

A watershed blueprint

PARTNERS WORK TOGETHER TO RESTORE ARROYO COLORADO'S HEALTH

In 2002 the Texas Commission on Environmental Quality (TCEQ) set a target of 90 percent reduction of nutrients and biochemical oxygen demand for the Arroyo Colorado to regain its healthy condition.

Eight years later, the Arroyo Colorado, an ancient channel of the Rio Grande in the Lower Rio Grande Valley, has been the focus of multiple projects; educational and outreach efforts; and collaborations between local, state, and federal governmental agencies to help restore the watershed.

To guide these efforts, the Arroyo Colorado Watershed Partnership (ACWP) was established in 2003. The partnership is made up of more than 700 people, representing federal, state, and private organizations, who work to improve watershed health, integrate watershed management, and seek out watershed project funding. The Texas Water Resources Institute (TWRI) administers the partnership in cooperation with TCEQ and the Texas State Soil and Water Conservation Board (TSSWCB). In 2007 the partnership published one of the first watershed protection plans

(WPPs) in the state. The plan is a blueprint for restoring the health of the Arroyo Colorado.

“There has been much progress toward protecting the Arroyo Colorado Watershed,” said Jaime Flores, the watershed coordinator. “And we have been successful in garnering local support from volunteers as well as through collaborative events and projects.”

Although winding just 90 miles from Mission to the Lower Laguna Madre, the Arroyo Colorado is essential to the Valley, Flores said. It helps control flooding and drainage, carries commercial barges from the Port of Harlingen to the Laguna Madre, and provides recreation. And it is a sanctuary for rare and endangered birds. Water flow in the Arroyo Colorado comes from treated wastewater, urban stormwater runoff, irrigation return flows, and base flows from shallow groundwater.

In 2007 TWRI began managing the WPP implementation project, along with other Arroyo Colorado projects. To date, TWRI has submitted or helped with 34 grant proposals involved in protecting the arroyo.

TWRI is currently coordinating six projects directed toward carrying out the WPP and restoring the arroyo. In addition to the implementation project, other projects monitor agricultural runoff to evaluate effects of implementing best management practices; educate farmers on integrated farm management systems and turf producers on nutrient, pesticide, and irrigation management; and construct a wetland to remove nutrients from the Port of Harlingen. TWRI is also producing public service announcements that educate farmers and urban residents on local water quality issues. Funding for these projects is from TCEQ, TSSWCB, the Texas General Land Office, and the U.S. Environmental Protection Agency (EPA).

“All these projects play an integral part of the implementation of the watershed protection plan and are working together for the benefit of the Arroyo Colorado, its environment, and the surrounding communities,” Flores said.

Education and outreach are important components of the WPP. Flores has given more



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JAIME FLORES WORKS WITH THE ARROYO COLORADO WATERSHED PARTNERSHIP TO IMPLEMENT THE WATERSHED PROTECTION PLAN.

than 100 presentations to youth and other organizations. More than 23,700 individuals have viewed the physical watershed demonstration model, which educates people about the watershed; the geography of Cameron, Hidalgo, and Willacy counties; and nonpoint source pollution and how it occurs. The Nueces River Authority funded the construction of the model through the Clean Rivers Program.

The ACWP and member cities of the Lower Rio Grande Valley Texas Pollutant Discharge Elimination System Storm Water Task Force have installed more than 1,000 storm drain markers throughout the Valley.

“The storm drain markers, reading ‘No Dumping, Drains to Laguna Madre,’ remind citizens not to dump their waste or trash directly into a storm drain or anywhere that the waste will end up in the storm drains,” Flores said.

“The partnership and local cities have also installed some 40 road signs marking Arroyo Colorado crossings or the boundary of the Arroyo Colorado Watershed,” he said. “The storm drain markers and road signs are part of the partnership’s ongoing efforts to restore and protect the watershed.”

A recently finished project, *Education of Best Management Practices in the Arroyo Colorado Watershed*, was successful in promoting programs associated with the WPP, including nutrient management, cost-share programs, and a soil-testing campaign, Flores said. More than 6,200 individuals were educated through this project, and more than 3,310 soil samples, representing more than 100,000 acres, were collected during the annual soil-testing campaigns. Projected fertilizer savings based on soil tests were an estimated 3.3 million pounds of nitrogen and 3.8 million pounds of phosphorus, compared to rates

planned before testing. The soil-testing project won a Texas Environmental Excellence Award in Agriculture for its success.

One of the plan’s top recommendations is to construct wetlands for treatment of point source and nonpoint source pollution. Wetlands serve as a habitat for fish and other aquatic animals, stabilize streambeds and banks, and filter and process wastewater contaminants in the water.

TCEQ and EPA fund a three-city wetland project as part of a Clean Water Act grant. “The city of San Juan opened its 7.5-acre wetland this year on Earth Day, the city of La Feria opened its wetland in December 2009, and San Benito should break ground later this year on a 20-acre wetland, all part of the actions recommended by the watershed protection plan,” Flores said.

For more information, visit the website at arroyocolorado.org.