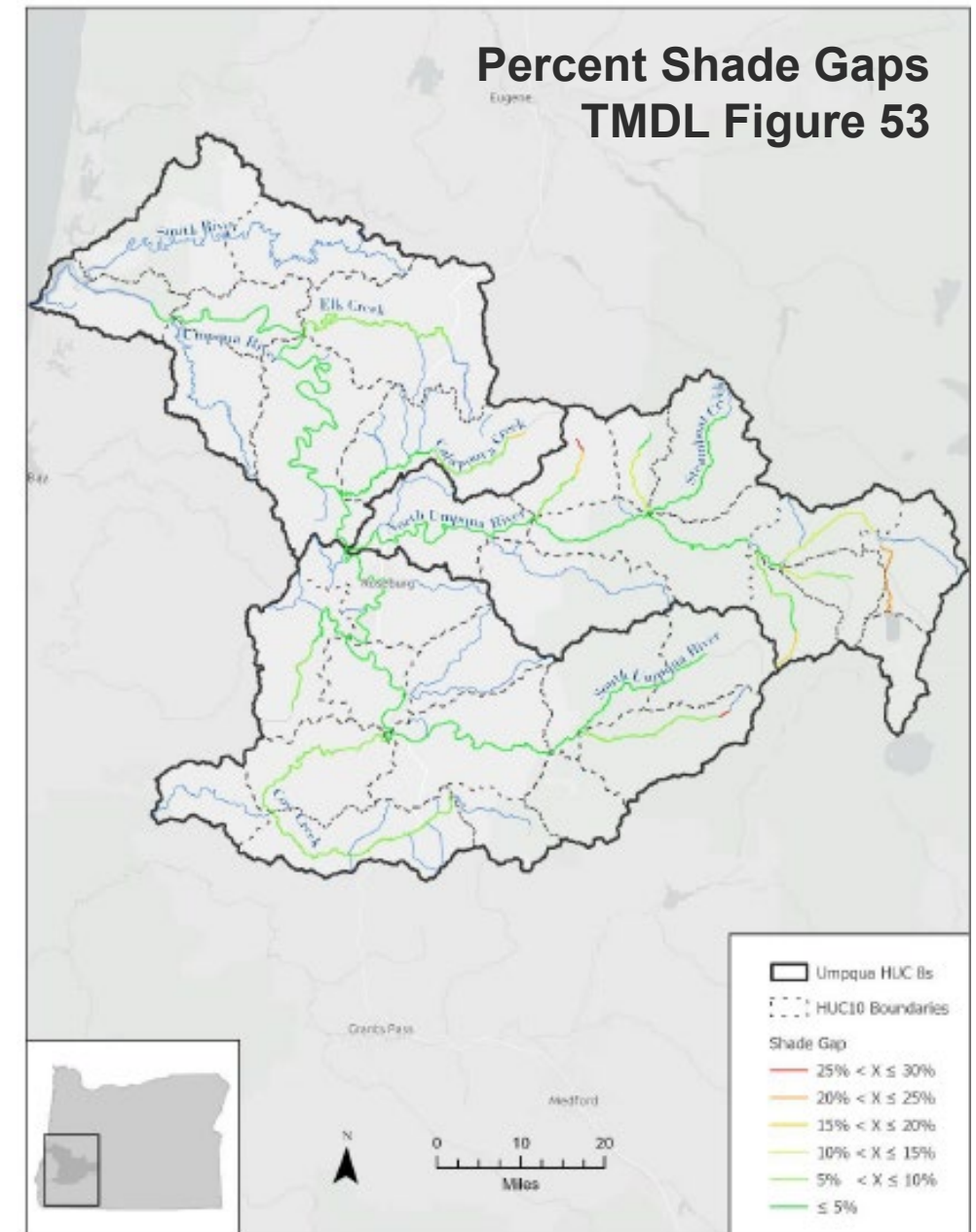
- Required for responsible persons with streamside jurisdiction
- Assess streamside vegetation conditions capable of providing shade
- Classify as protect, restore, constraint-limited, alternative
- Identify priority areas for protection and restoration
- Combine with shade gap analysis



South Umpqua River near Myrtle Creek

Identifying shade gaps

- Compare current shade to the TMDL's surrogate measure targets
- Identifies where protection or restoration is needed
- Map highlights modeled shade gaps
- Required for ODA, ODF, BLM, and USFS
- If not using TMDL results
 - Propose own shade gap analysis
 - Adopt 120-foot riparian buffer



Dam and reservoir monitoring and assessment

- Applies to large, publicly managed dam and reservoir operators
 - PacifiCorp's North Umpqua Hydro Project
 - Galesville Reservoir
 - Berry Creek Dam (Ben Irving Reservoir)
- Other facilities may be required to submit implementation plans with monitoring in the future
- Implementation plans must include monitoring and assessment plan
 - Verifies if operations meet surrogate measure targets
 - Confirms assigned Human Use Allowances (HUA) are achieved
 - Provides foundation for adaptive management



Galesville Reservoir

Measuring progress

- DEQ evaluates progress toward WQMP benchmarks and TMDL surrogate measure targets
- Benchmark: 10% cumulative shade gain each decade
- Annual reports and 5-year reviews provide the basis for evaluation
- Natural events can affect recovery pace
- Monitoring results guide adaptive management



Wrights Creek

Basin monitoring strategy

- DEQ leads; ODA, ODF, BLM, USFS required to participate
- Builds on existing monitoring partnerships
- Objectives:
 - Identify where protection and restoration are needed
 - Evaluate effectiveness of strategies
 - Refine pollutant load estimates
 - Track progress toward allocations and shade targets
 - Document status and trends in water quality
 - Support adaptive management



Lemolo Lake

New WQMP requirements

- 16 new responsible persons and DMAs named
- Implementation plans must include streamside evaluations
- ODA, ODF, BLM, and USFS must:
 - Submit implementation plans
 - Complete shade gap analyses
- Reservoir monitoring for PacifiCorp, Galesville, Ben Irving
- Umpqua Temperature Monitoring Strategy
- New benchmark: 10% cumulative shade gain each decade



Scholfield Estuary

Continuing requirements from 2006 WQMP

- Streamside shade remains the central strategy
- Surrogate shade measure targets and shade curves continue unchanged
- Load allocations and surrogate measures guide implementation
- Responsible persons, including DMAs, remain accountable
- Accountability framework continues (reports, 5-year reviews, adaptive management)
- Other Umpqua WQMPs for bacteria and nutrients remain in effect

Public engagement and next steps



Oct. 15, 2025 – Rule advisory committee meeting #1



Dec. 17, 2025 – Rule advisory committee meeting #2



March 2026 – Public comment period and hearing for draft WQMP



November 2026 – Rule proposal to EQC for action



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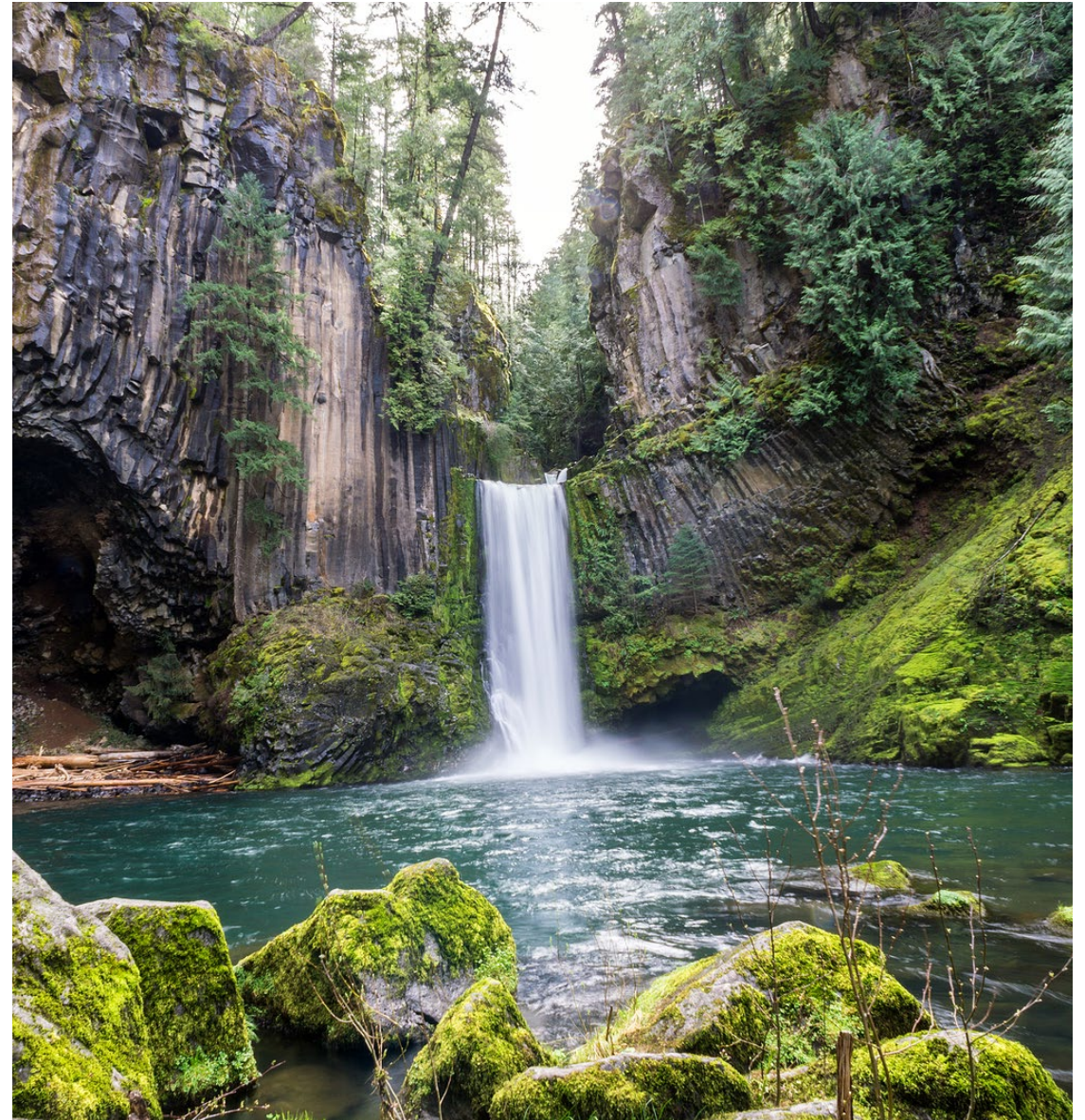
Contacts

Heather Tugaw, Water Quality Manager
heather.tugaw@deq.oregon.gov

Sarah Norpchen, Interim Basin Coordinator
sarah.norpchen@deq.oregon.gov

Michele Martin, Project Manager
michele.martin@deq.oregon.gov

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Toketee Falls

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