

## What exactly is a TMDL?

Simply put, a TMDL is a pollutant budget. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive from human-caused sources and still meet water quality standards. This budget is expressed in terms of loads: the amounts of pollutants added to a water body during a given time or per a volume of water. For example, a load allocation to a water body might be 5 kilograms of phosphorus per day from a given source.

A TMDL budget takes into account loads from point, nonpoint, and natural background sources. The load assigned to point sources is called a wasteload allocation (WLA); the load assigned to nonpoint sources is called a load allocation (LA). The budget is balanced at the point where water quality standards are just being met and is allocated among all the various sources. Like keeping money in the bank for a rainy day, some of the budget is set aside as a margin of safety. And, like cash flow in a business, the pollution budget must take into account the seasonal or cyclic nature of pollutant loads and the receiving water's capacity, so a temporary exceedance does not occur.

**The TMDL budget can be summarized as:**

**Load capacity (LC) = margin of safety (MOS) + natural background (NB) + allocations to pollutant sources (WLA and LA) = TMDL**

The equation is written in this order because it represents the logical order in which a TMDL is developed. First the load capacity is determined. The load capacity is the quantity of a pollutant a water body can receive over a given period without causing violations of state water quality standards. Then the load capacity is broken down into its components. First, a margin of safety is determined and subtracted; then natural background, if relevant, is quantified and subtracted; and then the remainder is allocated among pollutant sources. When the breakdown and allocation are completed, the result is a TMDL, which must equal the load capacity.

In addition to being a pollutant load, "TMDL" also refers to the written, quantitative assessment of water quality problems and contributing pollutant sources. DEQ has the authority and the responsibility to ensure that TMDLs are completed and submitted for EPA approval. On tribal lands, the EPA is likely to lead TMDL efforts with considerable help from the state, the tribes, and other agencies. The EPA has the responsibility to approve or disapprove all TMDLs. If the EPA formally disapproves a state TMDL, it is obligated under the Clean Water Act to issue a new TMDL within 30 days.



DEQ Webpage: <http://www.deq.idaho.gov/>