

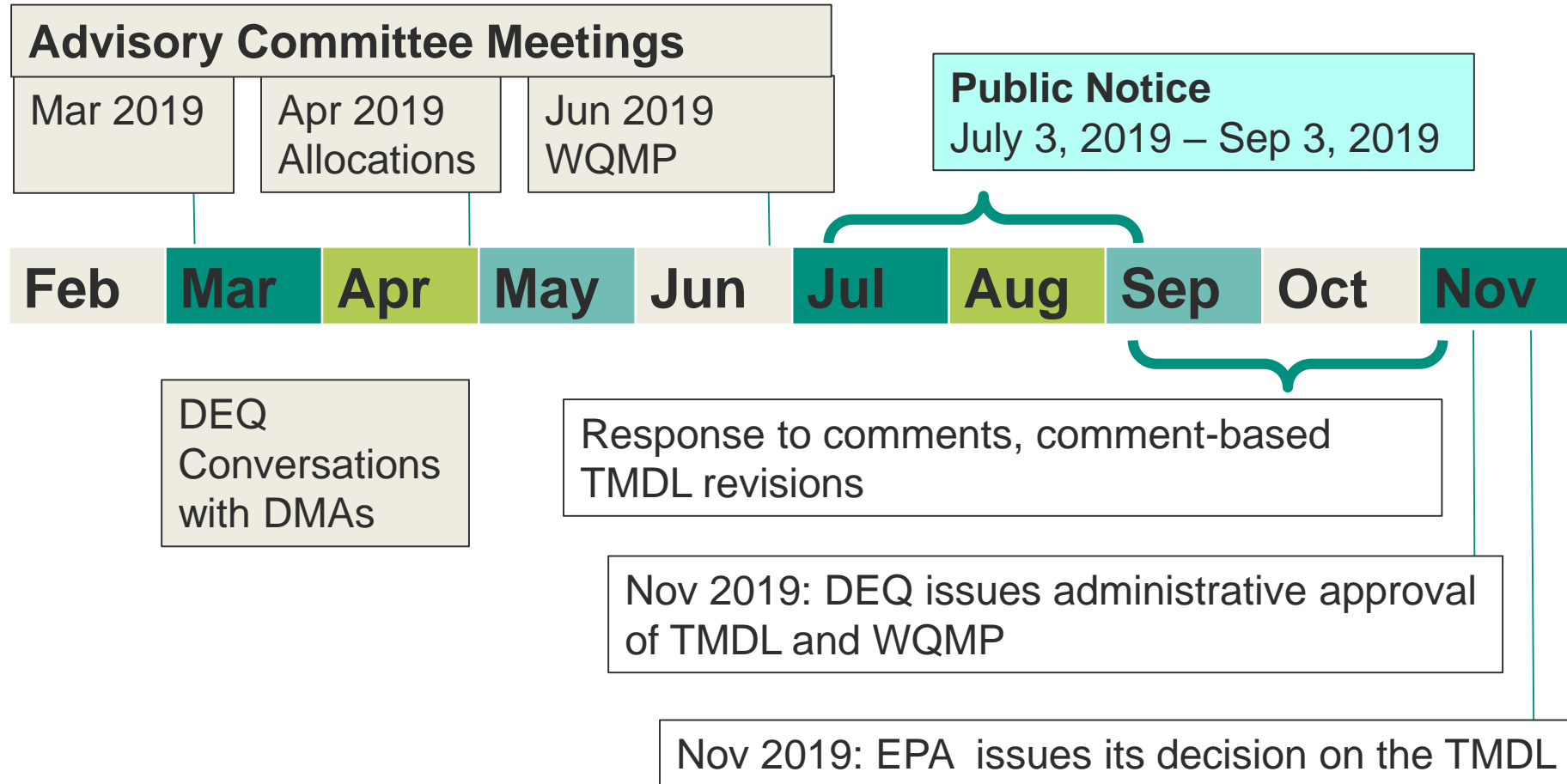
Willamette Mercury TMDL Revision Water Quality

July 18, 2019
Enterprise, Oregon

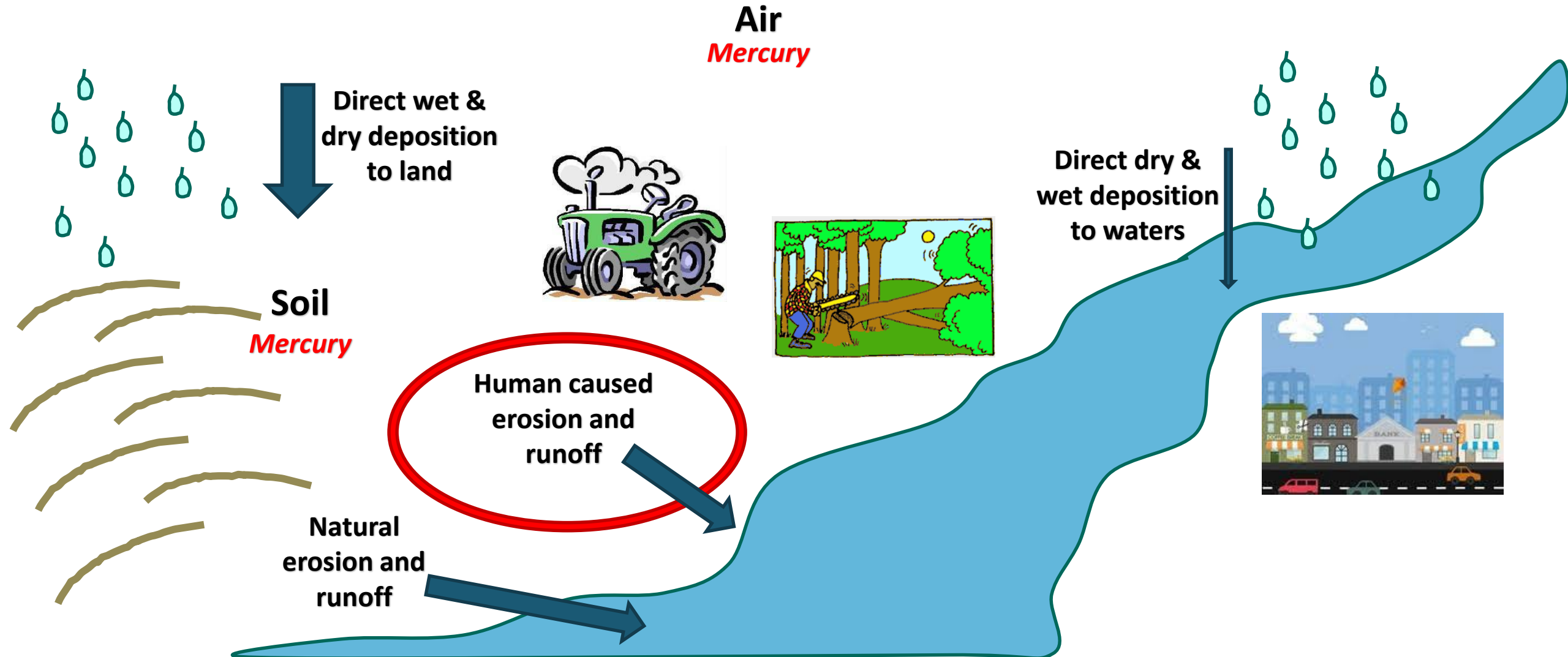
Presentation Outline

- Project Status and Timeline
- Willamette Basin Mercury TMDL Overview and Allocations
- Coordination with DMAs on Implementation
- Nonpoint Source Implementation Measurable Objectives
- Reasonable Assurance Accountability Framework

Status

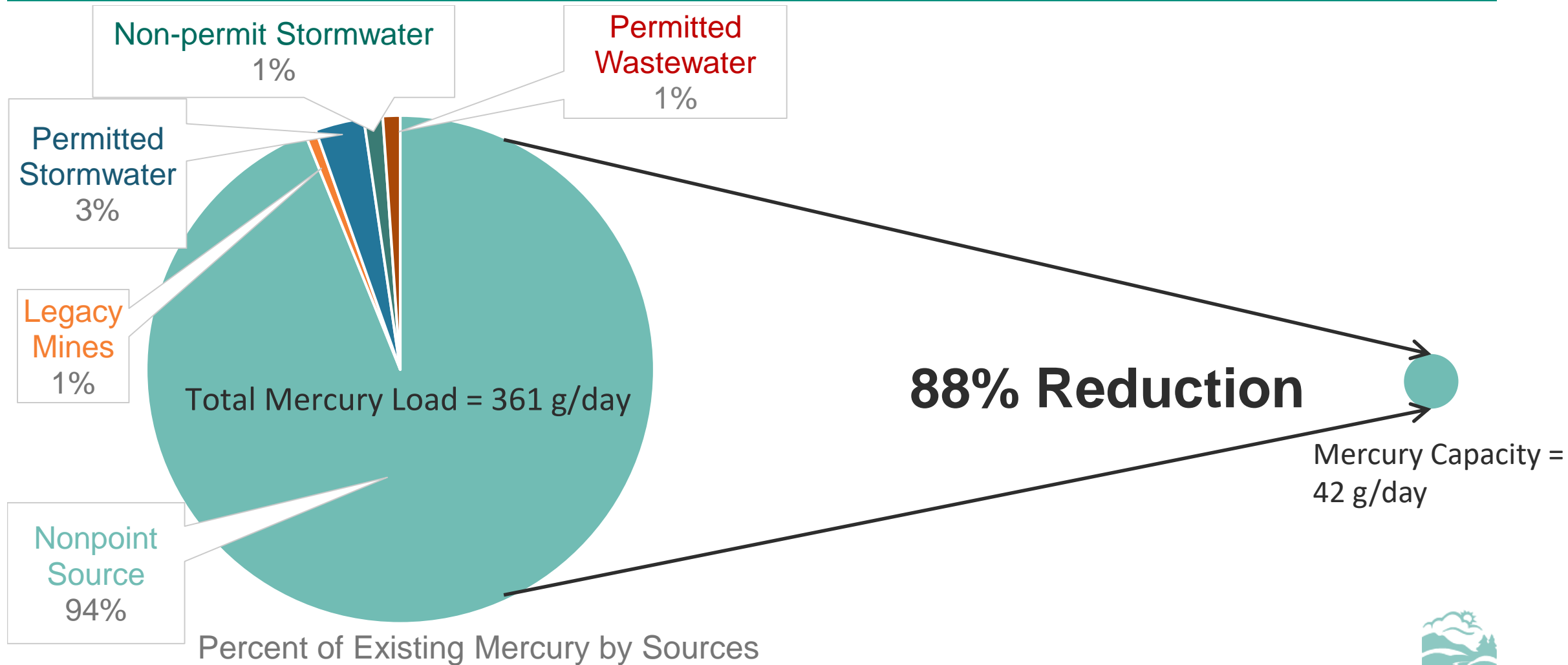


Willamette Basin Mercury Sources and Movement to Waterbodies



TMDL Implementation Plan addresses Human Activities. Actions are focused on controllable, achievable, and implementable strategies.

DRAFT Willamette Basin Mercury TMDL: Source Contributions and Reduction Needed



Allocations

SOURCE SECTORS	EXISTING LOADS			ALLOCATIONS			
	g/day	kg/year	Relative Contribution to Total Load	Percent Reduction	g/day	kg/year	Relative Allocation of Load Capacity
General Nonpoint Source and Background¹ Captures: Forestry, Agriculture, Water Impoundments, Water Conveyance Entities, Non-Permitted Urban Stormwater, Atmospheric Deposition	341.74	124.82	94.5%	88% ²	28.87	10.54	68.46%
Non-Permitted Urban Stormwater				75%	0.63	0.23	1.5%
Atmospheric Deposition				11%	5.22	1.91	12.38%
Legacy Metals Mines	4.00	1.46	1.1%	95%	0.20	0.07	0.5%
NPDES Wastewater Point Source Discharges	4.44	1.62	1.2%	10%	4.00	1.46	9.5%
NPDES MS4 Stormwater Point Source Discharges	11.31	4.13	3.2%	75%	2.83	1.03	6.7%
Reserve Capacity	NA	NA	NA	1% ³	0.42	0.15	1.0%
Margin of Safety	NA	NA	NA	implicit	implicit	implicit	implicit
TOTALS	361.49	132.03	100%	NA	42.17	15.39	100%

Engagement with Affected Entities:

April meetings with Nonpoint Source DMAs

- DEQ staff met with ODA, ODF, BLM and USFS:
 - Discussed proposed Nonpoint Source load allocations
 - Discussed measurable objectives and milestones
- Oregon Water Resource Congress
 - Water conveyance districts as responsible persons in TMDL
- March 21 stormwater webinar for non-permitted urban Designated Management Agencies
- Reservoir meeting

Engagement with Affected Entities:

700-PM General Placer Mining Permit

- Proposed prohibitions on motorized suction dredge mining in tributaries to Dorena Reservoir
 - Sediment in these streams is mercury contaminated
 - Multiple studies in OR, CA and other states show mercury contamination is mobilized and methylated by suction dredges
- July 15th information meeting with registered miners and their associations – DEQ, BLM, DSL, OSP and others
 - Explain alternative locations and methods
 - Prepare for meaningful participation in TMDL public review

WQMP Approach

Implementation Plans

- WQMP directs DMAs to develop implementation plans within 18 months of TMDL issuance
- Plans will include **measurable objectives and milestones** associated with reducing runoff and erosion of sediment
- Approved by DEQ

Measurable Objectives

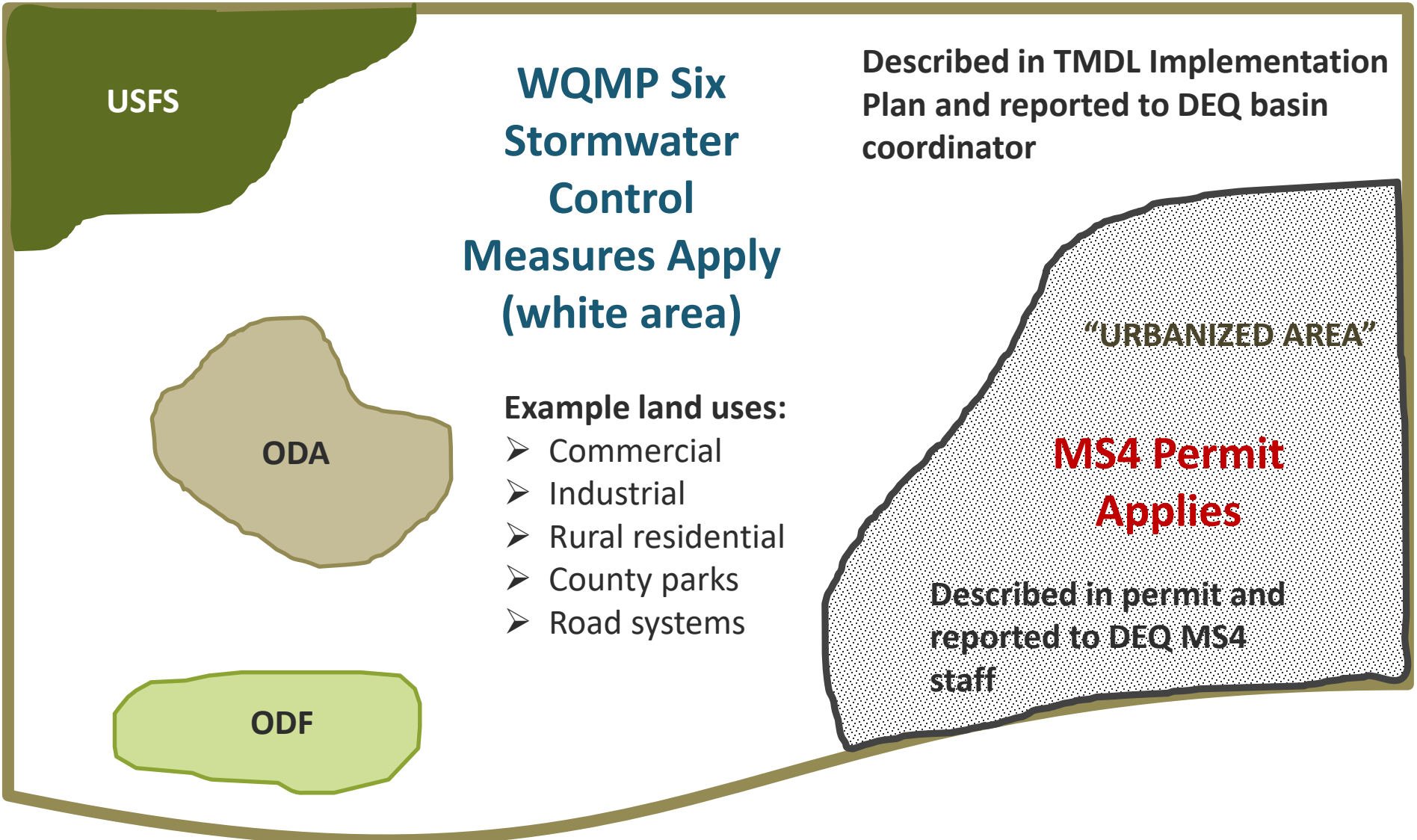
Examples:

- Minimize bare ground in agricultural operations
- Track percent compliance with Forest Practices Act rules related to sediment delivery
- Develop road management strategies—e.g. inventory hydrologically-connected roads, identify at-risk stream crossings, track percent of roads repaired/decommissioned/stored to date.
- Evaluate hillslope erosion potential related to logging

Urban Stormwater Sector

- Non-MS4 permitted urban areas
- Additional areas outside the permit coverage of MS4-permitted jurisdictions
- Applying “Six Minimum Measures” that are similar, but less stringent than in permits
- Application of these measures to urban areas not previously regulated by a permit or TMDL requirements fills a gap to ensure mercury and sediment in stormwater discharges are comprehensively controlled throughout the Willamette Basin.

Non-Permitted & MS4 DMA County Example



Responsible Persons: Water Conveyance Entities

- Entities that own and/ or operate water conveyance systems that have the potential to discharge to waters of the state (return flows)
 - Previously not included in WB Hg TMDL
- Central database of all potential water conveyance entities does not currently exist
 - Oregon Water Resources Department, Secretary of State, Soil and Water Conservation Districts, Oregon Water Resources Congress, Special District Association of Oregon

Water Conveyance Entities: WQ Management Strategy Examples

- Maintain a list of construction or ditch maintenance activities that require state and/ or federal permits or ODFW approval
- Implement streambank and/ or canal stabilization practices, including structural and non-structural best management practices
- Implement flow and drainage management to reduce erosion, and sediment delivery to streams

Water Conveyance Entities

- July 17 meeting in Tangent
- Willamette Basin SWCDs, ODA, and Farm Bureau also invited to Tangent meeting

Reservoir Operators

- Largest reservoir operators
 - U.S. Army Corps of Engineers
 - Portland General Electric
 - U.S. Bureau of Reclamation
 - Eugene Water and Electric Bureau
- Requirements
 - Assess factors affecting methylation rate in reservoirs
 - Evaluate approaches to reduce methylmercury production
 - Implement management strategy

Implementation for Reservoir Operators

1. Assess factors affecting methylation rate in reservoirs
2. Evaluate approaches to reduce methylmercury production
3. Implement management strategy

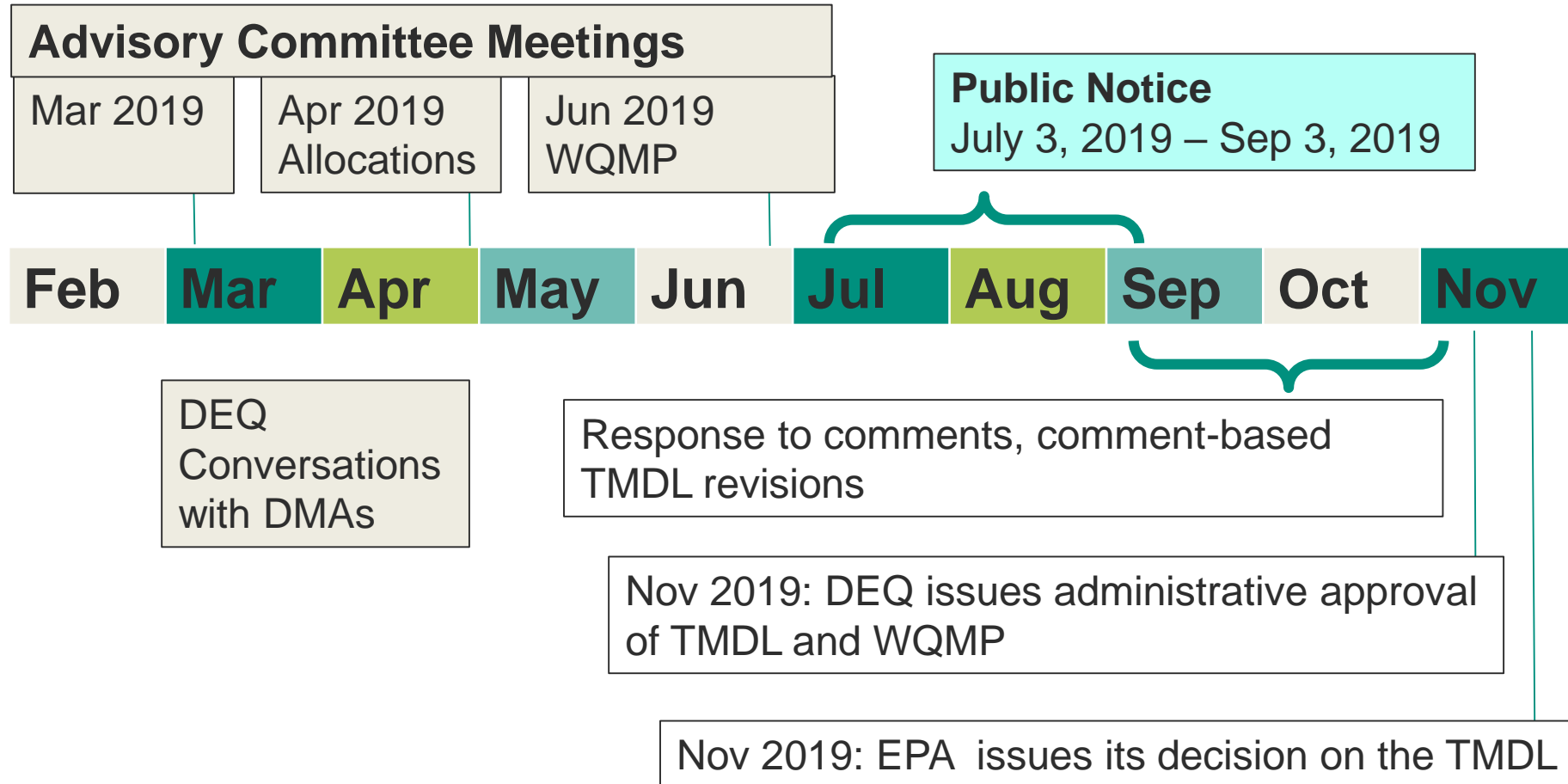
DMA Reporting to DEQ

- Cities and counties
 - Annual
 - Five year reviews
- State and federal agencies
 - Regular reporting in consideration of varying existing requirements
 - Five year reviews

Reasonable Assurance



Status



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