

# Willamette Water Quality Issues

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Willamette Valley Water Roundtable  
October 21, 2008

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**Michael J. Wolf**  
**Oregon Department of Environmental Quality**  
**Water Quality Division**



## Willamette Basin TMDLs

# Overview of presentation

- Current issues
  - Mercury, Temperature and Bacteria
  - Other efforts underway
- Emerging issues
- Challenges

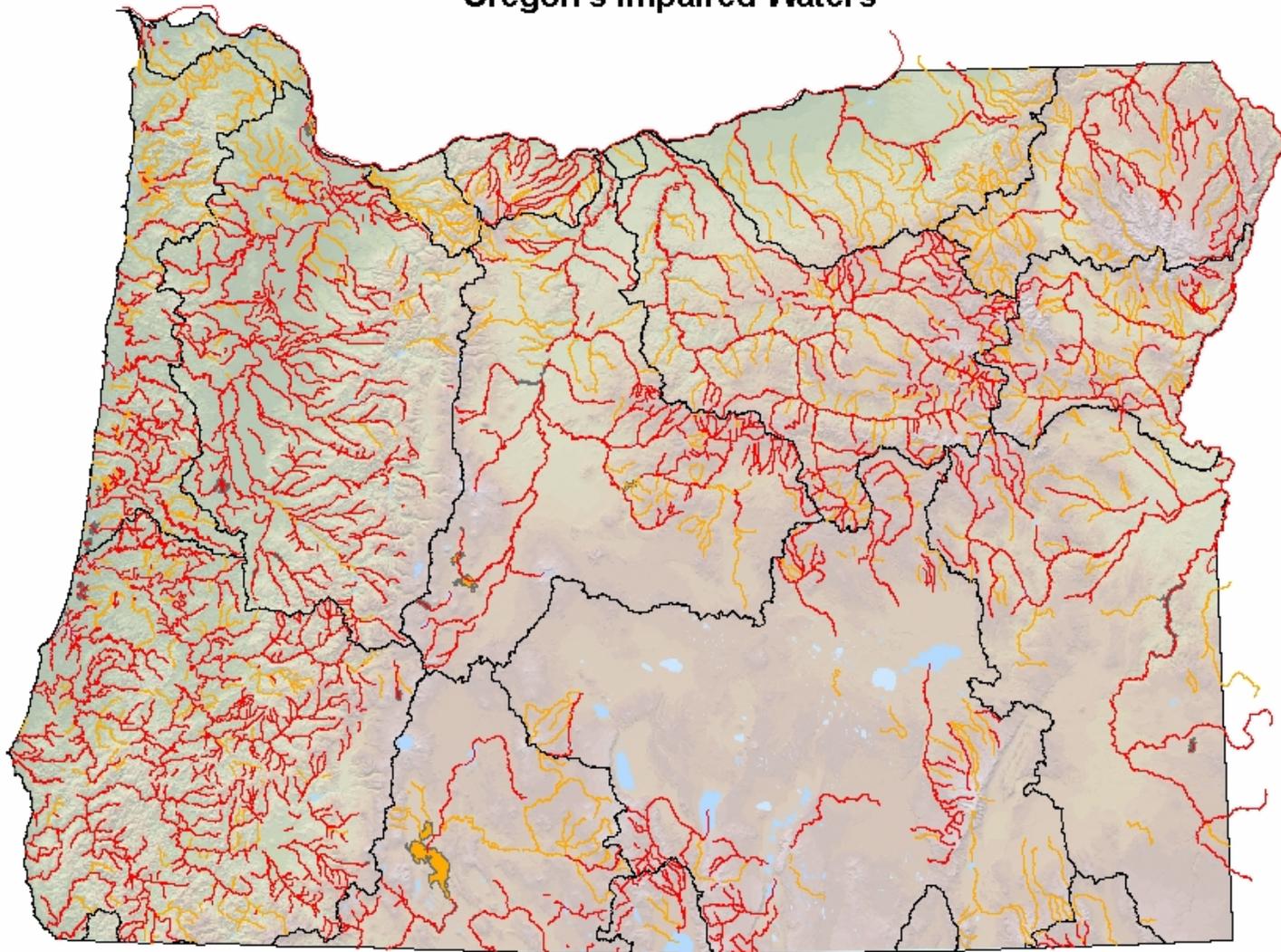


PHOTO ART

# Oregon's Impaired Waters

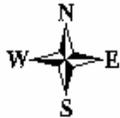


State of Oregon  
Department of  
Environmental  
Quality



## 2004/2006 Water Quality Limited Waters

-  303(d) Listed Streams
-  303(d) Listed Lakes
-  Other Water Quality Limited Streams
-  Other Water Quality Limited Lakes



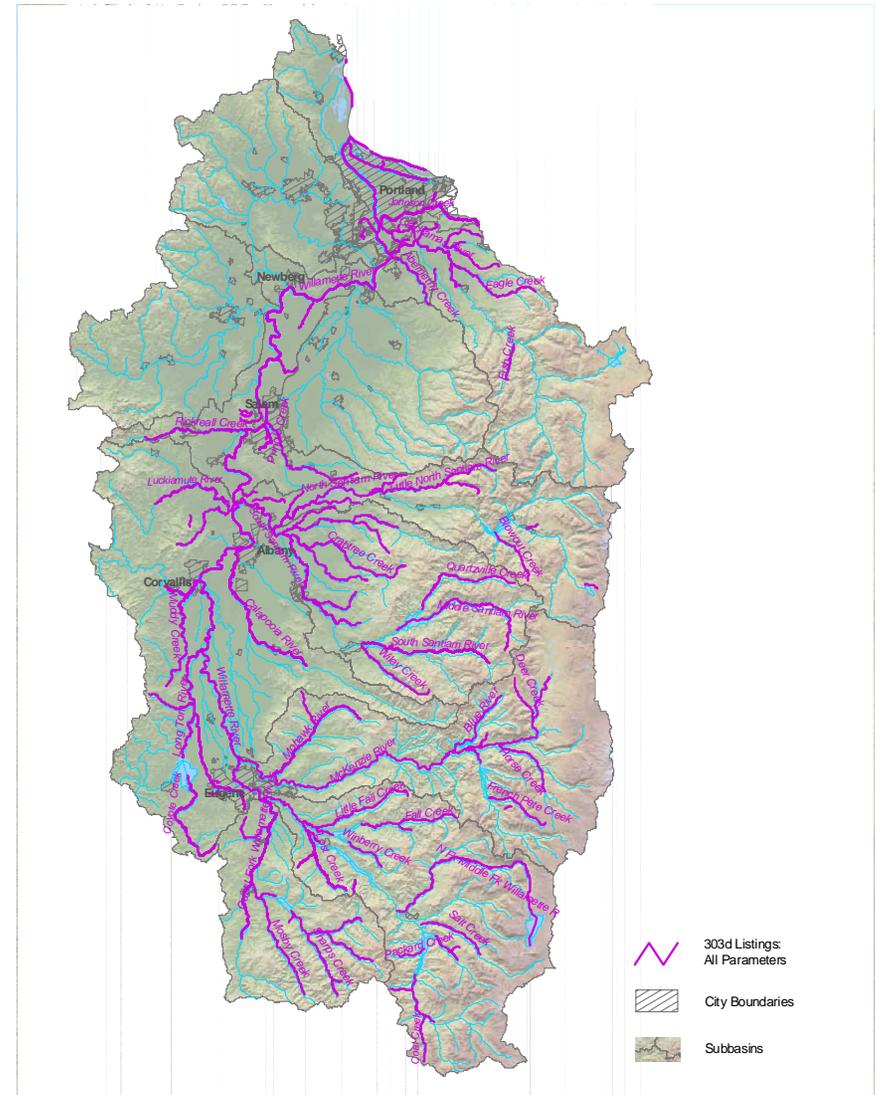
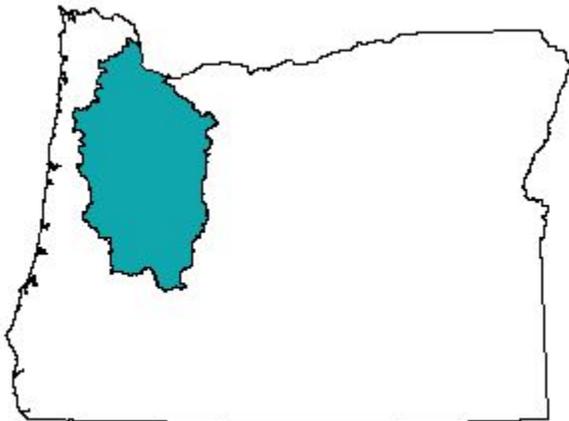
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## Willamette Basin TMDLs

# Willamette Basin Impaired Waters

All 303(d) Listed Parameters in the Willamette Basin

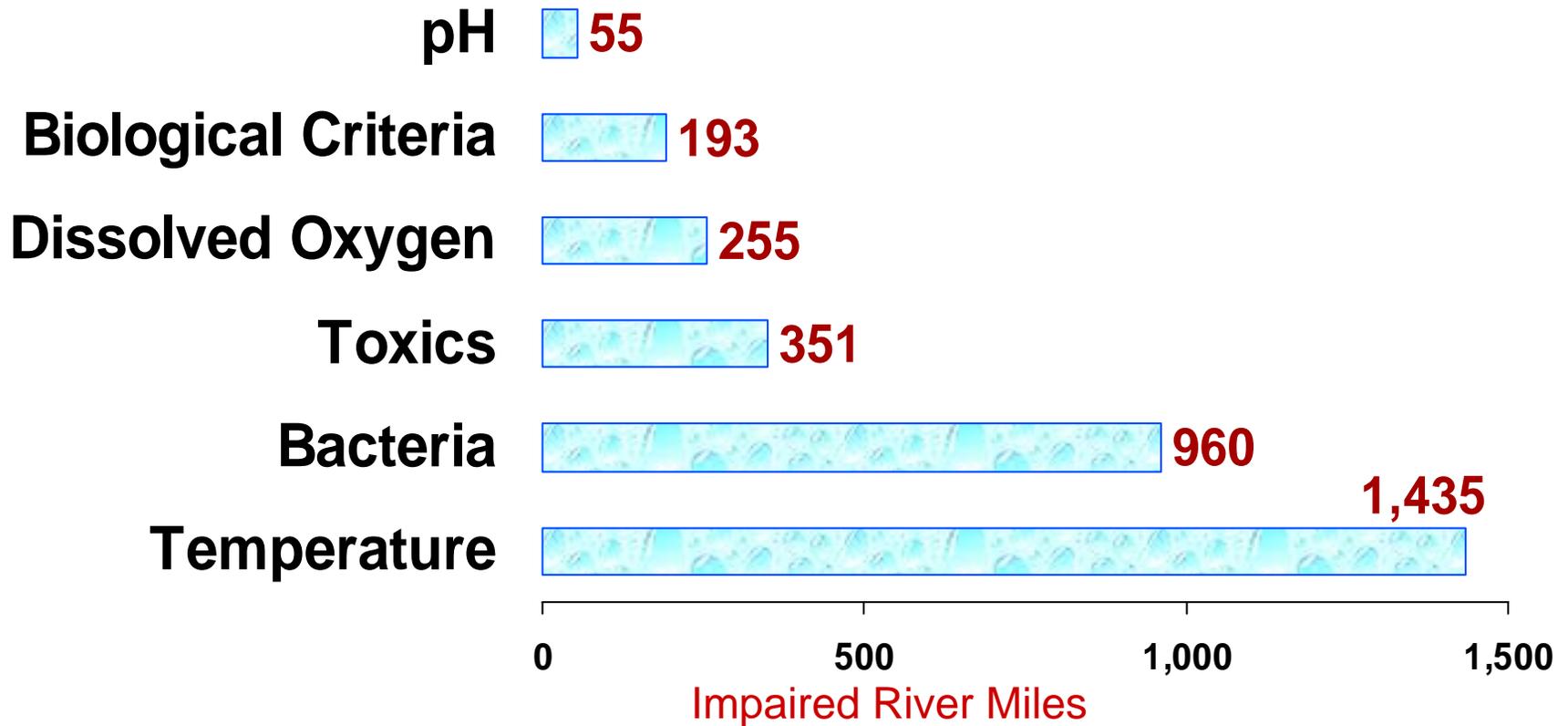




## Willamette Basin TMDLs

# Willamette Basin Impaired Waters\*

\*1998 303(d) List



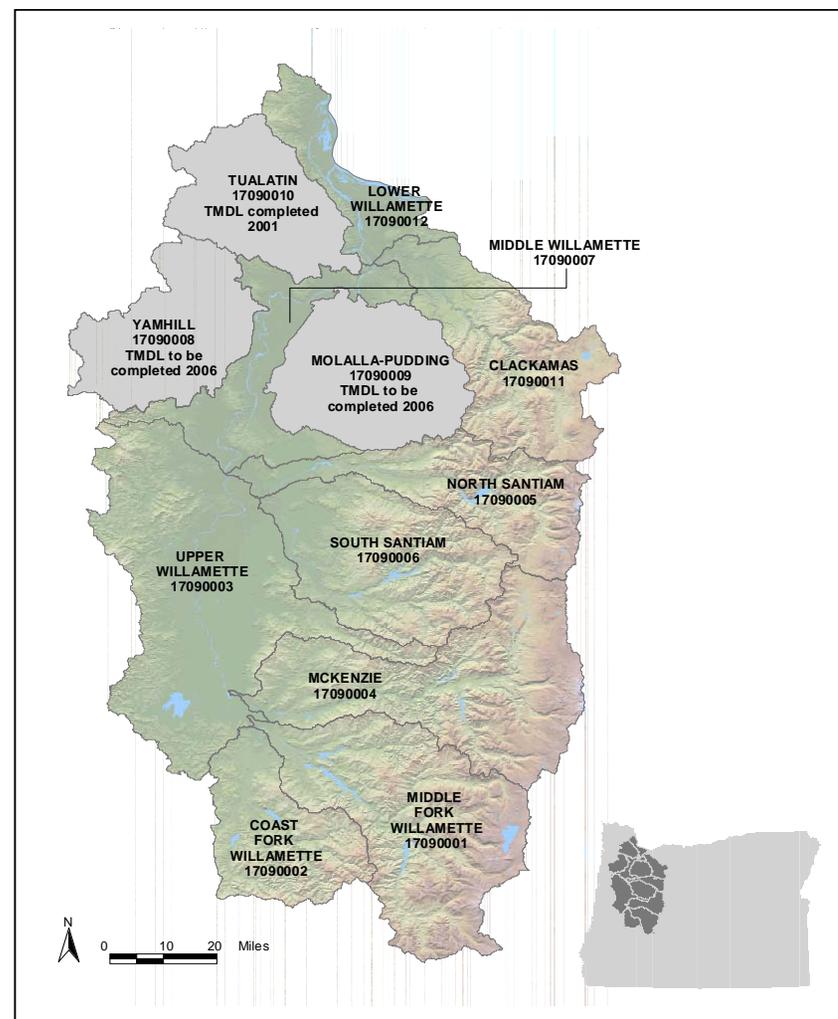
(1,436 miles total, 11% of 13,253 Willamette Basin river miles)



## Willamette Basin TMDLs

# Willamette TMDL Development

- **12 Subbasins**
  - 2001 Tualatin TMDLs established
  - 2006 TMDLs completed for 9 Subbasins
  - 2008 to 2009 Yamhill & Molalla-Pudding TMDLs will be completed
- **TMDL Parameters**
  - Mercury
  - Temperature
  - Bacteria





# 303(d) Listings, Land Use, and TMDL status for Temperature in the Willamette Basin

## Key issue:

- Impacts to cold water fish

## Primary causes:

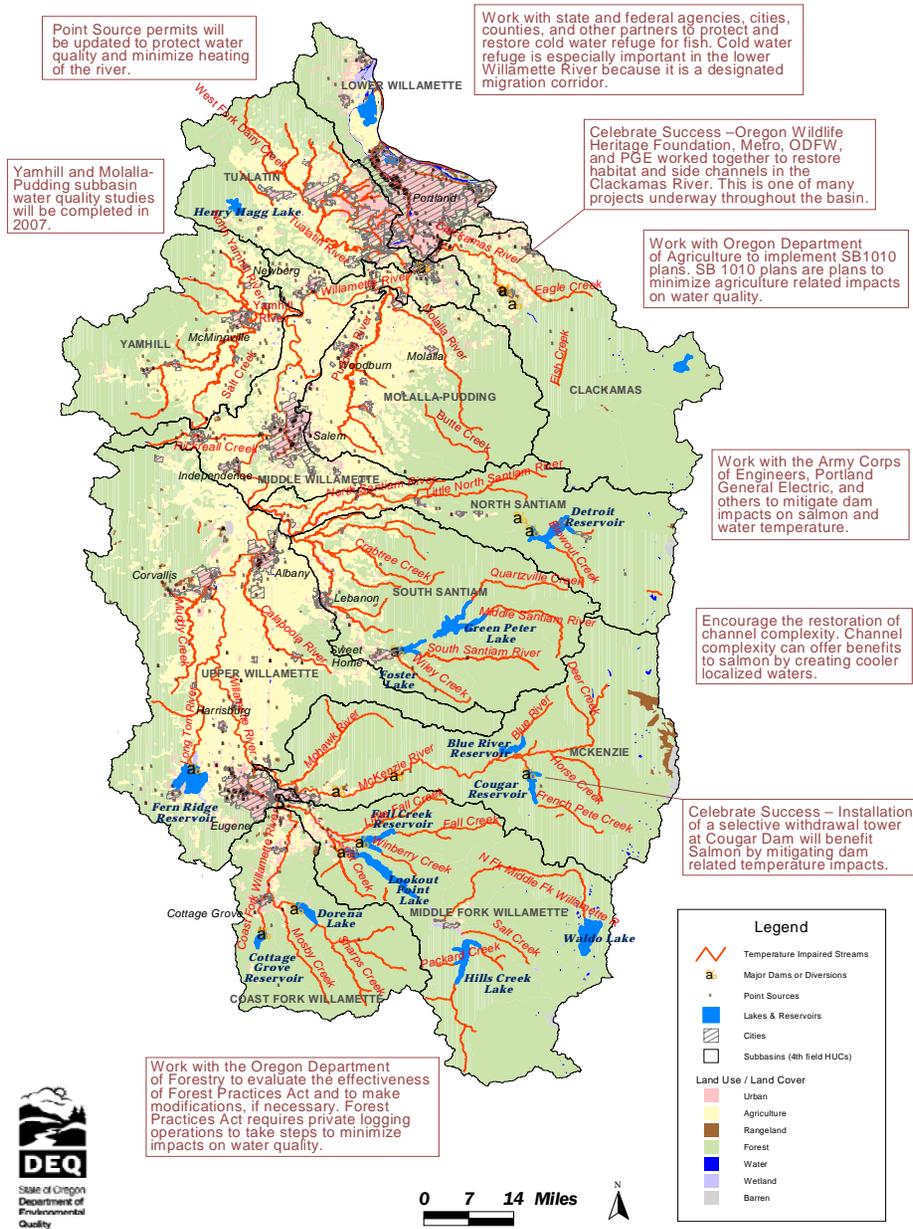
- Loss of shade-producing vegetation
- Reduced summer flows
- Thermal discharges

## Key actions:

- Establishment of shade-producing vegetation
- Reservoir management
- Thermal offsets

## Cleaning Up the Willamette - Temperature

Of the 32 native species of fish in the Willamette Basin, 6 are listed as threatened or endangered - elevated stream temperatures are a factor in their decline. The goal of the temperature Total Maximum Daily Load (TMDL) is to reduce human sources of heating, working with a variety of partners under a regulatory and non-regulatory framework.





# 303(d) Listings, Land Use, and TMDL status for Bacteria in the Willamette Basin

## Key issues:

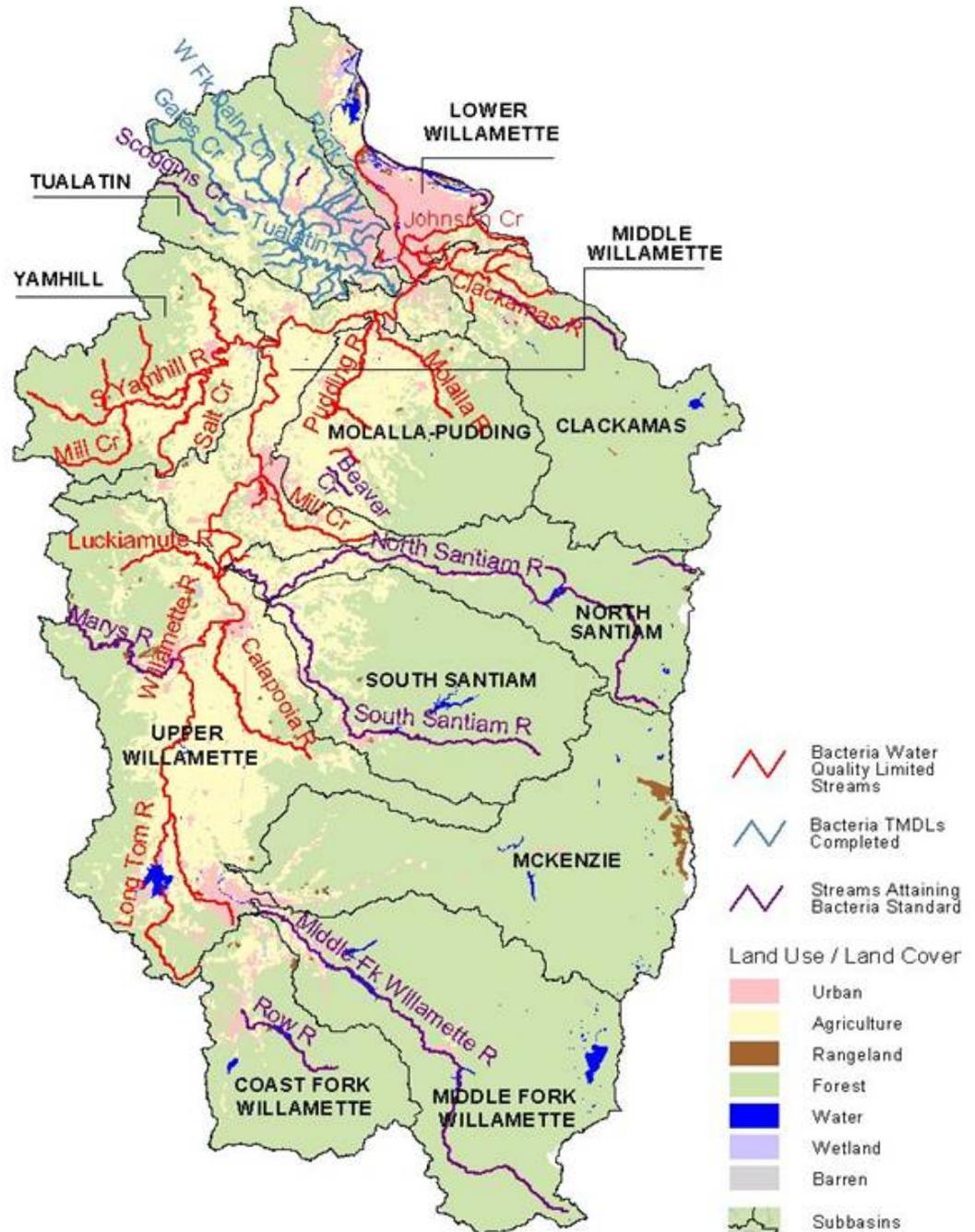
- Water contact recreation
- Ingestion

## Primary causes:

- Stormwater runoff

## Key actions:

- Stormwater permits
- Agricultural reductions
- Eliminate untreated sewage reaching waterbodies





## 303(d) Listings, Land Use, and TMDL status for Mercury in the Willamette Basin

### Key issue:

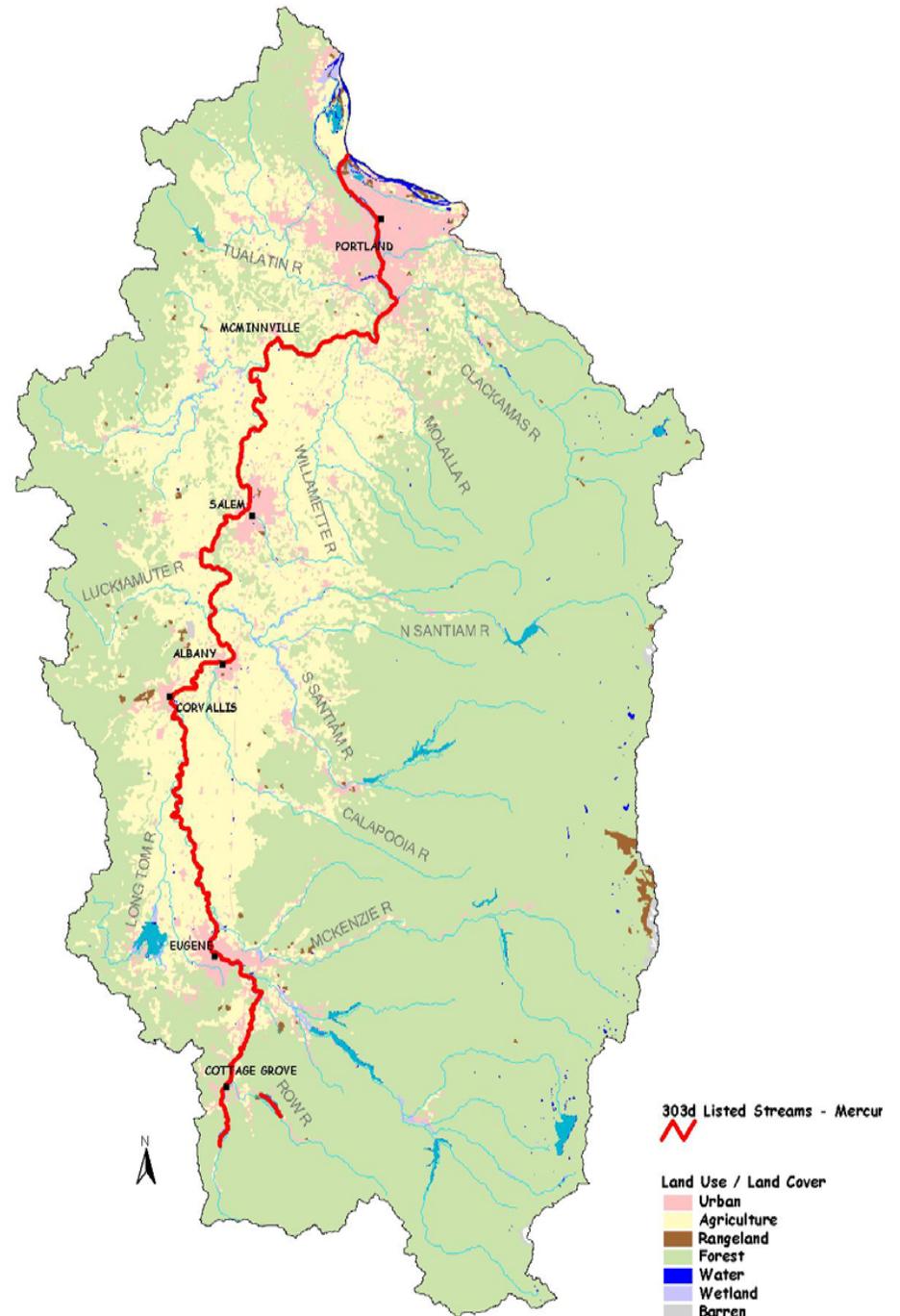
- Fish consumption advisories

### Primary causes:

- Erosion of native soils
- Historic mining
- Atmospheric deposition
- Commercial products

### Key actions:

- Reduce soil erosion
- Monitoring and reporting
- Hg minimization actions
- Update Hg TMDL





## Willamette Basin TMDLs

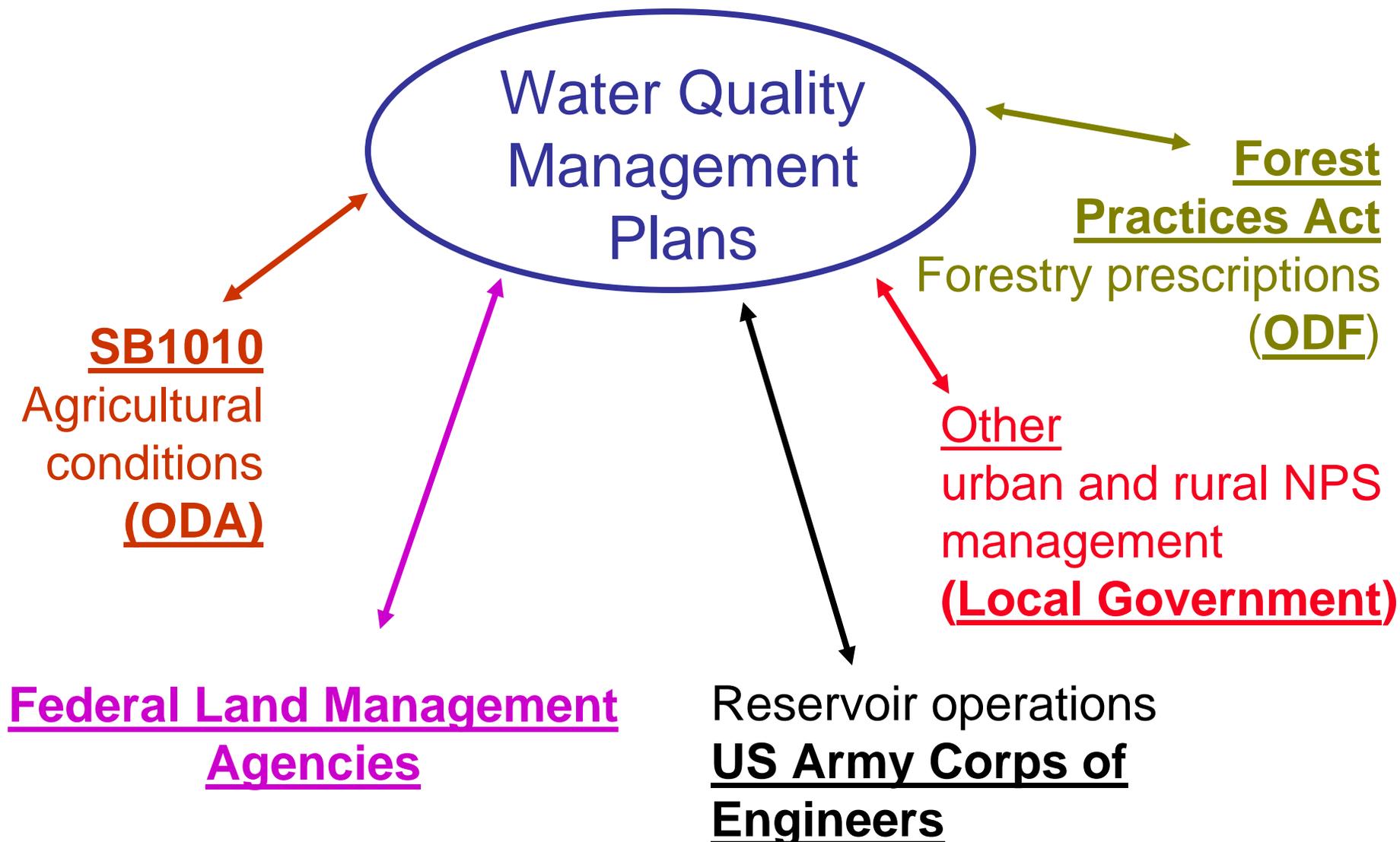
# Willamette – key actions

- Permitted sources
  - Industrial, municipal, stormwater permits
  - revise individual permits on 5 year cycle
  - include revised waste loads in individual permits
- Non-permitted sources
  - implementation plans
  - reliance on best management practices



## Willamette Basin TMDLs

# Non-permitted sources: DMAs





## Willamette Basin TMDLs

# Other efforts underway

- Establishing a water quality trading program for temperature
- Portland Harbor cleanup work
- Black Butte Mine cleanup
- Southern Willamette Groundwater Action Plan
- Willamette toxics monitoring
- Legacy pesticide collection events
- Pesticide Stewardship Partnerships



## Willamette Basin TMDLs

# Pesticide Stewardship Partnerships

### KEY STEPS IN PARTNERSHIP PROJECTS

**Monitor for current use pesticides in surface waters from drift & runoff**



**Identify streams with elevated pesticide concentrations**



**Collaborate to implement voluntary best management practices**



**Follow-up monitoring to determine water quality improvements over time**



## Willamette Basin TMDLs

# Emerging issues

- Emerging contaminants, e.g.
  - Pharmaceuticals
  - Flame retardants
  - Pesticides
- Ecosystem marketplace



## Willamette Basin TMDLs

# Challenges

- Flow management for multiple purposes
- Valuing restoration projects (e.g., creation of cold water refugia, restoring hyporheic flows)
- NPDES permitting issues (e.g., compliance schedule lawsuit, implementation of bacteria criteria)
- Focus effort on nonpoint source work



**Willamette Basin TMDLs**

# **Additional Resources and Information**

<http://www.deq.state.or.us/wq/TMDLs/willamette.htm>