WHAT IS A TMDL STUDY?

The Arizona Department of Environmental Quality intends to perform a TMDL study for the upper Gila 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.

UPPER GILA RIVER TMDL BACKGROUND

The Gila River begins in the Gila Mountains of southwestern New Mexico. The upper portion of the Gila River in Arizona begins at the New Mexico border and flows west about 140 miles through the San Carlos Indian Reservation to the Coolidge Dam near Peridot, Arizona. The San Francisco River joins the upper Gila River about 20 miles west of the New Mexico border. The current surface water quality standards developed for the upper Gila River segments considered in this document are intended to protect the River’s designated uses: aquatic and wildlife (warm water), full body contact, fish consumption, agricultural livestock and irrigation.

The 2004 305(b) Assessment Report concluded that two stream reaches in the upper Gila River did not meet surface water quality standards for selenium, E. coli and suspended sediment. The two reaches have been listed on Arizona’s 2004 303(d) List of Impaired Waters and TMDL studies have been initiated to analyze the impairments. The TMDL study on the upper Gila River will reach from Cottonwood Creek for 15 miles to the confluence with the San Francisco River and will concentrate on exceedances in selenium. Concurrently, the reach from Yuma Wash for 6 miles to Bonita Creek (northeast of Safford) will be examined for Escherichia coli (E. coli) and suspended sediment exceedances.

The upper Gila River is perennial in the Gila Box National Riparian Conservation Area and best characterized as intermittent elsewhere in the watershed. Lower perennial flow has been observed within the upper Gila River and may be a result of continued drought conditions. Additional sources of perennial flow include the lower reaches of the San Francisco River and Bonita Creek. Most other reaches along the river are intermittent flowing seasonally in response to climatic and water use variables.

FOR MORE INFORMATION

ADEQ encourages interest and involvement in the Upper Gila 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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