Tualatin River Subbasin TMDL, Oregon
Oregon Department of Environmental Quality
Approval Date: August 2001

Pollutants: Temperature, bacteria, dissolved oxygen, phosphorus

Scope: **Watershed:** 712 square miles in northwest Oregon
Waters originate in Coast Range and terminate at Willamette River near Portland
Temperature: 19 listed streams
Temperature loading upstream of listed streams contribute to downstream impairments. Therefore all waters are addressed within the TMDL.

Land Use: 49% forestry, 39% agriculture, 12% urban
93% private land, 5% state land, 2% BLM land

Sources: 7% heat load from point sources
49% from removal of riparian vegetation & channel morphology
44% from natural background loading (heat load under site potential conditions)

Assessment: Assessment includes evaluation of historic and current riparian vegetation; channel width; stream aspect, gradient, & elevation; land use; continuous summer temperature & flow data at over 70 sites; and thermal color video imagery of 245 stream miles. 186 stream miles of the Tualatin River and 8 of its tributaries were modeled at a 100 foot resolution.

Allocations: **Point Sources:** Heat Load (kcal/day) assigned based on causing <0.25 degree increase in receiving water temperature after mixing with 1/4 of river flow.
Nonpoint Sources: Allocations based on attaining site potential shade throughout the watershed. Percent shade required dependent upon stream width and natural vegetative conditions.

Implementation:
Point Sources: Allocations being incorporated into NPDES permits. No reduction required by most point sources. Two major sources (POTWs) evaluating flow augmentation from upstream cool reservoir, water exchange with local farmers (effluent applied to land in exchange for farmer leaving water in the stream), and expedited riparian restoration (tree planting) and channel restoration in exchange for increased effluent heat load as alternatives to meet WLA.
Nonpoint Sources: Implementation through Oregon Forest Practices Rules (state and private forest land), agricultural water quality management plans and city/county water quality management plans (urban areas). Each of these have both regulatory and voluntary components. Some are more tailored to needs outlined in the TMDL than others.

What is this TMDL important?
The Tualatin Subbasin is within a rapidly developing area on the outskirts of Portland and provides habitat for two ESA listed salmonids. Due to it's location, the subbasin is also heavily utilized for recreation. Restoration of stream temperatures throughout the basin will enhance habitat for listed salmonids & provide for increased recreational opportunities.