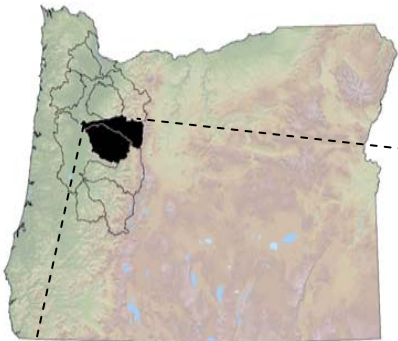



North Santiam and South Santiam Subbasin Water Quality Overview



 303(d) listed waters of the State

Issues

The Oregon Department of Environmental Quality (DEQ) has established TMDLs to address elevated **temperature** and **mercury** levels throughout the North Santiam and South Santiam Subbasins and a planning target has been proposed for **bacteria** in the urban and agricultural areas.

Temperature: Waters in these Subbasins are warmer than is necessary to protect salmonid rearing and spawning. Lack of riparian vegetation and impacts from dams and water withdrawals are the major contributors to high temperatures.

Mercury: The Willamette River has fish consumption advisories due to elevated levels of mercury found in some fish species. The Subbasins will be addressed as part of a basin-wide strategy for mercury. General sources include permitted sources, air deposition, and erosion of soils which contain mercury from natural and anthropogenic sources.

Bacteria: People can become sick if they ingest water that is contaminated with bacteria when they are swimming, recreating or in contact with the water. Both urban and rural/agricultural sources are major contributors to the high bacteria levels.

Other Pollutants of Concern: The Santiam River was added to the 303(d) list in 2002 for dissolved oxygen. DEQ will address this pollutant in future updates of the TMDL. Other concerns in these subbasins include sedimentation, loss of fish habitat and protection of water supplies.

Actions

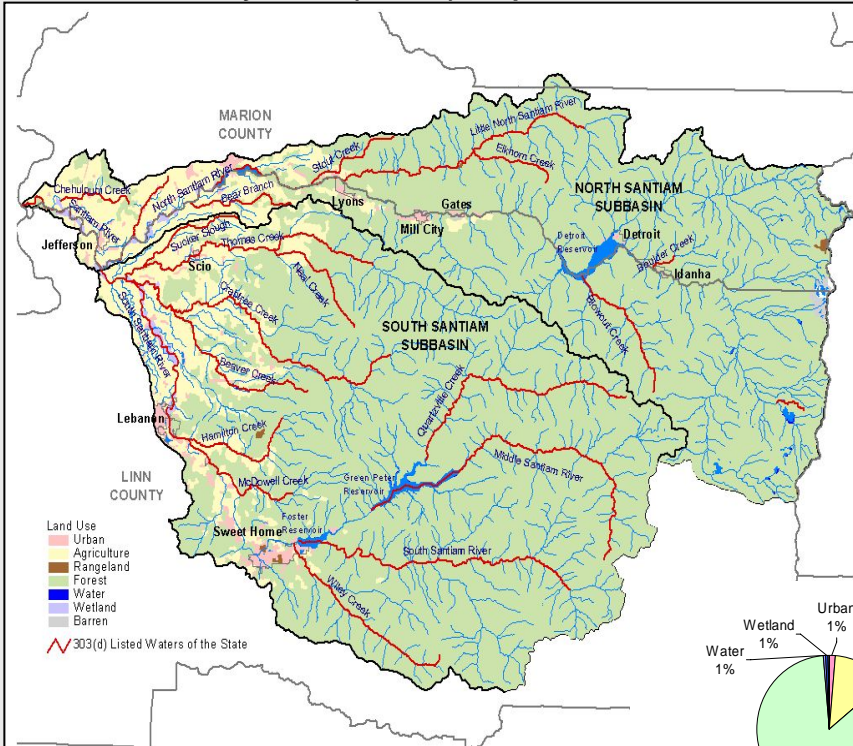
Partners: DEQ has been working with a variety of partners during development of the TMDL and will continue to work with a wide variety of partners for successful TMDL implementation. These partners include the cities, counties, Watershed Councils, local Soil and Water Conservation Districts (SWCDs), Oregon State University, state and federal agencies.

The initial step in successful watershed restoration is implementation planning. Many Watershed Councils have developed or are developing their watershed plans and have started on implementation Initial SB1010 plans for agricultural lands have been developed.

Major DEQ activities include:

- Permitting of waste water discharges, including stormwater;
- Technical and financial assistance for source identification and implementation activities (grant and loan funding);
- Cleanup activities;
- Monitoring activities, to include assistance to volunteer monitoring efforts; and
- Increased direct technical assistance to communities that choose to move beyond the assessments and develop a Drinking Water Protection Plan. Developing a plan facilitates local decision making as the community determines how to protect their own drinking water sources.





Land Use
 Urban
 Agriculture
 Rangeland
 Forest
 Water
 Wetland
 Barren

303(d) Listed Waters of the State

Temperature: Reductions in stream temperature can be achieved by:

- Reducing solar radiation loading by planting riparian vegetation to increase stream-side shading
- Increasing base flow
- Change in Dam operations. Further study of the effects Detroit, Green Peter, and Foster dams have on water temperature and how to mitigate their effects is needed.

Resources are available for temperature improvement implementation and habitat restoration projects:

- Loan and grants to help municipalities, Watershed Councils and SWCDs (example: ODEQ 319 grants)
- SB1010 plan implementation by ODA and SWCDs, and plan implementation by Watershed Councils

Bacteria: While waters in these subbasins did not exceed bacteria standards, small streams that drain primarily urban or agricultural land use often have high bacterial concentrations. Planning reduction targets have been suggested for urban (80-94% reduction) and agricultural areas (66-83% reduction) in the Willamette Basin.

Current actions include:

- Stormwater permits will continue to address bacteria contributions from sources in urban areas.
- ODA and SWCD will manage contributions from agricultural and rural lands under SB1010 plans and CAFO permits.
- Cities and counties will continue to identify and address failing septic systems.
- Municipalities will address inflow and infiltration problems that cause sewage bypasses.

Toxics: A 27% reduction in the load of total mercury is needed in the Willamette Basin.

Mercury will be addressed Willamette basin-wide, activities include:

- DEQ is conducting a point source pilot study for Mercury;
- Selected municipalities and industrial facilities will do monitoring and Mercury minimization planning via permit action letters;
- DEQ will further characterize the load of mercury from major tributaries to the mainstem Willamette River system;
- Erosion control and increased stormwater management activities can decrease the load of mercury entering the Willamette system.

