

Total Maximum Daily Loads (TMDLs), Surrogates, and Stormwater



Stormwater and TMDLs

A TMDL must include pollutant reduction targets for stormwater sources. This target, or wasteload allocation, limits the amount of pollutants a stormwater source is allowed to discharge to surface water. Stormwater runoff is generally not treated, and transports toxic chemicals, nutrients, and bacteria to surface waters when it rains. Water quality impairments caused by stormwater are the result of a combination of factors, including stormwater flow volume, flow duration, scouring caused by high flows, and the pollutants contained in the runoff. For this reason, it is logical to use surrogate indicators when developing wasteload allocations for stormwater.

How are surrogates used in TMDLs?

Surrogate measures are used for TMDL allocations when—

- The direct pollutant is too expensive or too difficult to measure, **or**
- When the impairment is caused by a combination of factors, as with stormwater, **AND** there is a direct correlation between the surrogate and the pollution problem.

Surrogate measures are either indirect pollutant targets (e.g. measuring total suspended solids as an indication of the concentration of copper or mercury) or as an “other appropriate measure” (e.g. an effective shade target to shade and cool a stream).

The Department of Ecology may establish a wasteload allocation that uses stormwater flow as a surrogate measure to address biological impairments as defined in the surface water quality standards

The report of the Federal Advisory Committee on the TMDL Program (EPA #100-R-98-006, 1998) includes the following guidance on the use of surrogate measures for TMDL development:

When the impairment is tied to a pollutant for which a numeric criterion is not possible, or where the impairment is identified but cannot be attributed to a single traditional “pollutant,” the state should try to identify another (surrogate) environmental indicator that can be used to develop a quantified TMDL, using numeric analytical techniques where they are available, and best professional judgment where they are not.

When a TMDL uses a surrogate indicator for either a load allocation or a wasteload allocation, the TMDL must make a narrative link between the surrogate indicator and the designated use that is impaired. The TMDL must also demonstrate a link between the surrogate indicator and the pollution source, and how the wasteload allocation and surrogate indicator will restore and protect the river or lake's designated uses.

There should also be additional post-implementation verification that attainment of the surrogate indicator results in elimination of the impairment. If the impairment is not eliminated, a procedure should be in place to modify the surrogate indicator or to select a different or additional surrogate and to impose additional remedial measures to eliminate the impairment.

Does the Accotink decision affect Ecology's authority to establish wasteload allocations using stormwater flow?

On January 3, 2013, the United States District Court for the Eastern District of Virginia issued its decision in *Virginia Department of Transportation, et al. v. United States Environmental Protection Agency*, vacating a total maximum daily load (TMDL) established by EPA for Accotink Creek in Virginia. That decision raised some questions as to how it may affect development of stormwater-based water cleanup plans (also known as total maximum daily loads, or TMDLs) in Washington State.

The Accotink decision applies only in the Eastern district of Virginia, it does not apply to the use of stormwater flow surrogates by Ecology for TMDL pollutant allocations when following guidance established by the EPA and as authorized by the federal Clean Water Act and the state Water Pollution Control Act. Ecology has successfully used surrogate measures for TMDLs in the past and will continue to use them where appropriate to establish meaningful and achievable water cleanup targets.