

A Water Quality Trading and Watershed Permitting Example

Clean Water Services, Oregon

Description of the CWS Watershed Permit

Clean Water Services (CWS) operates four wastewater treatment plants discharging in the Tualatin River watershed in Oregon and also implements an MS4 permit with Washington County. The Tualatin River is impaired for dissolved oxygen and temperature. A TMDL was adopted in 1988 that addressed phosphorus and ammonia, and a revised TMDL was issued in 2001 that established wasteload allocations for temperature, in order to protect salmonid rearing.



In 2005, the Oregon Department of Environmental Quality issued CWS an NPDES permit that combined the separate permits for the wastewater treatment plants and the MS4 permit into one permit. Trading provisions are included in the permit for two parameters: dissolved oxygen (DO), and temperature. For DO, CWS' two largest WWTPs essentially now have a single combined wasteload allocation for the discharge of oxygen-demanding substances—carbonaceous biochemical oxygen demand (CBOD), which is exerted mostly by biodegradable organic matter, and nitrogenous oxygen demand (NOD), which is mostly ammonia. Without the combined permit, the plants would have separate allocations that would both have to be met. Trading between the wastewater treatment plant loadings and the stormwater loadings is not provided for in the permit.

The goal of the temperature trading program is to achieve instream warm-weather temperature standards without having to install expensive refrigeration units at the treatment plants. Under the permit, CWS will provide the Oregon DEQ with a Thermal Load Credit Trading Plan. CWS can create temperature credits by providing more shade in the watershed through tree and shrub plantings, augmenting river flow, and optimizing temperature controls between the two plants.

Summary of Watershed Permit Features

- Combines four NPDES and one MS4 into one permit
- Establishes authority for water quality credit trading to implement TMDLs: DO and temperature
- Spells out DO trading plan in the permit
- Lays out basics of temperature trading in permit, to be followed by more detail in a Temperature Credit Trading Plan

Benefits of the Watershed Permit

The watershed permit provides CWS with greater flexibility in prioritizing capital investments to fulfill its watershed stewardship goals. Without the watershed permit, capital investments would have to be made in accordance with the requirements of the individual permits. With the watershed permit, capital projects can be prioritized based on broader watershed objectives, specific priorities, and environmental return on the investment. In addition, the watershed permit will foster the integration of trading options into the capital improvement planning process, and help implement viable trades.

For more information, see <http://www.deq.state.or.us/wq/wqpermit/indvpermitdocs.htm>