

## Little Colorado River Total Maximum Daily Load

### WHAT IS A TMDL STUDY?

The Arizona Department of Environmental Quality intends to perform a TMDL study for the Little Colorado 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, 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.

### FOR MORE INFORMATION

ADEQ encourages public involvement in the Little Colorado River TMDL study. For more information on TMDL studies, please refer to the ADEQ Web site: [www.azdeq.gov/environ/water/assessment/tmdl.html](http://www.azdeq.gov/environ/water/assessment/tmdl.html)

### LITTLE COLORADO RIVER TMDL BACKGROUND

The Little Colorado River begins in the White Mountains of eastern Arizona and western New Mexico and flows approximately 356 miles northwest to its confluence with the Colorado River. The current surface water quality standards developed for the Little Colorado River segments considered in this document are intended to protect the River's designated uses: domestic water source, aquatic and wildlife (cold water), full body contact, fish consumption, agricultural livestock and irrigation.

The 2004 305(b) Assessment Report concluded that two stream reaches in the Little Colorado River did not meet surface water quality standards. These two reaches were listed on Arizona's 2004 303(d) List of Impaired Waters and TMDL studies have been initiated to analyze the impairments. A TMDL on a 6 mile reach of the Little Colorado River from Silver Creek (north of Snowflake) to Carr Wash will concentrate on exceedances in *Escherichia coli* (*E. coli*) and suspended sediment. Concurrently, a 17 mile reach between Porter Tank Draw (west of Holbrook) and McDonalds Wash will be examined for copper, silver, and suspended sediment exceedances.

The Little Colorado River is generally perennial upstream and ephemeral downstream from Joseph City, Arizona. Flow has steadily decreased in the last 100 years because of the construction of dams in the upper basin, which created lakes for recreation and provided storage for irrigation diversions. Some reaches along the river are intermittent flowing seasonally in response to climatic and water use variables. Most other drainages to the river are ephemeral, flowing only in direct response to precipitation.

### ADEQ CONTACTS:

TMDL Program: (602) 771-4468

Little Colorado River TMDL: (602) 771-4546

TMDL Implementation: (602) 771-4243

Clean Lakes Program: (602) 771-4541

Water Quality Improvement Grant Program: (602) 771- 4635