Fall 2005

Newsletter

Tres Rios del Norte Feasibility Study

US Army Corps of Engineers®

Pima County Regional FLOOD CONTROL DISTRICT

TOWN OF MARANA 1977 ARIZONA

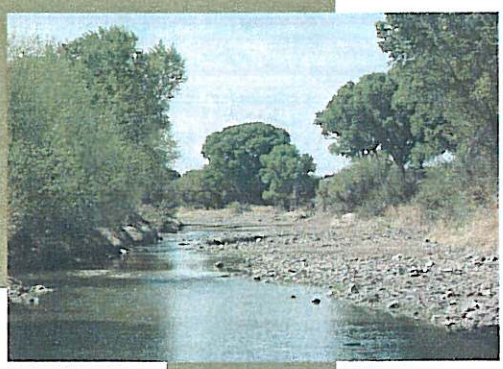
CITY OF TUCSON FOUNDED 1775

Water is a limited resource in the desert southwest. For a secure and sustainable water future, we must make decisions about how to best use the resources we have available. Tres Rios del Norte is a river restoration project that considers all aspects of water resource planning for the future.

The United States Army Corps of Engineers, the Town of Marana, the Pima County Regional Flood Control District, and the City of Tucson are working together to try to improve a portion of the Santa Cruz River by enhancing riparian habitat for native species.

The Santa Cruz River is an oasis for desert life. The land area contained in the river channels and along riverbanks is called riparian habitat. For nearly seventy years, groundwater pumped for use by towns, agriculture and mining has steadily taken more water out of the underground aquifer than nature can replace, and as a result, the quantity and quality our riparian areas have declined.

The loss of riparian habitat causes the loss of biodiversity, which is defined as both the number of different species of plants and animals, as well as the total number of plants and animals in these areas. Such loss also diminishes our quality of life because of the loss of the aesthetic quality of the riparian areas. Tres Rios del Norte is a step toward recovering some of what has been lost and conserving it for future generations . Planning for future water resource use and the future of the rivers is an effort that requires local coordination and cooperation.



The Tres Rios project area includes the Santa Cruz River from Prince Road to Sanders Road and its junction with the Rillito Creek and the Canada del Oro Wash.

The goals of Tres Rios are to contribute to:

- Reclamation and restoration of habitat
- Flood control
- Recreation and the protection of cultural resources
- Water supply improvements and management

The photos on this page show riparian habitat along the San Pedro River in southeastern Arizona. These photographs portray the conditions and character of a healthier, more natural river habitat that will serve as a model to improve the Santa Cruz River habitat.

Partnering with the Army Corps

The local sponsors, the Town of Marana, the City of Tucson, and the Pima County Regional Flood Control District, have entered into a partnership with the U.S. Army Corps of Engineers to take advantage of the opportunities created by the substantial financial and technical support that the Corps can provide.

The Corps of Engineers is authorized to provide assistance to States, Tribes, local governments, and non-profit groups for watershed and ecosystem planning and for the design and implementation of restoration projects.

The Army Corps brings 15 years of experience in ecosystem restoration to this regional project.

The TRDN planning process and timeframe are determined by the requirements of the National Environmental Policy Act (NEPA), the Water Resources Department Development Act (WRDA), Congressional mandate of the Army Corps of Engineers, and other Federal legislation.

Public Involvement Activities

Public involvement activities are an important aspect of the Tres Rios study and have been part of this restoration project from the beginning. Previous public meetings include the Tres Rios scoping meeting in October 2001, which determined the extent and type of work to be done, and community meetings held in April and October of 2003 to obtain formal public input and feedback on proposed restoration elements of the project.

The next public meeting is scheduled for February 15, 2006 and is the third meeting in a three part series to show the relationship of all of the ongoing Corps of Engineers studies along the Santa Cruz River: El Rio Medio, Paseo de las Iglesias and Tres Rios del Norte. A public meeting to coincide with the release of the Tres Rios del Norte Draft Feasibility Study is anticipated for the summer of 2006.

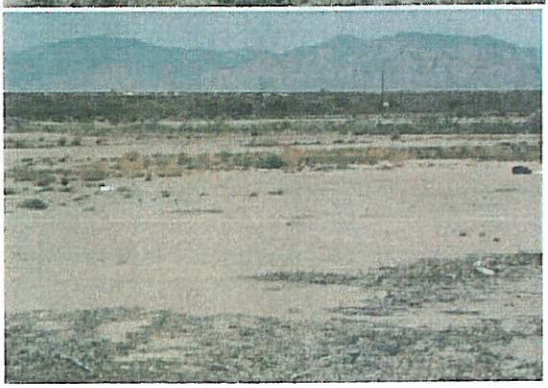
Public comments to date demonstrate strong support for riparian restoration along the Tres Rios stretch of the Santa Cruz River.

Restoration Potential

Demonstration photos of the types of areas where restoration potential exists along the Santa Cruz River.

Continental Ranch drainage-way

A Reach of the Santa Cruz River channel north of Ina Rd.



Over bank of the Santa Cruz River south of Twin Peaks Rd.

Erosion –West bank of Santa Cruz River south of Ina Rd.

Feasibility Study

The purpose of the Tres Rios del Norte Feasibility Study is to address potential alternatives for ecosystem restoration, flood damage reductions, groundwater recharge, and recreation.

The project sponsors developed 10 proposed restoration plan alternatives. The alternatives developed in the feasibility study do not include detailed plans or designs, but represent a framework of potential restoration activities, and the areas where those activities might be focused.

Each alternative was evaluated independently and compared to a "no action alternative," which is a projection of the future river conditions resulting from not doing the project. As a result of this evaluation, five ecosystem restoration action plans, five water supply alternatives, and three recreation alternatives were developed and carried forward for further analysis.

Several key criteria were used to assess each alternative. Cost-effectiveness, an analysis of potential impacts and benefits, overall completeness, and effectiveness are just a few measures used to evaluate the alternatives. The feasibility study report will recommend an alternative for implementation

Based on the additional assessment, a restoration plan and economic plan were developed. The restoration plan includes structural and non-structural features which may include various vegetative covers, grade control structures, and diversion channels. The recommended economic plan includes features for water supply and recreation. Water supply features may include in-channel t-berms and spreading basins. Recreation plan elements may include pedestrian trailheads, equestrian trailheads, interpretative signage, and recreation trail crossings.

Subsequently, a combined restoration and economic plan will be analyzed for trade-offs to determine the best balance between the two objectives.

Additional considerations in the feasibility study report, beyond the recommendation of a preferred plan include post-construction operations and maintenance activities, including replacement or upgrade of structural features, environmental monitoring, mosquito control, and replacement restoration following flood events.

A final report will culminate in a complete feasibility report will identify the recommended plan that is supported by the local jurisdictions and the U.S. Army Corps of Engineers to improve the overall ecological health of the Santa Cruz River and reestablish a more stable, less degraded, and sustainable riparian habitat.

Project Timeline

Study initiated	September 2001	**Public Workshop**	October 2003
Public Workshop	October 2001	**Public Open House**	February 2006
Data Collection; current conditions identified	August 2002	**Draft Feasibility Report**	Summer 2006
Potential Projects identified	October 2002	**Public Meeting**	Following release of Draft Report
Community Meeting Held	April 2003	**Final Report**	To Be Determined
Alternatives Developed	Summer 2003		

Town of Marana
Department of Public Works
Environmental Engineering Division
11555 W. Civic Center Drive
Marana, AZ 85653-7003

Contact Information

Mr. William Miller, Water Resources Planner
U.S. Army Corps of Engineers
3636 North Central Ave. Suite 900
Phoenix, Arizona 85012
e-mail: William.H.Miller@spl01.usace.army.mil

Ms. Leslie Liberti, Environmental Planning Manager
City of Tucson
100 N. Stone Ave., Suite 200
Tucson, Arizona 85701
e-mail: leslie.liberti@tucsonaz.gov

Santa Cruz River south of Ina Road bridge

Santa Cruz River north of Avra Valley Road

Ms. Corby Lust, Environmental Aide
Environmental Engineering Division,
Town of Marana
11555 W. Civic Center Drive
Marana, AZ 85653-7003
e-mail: clust@marana.com

Mr. Lynn Orchard, Principal Hydrologist
Pima County Flood Control District
201 N. Stone Ave., 4th Floor
Tucson, Arizona 85701-1207
e-mail: lynn.orchard@rfcd.pima.gov