

Upcoming Lower San Pedro River Total Maximum Daily Load

WHAT IS A TOTAL MAXIMUM DAILY LOAD?

The Arizona Department of Environmental Quality intends to perform a TMDL study for the lower San Pedro River. Total Maximum Daily Load (TMDL) is a term used to describe the amount of a pollutant that a stream or lake can receive and still meet water quality standards. A TMDL study identifies sources of pollution and potential reductions needed to attain standards. **Point sources** (such as municipal or industrial discharges) and **nonpoint sources** (such as runoff from urban or agricultural lands, and natural background) are considered in calculating the TMDL. The study must also account for seasonal variation and include a margin of safety.

WHY DO WE PREPARE A TMDL?

The objective of the federal Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. To fulfill this objective, states assess their surface waters and identify which waters do not meet state surface water quality standards. A TMDL must be completed for each pollutant "impairing" (or not meeting surface water quality standards) these waterbodies.

TMDL STUDY AND IMPLEMENTATION

The TMDL study will examine the source(s) and the extent of the water quality impairment, providing the appropriate information necessary for planning implementation actions designed to achieve surface water quality standards. Whereas the TMDL study establishes a pollution budget for an impaired surface water, the accompanying TMDL implementation plan provides an action plan outlining the affordable, efficient, and effective alternatives to restore water quality.

During both the TMDL study and implementation planning processes, the Arizona Department of

Environmental Quality (ADEQ) involves stakeholders by coordinating public meetings and encouraging comments and input. Additionally, ADEQ will help stakeholders identify funding sources (such as Water Quality Improvement Grants) that can help pay for water quality improvements.

LOWER SAN PEDRO RIVER TMDL BACKGROUND

The San Pedro River begins in the mountains near Cananea, Sonora, Mexico and flows north more than 150 miles through the southeast corner of Arizona to join the Gila River near Winkelman, Arizona. The current surface water quality standards developed for the lower San Pedro River segment considered in this document are intended to protect the river's designated uses: aquatic and wildlife (warm water), full body contact, agricultural livestock and fish consumption.

Assessment of data sampled in the lower San Pedro River in Pinal county between Winkelman and Mammoth has determined that pollutant concentrations exceed surface water quality standards. One stream reach of the lower San Pedro has been listed on Arizona's 2004 List of Impaired Waters due to exceedances of selenium and *Escherichia coli* (*E. coli*). A TMDL study will analyze these impairments associated with the listed segment from Aravaipa Creek to the confluence with the Gila River.

The San Pedro River has historically been perennial, flowing continuously throughout the year in many places as a result of groundwater discharge; however increasing population and drought conditions have depleted groundwater resources resulting in lower perennial flow in places and spatially intermittent flow in other locations. Many reaches along the river flow seasonally in response to climatic and water use variables. Most other drainages to the river are ephemeral, flowing only in direct response to precipitation.

FOR MORE INFORMATION

ADEQ encourages interest and involvement in the lower San Pedro River TMDL study. For more information on TMDL studies, please refer to the ADEQ Web site: www.azdeq.gov/environ/water/assessment/tmdl.html

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