

Improving Water Quality with Total Maximum Daily Loads

A Watershed Approach

By looking at a *watershed*—the geographic area that drains to a common body of water—the TCEQ can evaluate the sources of pollution that may be affecting water quality. This watershed approach is used to:

- identify water quality problems and issues
- establish statewide, regional, and local priorities
- develop community-based solutions
- cooperate with local stakeholders to implement those solutions

The watershed approach is based on four basic principles:

- geographic focus based on hydrology rather than political boundaries
- objectives for water quality based on scientific data
- coordinated priorities and integrated solutions
- diverse, well-integrated partnerships

These principles guide all activities of the TCEQ's water quality programs. They provide the framework for coordinating resources, people, and activities to achieve the state's goals for clean water.

Total Maximum Daily Loads and Implementation Plans

TMDLs and their I-Plans are developed to address impaired segments on the state's 303(d) list. Area residents develop the I-Plan to achieve the loading allocations defined in the TMDL.

Total Maximum Daily Loads

One way to determine the sources and causes of pollution is to develop a scientific allocation called a *total maximum daily load*. A TMDL:

- determines the maximum amount of a pollutant that a segment can receive and still both attain and maintain its water quality standards; and
- allocates this allowable amount (load) to point and nonpoint sources in the watershed.

TMDLs must be submitted to the USEPA for review and approval. A TMDL is normally prepared for one pollutant in each impaired segment. This may mean that several TMDLs are developed for one river or lake.

Implementation Plans

The *TMDL I-Plan* describes the activities necessary to improve water quality, using the TMDL as its scientific basis. Management activities in the I-Plan incorporate both regulatory and non-regulatory mechanisms, such as permit effluent limits and

recommendations, watershed-specific rule recommendations, proposed revisions to stream standards, nonpoint source pollution management practices, special projects, pollution prevention, and public education.

A Joint Effort—Stakeholder Involvement

We believe the best decisions are made by people closest to the source. Who better to be involved in cleaning up local water bodies than those who have lived or worked in the area, who know it, who have raised their families there, and who care about their future? We call these people stakeholders. They are individuals, organizations, and communities. They represent government, agriculture, business, environmental and community groups, and themselves. A coalition of government agencies and citizens is necessary to develop and implement water quality protection and restoration strategies.