



**Notice of Public Review and Public Meeting**  
**Paseo de las Iglesias**  
**Pima County, Santa Cruz River**  
**Ecosystem Restoration Feasibility Study**  
**26 October 2004, Tuesday, 6:30 pm**  
**at the Desert Vista Pima Community College**

**Interested Parties:**

This is an open invitation to all interested parties to provide views and comments on the U.S. Army Corps of Engineers' and the Pima County Flood Control District's proposed plan for ecosystem restoration of the Santa Cruz River in Pima County, Arizona. A public meeting will be held on October 26, 2004 at 6:30 pm in the Ocotillo Room of Pima Community College Desert Vista Campus, 5901 S. Calle Santa Cruz, Tucson, Arizona 85709.

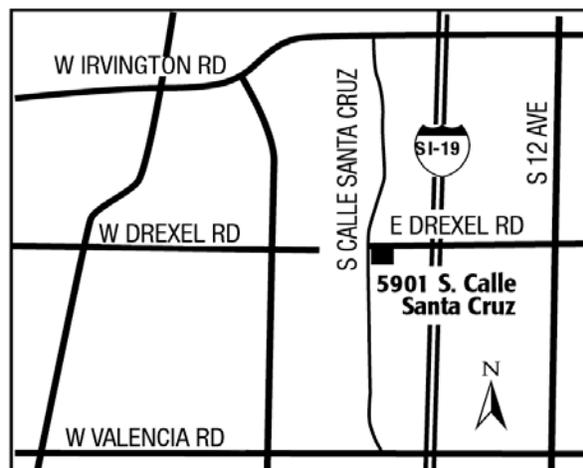
At the public meeting, the results of the feasibility study, as well as the proposed plan, will be presented. The proposed plan includes ecosystem restoration measures to improve ecological system functions along the Santa Cruz River from Los Reales Road to West Congress Street. The Draft Environmental Impact Study (DEIS) will also be presented. The draft Feasibility Report and DEIS are available for public review at the Pima County Public Library Branches, Pima County College, and University of Arizona libraries during normal hours of operation, and on the Pima County website at <http://www.dot.co.pima.az.us/flood/envrest/paseo.htm>. Technical Appendices will be made available upon request. A summary of the study results and a general description of the Recommended Plan and Environmental Impacts are included in this announcement.

The purpose of this public meeting is to solicit public comments and concerns with respect to the feasibility study findings and the proposed Recommended Plan, including the proposed future project design and maintenance. All comments and information received will be carefully reviewed and fully considered in reaching the final feasibility study conclusions and recommendations. Comments regarding future maintenance will be considered in the Regulatory permitting process. Therefore, we urge all interested parties to participate. Anyone wishing to express his/her views at the meeting will be offered a full opportunity to do so. In addition, written comments may be submitted at the meeting or mailed to the Corps of Engineers at the address below. A record of proceedings will be taken during the meeting and a transcript prepared. All statements, written or oral, will become part of the official record of the study. Appropriate statements or recommendations for change will be incorporated into the final study documents.

All written statements must be received by the Corps no later than 45 days after the Notice of Availability of the DEIS is published in the Federal Register. Written comments or further information regarding the Paseo de las Iglesias Feasibility Study or the public meeting can be addressed to Mr. Richard Legere, Study Manager (602-640-2003), or Michael Fink, Environmental Coordinator (602-640-2001), U.S. Army Corps of Engineers, 3636 N. Central Ave, Suite 900, Phoenix, AZ 85012-1939. You may also contact Thomas Helfrich or Jennifer Becker of the Pima County Flood Control District at (520) 740-6350.

**Directions to the Meeting:**

From I-10, take the I-19 exit south 2.1 miles to Irvington Road, turn right and go 0.2 miles then turn left onto Calle Santa Cruz. Proceed 1.3 miles and turn left into the 3<sup>rd</sup> parking lot entrance driveway. The Ocotillo Room is through the front doors, down the hall in the middle of the building.



# Paseo de las Iglesias Santa Cruz River, Pima County Feasibility Study Project Summary

We have attempted to send this information to all individuals and organizations that may have an interest in the feasibility study of the Santa Cruz River, Pima County, Paseo de las Iglesias reach. If you know of individuals who may desire to attend and have not been contacted by us, please bring this invitation to their attention.

## Authority and Purpose

The Los Angeles District was directed to perform feasibility level studies of ecosystem restoration alternatives in Pima County under two separate authorities, House Resolution 2425, dated May 17, 1994 and in Public Law 761, Seventy-fifth Congress, known as Section 6 of the Flood Control Act of 1938. The purpose of this study is to investigate the feasibility of ecosystem restoration along the Santa Cruz River in Pima County, Arizona. Critical riparian and cienega habitats have been lost in the region due to water resource changes in Pima County.

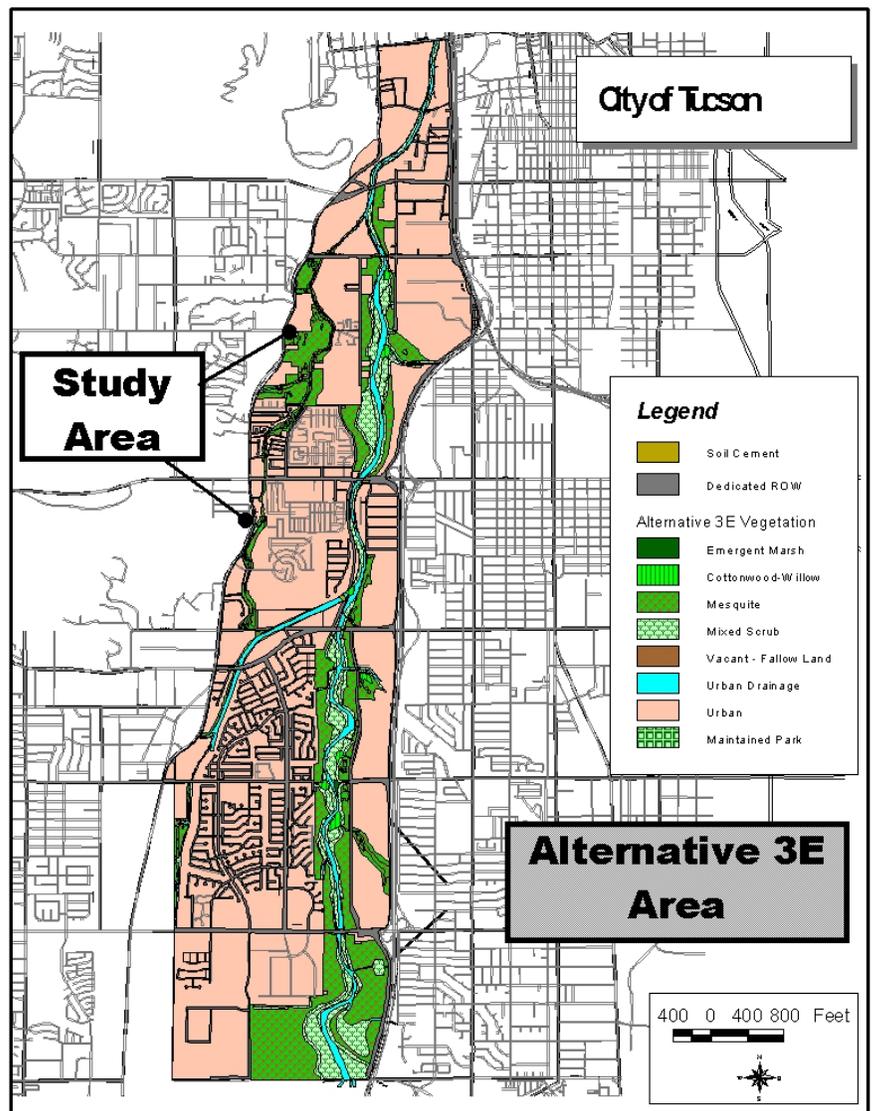
This Feasibility Study completes the planning process of formulating and evaluating the array of alternative plans identified in the reconnaissance study and selects a plan that maximizes net economic benefits while addressing ecosystem restoration, flood damage reduction, recreation, and other needs identified throughout the planning process. The results presented in this report were developed in accordance with Federal water resources planning principles, guidelines, procedures, and policies.

## Study Participants

The draft Feasibility Report and DEIS were prepared by the U.S. Army Corps of Engineers, Los Angeles District, in cooperation with the Pima County Flood Control District (PCFCD). PCFCD is the non-Federal Sponsor and is expected to produce the non-Federal cost of implementing a recommended project. Coordination was also conducted with the Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), the Arizona Department of Game & Fish (ADGF), the City of Tucson Parks and Recreation, Tucson Water Department, City of Tucson Transportation, Pima County Department of Transportation, Pima County Cultural Resources, Pima County Parks and Recreation, University of Arizona Cooperative Extension, local Homeowners Associations, Tucson Audubon Society, and Friends of the Santa Cruz, among others.

## Study Area Location

The study area consists of a 7.5-mile reach of the Santa Cruz River and adjacent lands, totaling 5,005 acres, in the Tucson Valley in south-central Arizona. More specifically, the study area consists of the Santa Cruz River Valley between Los Reales Road and West Congress Street. Interstate highways 10 and 19 define the eastern boundary of the study area and Mission Road the western boundary. The proposed plan, if implemented, would impact a much smaller area within the study reach.



## **Problem Description**

The primary problem is the severe degradation and loss of riparian habitat along the Santa Cruz River since the early 20th century. Along the Paseo de las Iglesias reach of the Santa Cruz, water once flowed perennially and supported substantial growth of mesquites, cottonwoods, and willows. Historical accounts of conditions on the Santa Cruz approximately 100 years ago describe a tree-lined, narrow river with dense vegetation winding throughout the riverbed and vicinity. Increasing appropriation of surface and ground water to support expansion of agriculture and growing urban populations resulted in the transformation of the Santa Cruz from a river with perennial surface and subsurface flows to a dry wash with stabilized banks flowing only ephemerally in response to storm runoff. As a result of this change, stands of native riparian habitat are rare in the study area, as they are throughout Pima County.

## **Planning Objectives**

The Federal planning objective for ecosystem restoration studies is to contribute to National Ecosystem Restoration (NER) through increasing the net quality and/or quantity of desired ecosystem resources. The specific objectives for environmental restoration within the study area have been identified as follows:

- Increase the acreage of functional riparian and floodplain habitat within the study area.
- Increase wildlife habitat diversity by providing a mix of riparian habitats within the river corridor, riparian fringe and historic floodplain.
- Provide passive recreation opportunities
- Provide incidental benefits of flood damage reduction, reduced bank erosion and sedimentation, and improved surface water quality consistent with ecosystem restoration.
- Integrate desires of local stakeholders consistent with Federal policy and local planning efforts.

## **Plan Formulation**

A variety of restoration measures were developed consisting of water harvesting features, irrigation options, riverbank and terrace treatments, and native tree, shrub and wetland plant community combinations. These measures were grouped into three categories based on the amount of water required for implementation, then assigned to one or more of three existing hydrogeomorphic settings (river channel, terrace, and/or historic floodplain). A matrix of grouped restoration measures was created that allowed initial consideration of potential measure combinations (including “no action”) and hydrogeomorphic settings to create 47 potential alternatives.

Alternatives that were not consistent with natural vegetation patterns, that failed to produce sufficient habitat diversity, or that reduced conveyance of flood waters were eliminated, leaving 14 alternatives to be considered in more detail. Further analysis resulted in three restoration alternatives that provided the most ecological benefit for the investment, plus the “no action” alternative. Additional refinement of those alternatives and subsequent analysis of costs and ecosystem restoration benefits relative to their effectiveness, acceptability, completeness, and efficiency led to the selection of the preliminary recommended plan. Pima County has endorsed the recommended plan based on community input received during the plan formulation process.

To ensure no flood damage reduction opportunities were missed, the existing flood damages were identified. The average annual damages were not sufficient to support inclusion of flood control as a project purpose in development of detailed alternative plans.

## **Recommended Plan**

The recommended plan (Alternative 3E) is illustrated on the preceding page. It is characterized by:

- Water harvesting basins associated with tributary inflows, grade control structures, and surface depressions;
- Planting of mesquite and riparian shrubs in the historic floodplain, on the terraces, and on the vegetated banks;
- Planting of cottonwood-willow and emergent marsh in the water harvesting basins;
- Removal/control of invasive vegetation;
- Utilization of existing low-flow channel to direct storm water to the vegetation communities;
- Bank stabilization consisting of a combination of decreased (cut back) side slopes, vegetation, and soil cement;
- Erosion control measures to prevent headcutting and loss of restored habitat;
- A irrigation water distribution system to support planted vegetation;
- Additional ramps and trails for maintenance and safety access

Recreational measures include a multipurpose trail system, comfort stations, parking facilities, and other amenities.

**Paseo de las Iglesias  
Santa Cruz River, Pima County Feasibility Study  
Project Summary-Continued**

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The analysis presented in the report shows that the selected plan is feasible and would provide environmental restoration and recreational benefits that serve the public interest. Plan features are consistent with proposals developed by public involvement work groups. The United States Fish and Wildlife service supports implementation of the selected plan.

**Environmental Impact of the Recommended Plan**

The feasibility report and the combined environmental document fully describe the environmental impacts for the recommended plan. Short-term, less-than-significant impacts to air quality, noise conditions, and other resources would occur during construction and future maintenance activities. However, no change from existing conditions would be expected in the long-term. The anticipated insignificant negative impacts to aesthetics would be short-term during the construction activities. In the long-term, the improvements proposed in this project would enhance the aesthetic values along the project reach with revegetation of tributary banks, in the channel, and on the newly created terraces. Ecosystem value would be expected to increase.

**Plan Implementation Requirements**

The District Engineer's recommendation is to seek Congressional Authorization for this project. Ecosystem restoration projects are typically cost shared on a 65-percent Federal 35-percent non-Federal basis, with the cost for lands, easements, rights-of-way, relocations, and disposal sites (LERRDS) as a non-Federal responsibility. The total first cost of the recommended plan is \$92,058,546 and the total annual operation and maintenance costs are \$1,906,221. The Federal share of the recommended plan is \$59,666,768 and the non-Federal share is \$32,391,778.

The recreation plan has a first cost of \$1,141,914. Cost sharing for recreation features is 50-percent Federal and 50-percent non-Federal. Fifty-percent of the first cost of the recreation plan is \$570,957. The cost for environmental education, public art, associated costs of water, recreational betterments, and all operations and maintenance (O&M) costs for the recommended project would be the responsibility of the non-Federal sponsor. Annual costs for operation and maintenance of recreation are estimated at \$36,260.

**OFFICIAL BUSINESS**

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