

## A Water Quality Trading and Watershed Permitting Example

### *Lake Lewisville, Texas*

#### **Description**

The Lake Lewisville project involves the development of a long-term plan to develop and implement a water-quality credit trading demonstration project.

Lake Lewisville serves multiple uses and is currently managed under separate regulatory programs implemented by 25 communities located around the lake. The Lake is a major drinking water source, providing about 110 million gallons per day (mgd). By 2020, demand will be almost 200 mgd.

The Lake receives discharges from wastewater treatment plants in the area, approximately 27 mgd in 1999 from plants totaling over 40 mgd in design capacity. Stormwater runoff also impacts the lake, both from Phase 2 communities and from rural sources. As a result of sediment loadings to Lake Lewisville, it is losing storage volume.

A local partnership was formed and is currently investigating whether a trading program could help create incentives for action and whether a watershed permit could help implement a cooperative, cost-effective solution for sediment management. In this watershed, one or more watershed permits could be used to support integrating major programs for broader benefits.

#### **Study Approach**

The project is using the Watershed Stewardship Action Strategy, a formalized six-step process developed by CH2M HILL. It is comprised of the following steps:

- Visioning
- Watershed Allocation for Pollutants
- Cost-Effectiveness Analysis
- Optimal Management Practices Mix
- Trading Options
- Institutional Development

For the Lake Lewisville project, these steps have been translated into a Trading Pilot Framework comprised of three phases – Pilot Development, Beta Market, and Full Market. The project is in the first phase. The following goals and objectives were adopted for the first year of the study:

- Conduct preliminary needs analysis for trading
- Determine stakeholder level of interest and willingness to participate
- Determine economic basis for trading
- Determine water quality basis for trading
- Determine opportunities to create tradable credits
- Determine alternative processes and mechanisms to execute trades
- Determine the benefits of a trading option

