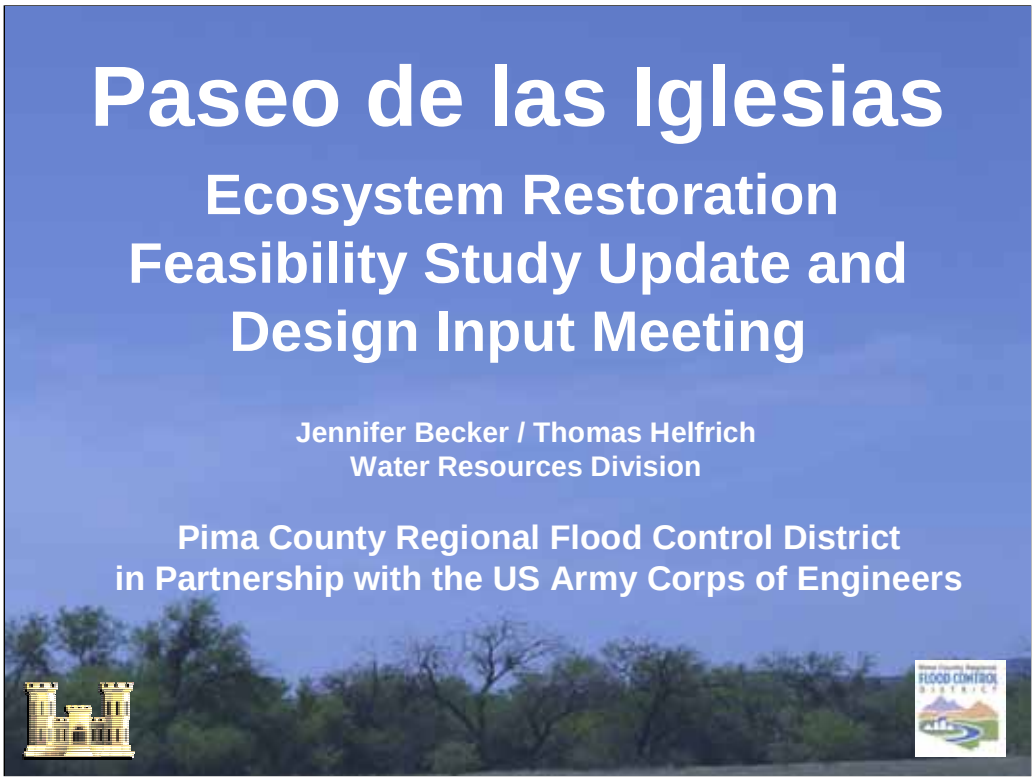
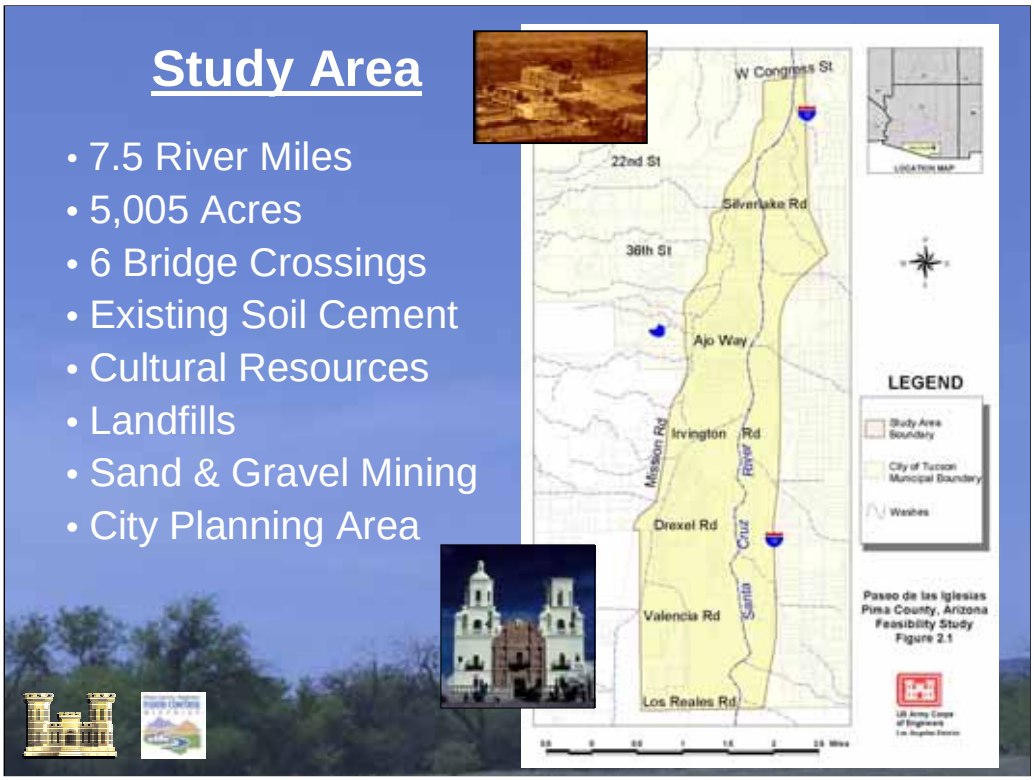


My name is Jennifer Becker and I am with the Pima County Regional Flood Control District. The District is the local sponsor of the USACE Paseo de las Iglesias Ecosystem Restoration Feasibility Study.

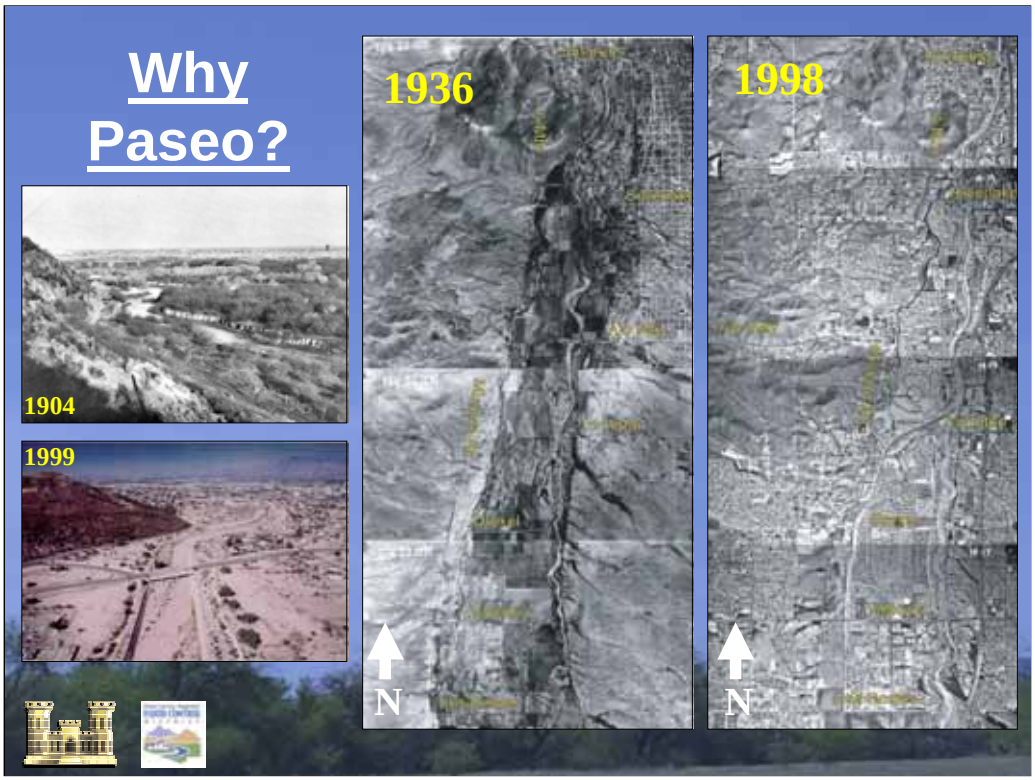
The local Project Manager is Thomas Helfrich, who is seated over there.

The Corps of Engineers Project Manager, John Drake and the Study Manager, Kim Gavigan, are also in attendance tonight.

In additions to the FCD & Corps, other participating stakeholders include various departments in Pima County and City of Tucson government, Federal and State agencies, local colleges & universities, local Indian Nations, environmental organizations, consulting companies, and individual citizens and citizen groups.



The study area is located on the Santa Cruz River and West Branch, within the City of Tucson from West Congress Street upstream to the San Xavier District. It is 7.5 mile long, and 5005 acres in area. “Paseo de las Iglesias” means the “Path of the Churches.” The referenced churches include Kino’s San Xavier Mission, and Mission San Agustín del Tucson once located at the downstream Paseo study boundary.



So why has this study been undertaken? At the turn of the century, the Santa Cruz River was a flowing stream lined with cottonwood, willow, and mesquite forests that once supported some of most diverse riparian habitat in the Sonoran Desert.

Urban influences over the last 100 years have caused significant ecosystem degradation. The water table is now 100-200' below the surface throughout the study area.

The remaining trees and other vegetation no longer have access to the water table.

Flood storage and riparian functions provided by the historic Santa Cruz River floodplain have been virtually eliminated.

The Feasibility Study process began with a 2-day public meeting back in 2001. Since then there have been a series of workshops and public meetings to solicit input regarding restoration measures and desired outputs, plus numerous stakeholders meeting to gather technical information and determine planning constraints.

Public concerns included loss of habitat & wildlife, water issues, invasive plants, stream bank erosion, other destructive influences, and inclusion of recreation elements in the final plan.

Study planning objectives were developed. These objectives include:

•Increase size, health, and diversity of native riparian habitat within the river corridor and historic floodplain by restoring and protecting habitat.

•Reduce bank erosion and sedimentation, and improve surface water quality consistent with ecosystem restoration; and

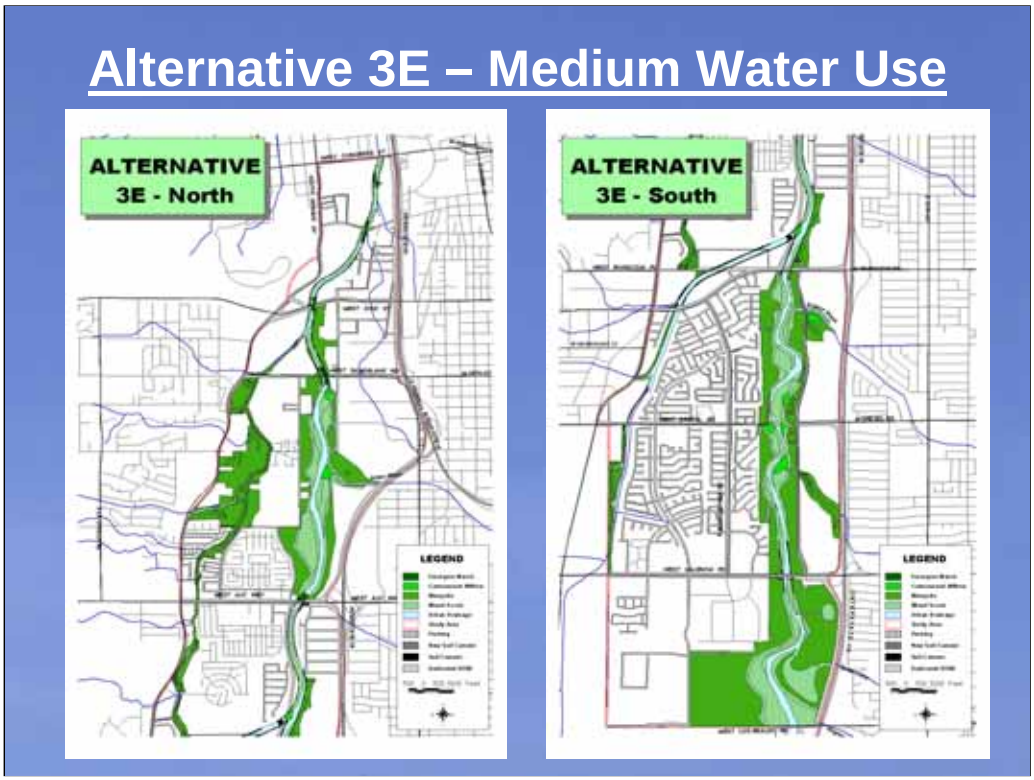
•Provide passive recreation opportunities.

At the numerous meetings, citizens and experts have provided ideas regarding desired plant communities, visions of what the river banks could look like, options for irrigation and water harvesting, and recreation needs.

These ideas were combined in various ways to form "alternatives" . The alternatives were screened based on environmental and cost-benefit analyses, and the Corps suggested several "best buys" alternatives.

Several alternatives were presented for public comment at a public open house two years ago. With the backing of participating citizens and Pima County government, Alternative 3E has been selected to be the Recommended Plan.

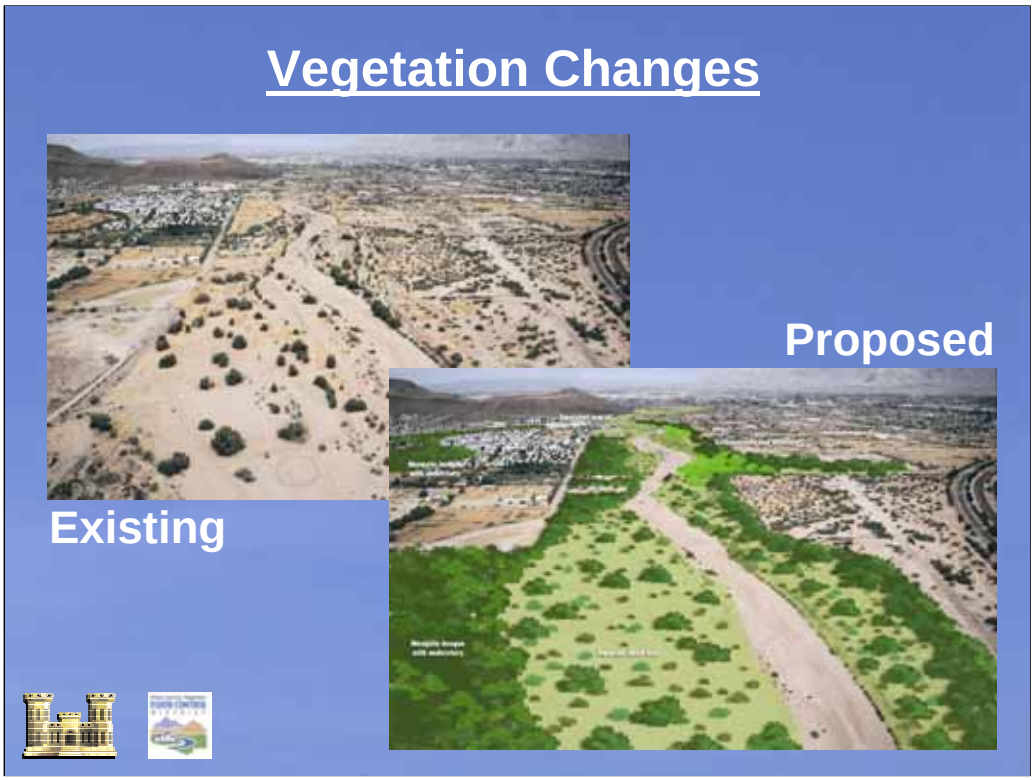
The Recommended Plan was one of the medium water-use alternatives. It provides good habitat diversity at medium cost and water need.



This slide shows the proposed plan footprint within the study area. Over 1100 acres could be planted and irrigated.

Mesquite and riparian shrub communities would be planted on terraces and in the historic floodplain. Emergent marsh and cottonwood-willow habitat would be located at stream-confluences and upstream of existing grade control structures.

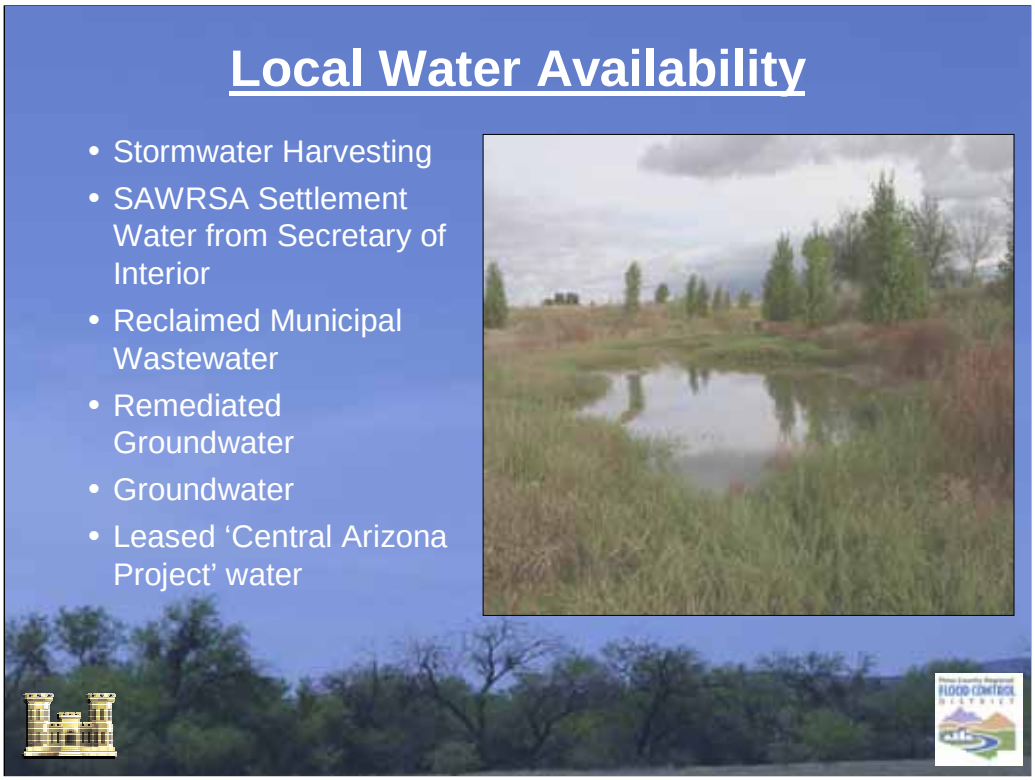
Various surface and subsurface water harvesting methods will be incorporated.



This is an artists' rendition of the vegetation changes proposed in the Recommended Plan. The view is looking to the north from Ajo Way toward the northern ½ of the project area.

It was important to develop a passive recreation plan that would encourage enjoyment of the environment while recognizing the history of the area. The recreation elements will provide better access to the area for hiking, wildlife viewing, biking, and equestrian use.

The plan includes construction of a portion of the 1,200 mile Juan Bautista de Anza National Historic Trail that is planned to eventually connect Nogales to San Francisco.



As the local sponsor, Pima County is responsible for providing the irrigation water, conservatively estimated at 1,900 acre-feet. Current research is showing that the calculated water need may be significantly reduced after establishment.

As part of the cost analysis, the Corp's used a known water source with a known cost. They used the current market rate for reclaimed water from Tucson Water. Pima County is in no way obligated to use this particular water source. In fact, there are significantly less costly irrigation water sources including stormwater harvesting, use of other secondary or tertiary effluent, leasing other water, or the use of groundwater, although that is not a preferred source.

This is an artist conceptual vision of multi-use storm water-harvesting facility. Vegetation regimes include open water, emergent marsh, cottonwood/willow, mesquite bosque, and shrub communities. Recreation elements could include trails, ramadas, and possibly even ball fields on the periphery.

Even though the region is in an eight-year drought, successful stormwater harvesting has already been accomplished at the County's Kino Environmental Restoration Project near Tucson Electric park.

The Paseo project could include a facility like this at the location of the retired S&G pit south of Valencia Road if that currently private property can be acquired. At this site water could be harvested from both the Santa Cruz River, and adjacent tributaries.

Now that the Feasibility Study is essentially complete, the Corps and County will initiate the Design Phase of the Project later this year. Prior to beginning this task, we are here to gather your input on how to proceed. The design and construction of the project will be phased, and we want your input on what should be undertaken for "Phase One." Each design and construction phase will include the project features, including …

Where we start is up to you. The top priority locations could include various reaches of the Santa Cruz or the West Branch, either channelized areas, or less encroached reaches, we could concentrate on the reaches between existing river park, or where improvements are necessary for public safety, such as in the location of Ryland landfill.

Furthermore, there may be other reasons you may have to start in certain areas.

Channelized Reaches

- ~5 miles including:
  - SCR: Congress to Silverlake
  - SCR: Ajo to Irvington
  - WB: Irvington to Valencia
- Mainly in-channel improvements
- Existing river park trail (SCR)
- Largely publicly owned

Given other trail projects currently underway, trail linkage would then exist from Irvington to N of Grant road, and up Julian wash to Kino Basin, east of Ajo and 1-10.

WB - Silverlake to Irvington

- 3 mile segment
- Unique habitat area
- Contains some wide open space
- Localized water harvesting opportunities
- Largely publicly owned

SCR – Irvington to Valencia

- 2 mile segment
- Unchannelized wide reach
- Some water harvesting opportunities
- Create river park trail linkage to Ajo Way
- Largely publicly owned
- COT development plans include some channelization

Most of this property is is currently privately owned, so construction couldn't begin unless Pima County were able to acquire the property.

Future Land Use Changes

- Proposed development at Irvington/Drexel
  - Accommodates most of ecosystem restoration footprint
  - Calls for unspecified level of SCR bank protection
  - Includes river park trail
- Other new commercial or residential developments
  - Possibly restrict water harvesting opportunities
  - Possibly reduce habitat size and function

The Corp's Feasibility Study Report and Environmental Impact Statements were released last fall. The report is available for viewing on the District's website.

The design process will begin this year. Construction may begin in mid 2008. Construction would require about three years to complete.

This concludes our presentation.

We will be available for questions after the following presentations.