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## **Water Quality Impact - TMDL**

### **Background**

Over the years, the quality of U.S. water bodies has been impaired by pollutants from a variety of sources. United States Environmental Protection Agency (EPA) has implemented a pollution reduction program under the Clean Water Act by establishing pollution limits for water and wastewater dischargers.

In order to quantify the contamination levels on water bodies, a value of maximum amount of an impairing substance that a body of water can receive and still meet water quality standards established. This value is known as the Total Maximum Daily Load (TMDL).

Section 303(d) of the Clean Water Act (CWA) requires *“states to submit lists of surface waters that do not meet applicable water quality standards (impaired waters) after implementation of technology-based effluent limitations, and establish TMDLs for these waters on a prioritized schedule.”*

### **TMDL Quantification**

TMDL was created to improve the quality of impaired waters. The TMDL takes into account the potential sources of pollutants, including factors associated with uncertain effluent limitations and water quality, future growth and seasonal variations. The following equation describes how TMDLs can be quantified:

$$\text{TMDL} = \text{WLA} + \text{LA} + \text{MOS}$$

Where:

WLA= Point Sources Waste Load Allocation.

LA= Non-point sources Load Allocation.

MOS= Margin of Safety considering a seasonal variation factor.

EPA evaluates and approves TMDL programs submitted by the states, making sure they comply with regulations. Primacy states have the primary authority to develop adequate procedures and regulations to manage TMDL programs based on national requirements. In Nonprimacy states EPA implements the TMDL's for public water systems.

## **Conclusion**

The TMDL programs have resulted in improve water quality in impaired water bodies as required by the Clean Water Act on its Section 303d. Stormwater related TMDL's requirements can be achieved by the use pollution control devices such as hydrodynamic separators and filters and other BMP's. BaySaver Technologies helps stormwater professionals meet their TMDL and pollution removal requirements and contributes in maintaining a healthy environment of water bodies for the use and recreation of communities.

Paola Rodriguez  
Applications Engineer  
**B A Y S A V E R** TECHNOLOGIES, Inc.  
Engineering Stormwater Solutions

## Reference:

1. U.S. EPA NPDES Permit Writer's Manual
2. "Code of Federal Regulations" § 130.7. Revised as of July 1, 2004.
3. "Summaries of Environmental Laws Administered by the EPA".  
Congressional Research Service Report RL30022
4. Safe Drinking Water Act, 1974, as amended in 1996.