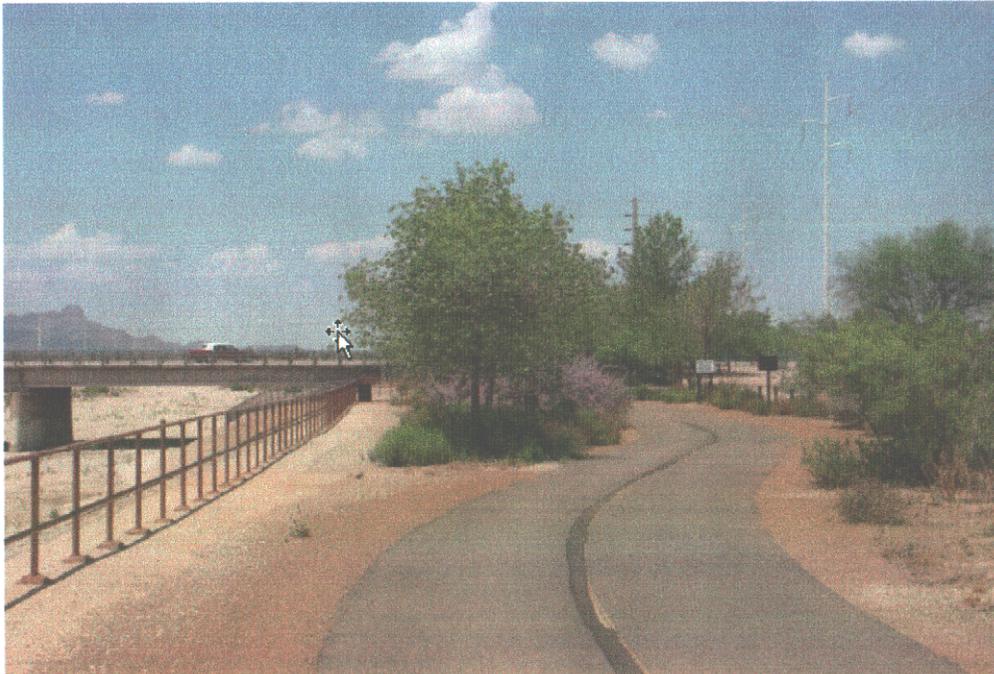


Pima County Bond Project Proposal

CIP Bond Program – May 2004 ***Bond Advisory Committee Presentation***

Flood Control District



Pima County Bond Project Proposal

Flood Control District

2004 General Obligation Bond Proposal Summary

2004 GO Bond Authorization

River System Environmental Restoration Project	\$15,000,000
River Flood Control, Erosion Control, and Linear Park Program	\$7,500,000
Urban Drainage Infrastructure Program	\$27,500,000
Floodprone and Riparian Land Acquisition Program	\$10,000,000
<i>Total Proposal</i>	\$60,000,000

Pima County Bond Project Proposal

Flood Control District

River System Environmental Restoration Project

Scope:

Project long term goals include riparian restoration and flood hazard mitigation. Along the major rivers and tributaries in the metropolitan area. Currently planning and feasibility studies are underway with the U.S. Army Corps of Engineers for involving riparian restoration, groundwater recharge, flood control and recreational opportunities along the Santa Cruz River and Rillito River. Other essential components of the project address floodplain properties owned by the Flood Control District along major rivers to provide expansion of riparian restoration recreational opportunities and implementation of flood and erosion control measures to address public safety. Specific and critical sub-project efforts including land acquisition, riparian restoration, channel stabilization, groundwater recharge, and tributary drainage management are described in the addendum (See final page).

Location:

General : Santa Cruz River , Rillito River, Canada del Oro Wash, Tanque Verde Creek, Black Wash and Other Major Rivers and Tributaries

Justification/Benefit:

Meets long range plans for the Major Rivers and Tributary Corridors. Preserves and enhances floodplains and river systems as well as providing corridors of natural biological diversity, opportunities for preservation and recovery of Priority Vulnerable Species listed in the Sonoran Desert Conservation Plan, and provides recreational benefits for the community.

Cost Estimate:

This Project: \$20,000,000

Funding Sources:

\$15,000,000 General Obligation Bonds
\$5,000,000 Additional funding may be available from: Flood Control District Tax Levy and local jurisdictions.
Potential Funding: U.S. Army Corps of Engineers (65% federal : 35% local Flood Control District tax levy)

Project Duration:

Planning/Design/Procurement:	36 Months
Construction:	<u>24 Months</u>
Total:	60 Months

Project Considerations

Multi-jurisdictional Considerations:

Project footprint includes Town of Marana, City of Tucson, and Pima County, and includes in all Supervisor Districts.

Right-of-Way Impacts:

Not known at this time. Minimal right-of-way needs along Santa Cruz River and Rillito River.

Environmental Concerns:

Project goal is based on restoring riparian habitat.

O&M Impacts/Funding:

Operation and maintenance cost will be shared among all the local sponsors and are estimated to be \$80,000 annually.

Pima County Bond Project Proposal

Flood Control District

River Flood Control, Erosion Control, and Linear Park Program

Scope:

Evaluate, design, and develop structural and nonstructural drainage and erosion control improvements on Pantano Wash from 22nd Street to Kenyon Drive and Craycroft Road to Grant Road. Future develop continuous river park and trail systems including bike paths, walking paths, landscaping, restrooms, ramadas, and picnic areas along the Pantano that will join existing segments to create a continuous linkage from the confluence with the Rillito upstream to Houghton Road. Develop continuous river open space and trail systems including bike paths along the Cañada del Oro from La Cholla Blvd. to La Cañada Drive.

Location:

Pantano Wash –
22nd to Kenyon and Craycroft to Grant
Cañada del Oro Wash –
La Cholla Blvd. to La Cañada Drive

Justification/Benefit:

Meets long range plans of the River Park Master Plan. Meets long range river plans for Tucson, Marana, and the Town of Oro Valley. Protects public safety and residential and commercial development adjacent to river courses through structural and nonstructural drainage improvements. Enhances connectivity of major river system flood control features, open space areas, and linear park corridor system. Creates contiguous corridors of multi-use recreational opportunities, provides recreational and aesthetic benefits for the community, preserves and enhances corridors of natural biological diversity, and preserves areas of riparian habitat through acquisition.

Cost Estimate:

This Project: \$10,000,000

Funding Sources:

\$7,500,000 General Obligation Bonds
\$2,500,000 Additional funds from the
FCD Tax Levy

Project Duration:

Planning/Design/Procurement: 24 Months
Construction: 12 Months
Total: 36 Months

Project Considerations

Multi-jurisdictional Considerations:

Project footprints include Marana, City of Tucson, and Pima County, and includes, or is immediately adjacent to, all the Supervisor Districts.

Right-of-Way Impacts:

Not yet determined.

Environmental Concerns:

Project goal is based on providing drainage improvements and enhancing the linear river park system. Although some habitat may be impacted, mitigation and additional landscaping will be done to avoid adverse impacts.

O&M Impacts/Funding:

Not yet determined.

Pima County Bond Project Proposal

Flood Control District

Urban Drainage Infrastructure Program

Scope:

Evaluate, design, and construct drainage improvements that protect public safety through a combination of nonstructural and structural improvements that enhance flood control, erosion control. Develop structural and nonstructural solutions to long-standing flooding problems where residential and commercial properties have experienced repeated flooding and flood-related loss. Highest priority drainage reaches will be chosen in each jurisdiction based on methods similar to those used in the City of Tucson's "Tucson Stormwater Management Study" (TSMS).

Location:

City of Tucson: Columbus Wash; Arroyo Chico – Alvernon to Rosemont; Nebraska Wash; and various other TSMS priorities

Town of Oro Valley: Projects identified in Stormwater Management Plan

Town of Marana: Barnett Floodway Channel

Town of Sahuarita

City of South Tucson

Green Valley

Ajo

Justification/Benefit:

Alleviates chronic flooding, protects residential and commercial development adjacent to river courses, and safeguards flood protection benefits provided by currently existing facilities.

Provides flood control infrastructure to support urban in-fill development and Comprehensive Land Use Plan.

Cost Estimate:

This Project: \$35,000,000

Funding Sources:

\$27,500,000 General Obligation Bonds

\$8,000,000 from the FCD Tax Levy

Potential cost sharing with local jurisdictions

Project Duration:

Planning/Design/Procurement: 36 Months

Construction: 24 Months

Total: 60 Months

Project Considerations

Multi-jurisdictional Considerations:

Project footprints include numerous areas in the Green Valley, City of South Tucson, Town of Marana, City of Tucson, Town of Sahuarita, and includes all of the Supervisor Districts.

Right-of-Way Impacts:

Not yet determined.

Environmental Concerns:

Project goal is based on providing drainage improvements. Although some habitat may be impacted, mitigation will be done to avoid adverse impacts.

O&M Impacts/Funding:

Operation and maintenance cost will be the responsibility of the local jurisdictions.

Pima County Bond Project Proposal

Flood Control District

Floodprone and Riparian Land Acquisition Program

Scope:

Purchase floodprone and properties in order to protect public safety and preserves natural floodplain characteristics. Purchase land or secure drainage and conservation easements where appropriate. Development floodplain and watershed management plans.

Adaptive floodplain management in urban areas to preserve floodplain, protect riparian areas, provide floodplain management, and stormwater quality benefits

Upper watershed protection in rural to preserve overbank flood storage, preserve floodplain characteristics, minimize future flooding and protect riparian areas

Locations:

First Priority Public Safety: Canada del Oro Wash; Tanque Verde Creek; Black Wash; Brawley Wash; Old Channel of the West Branch of the Santa Cruz River .

Second Priority SDCP Riparian "A List": Cienega Creek; Davidson Canyon Wash; Sabino Creek (near Coronado NF); and Bear Canyon Wash.

Third Priority SDCP Riparian "B List": Sutherland Wash; Tanque Verde Creek; Agua Caliente Wash ; Rincon Creek; Altar Wash .

Justification/Benefit:

Cost-effective strategy to remove people and property from exposure to flood hazards. Creates flood water storage capacity, minimizes flood damages, reduces the need for structural flood and erosion protection, facilitates groundwater recharge, creates passive-use recreational opportunities, maintains urban open space corridors, preserves and enhances riparian habitat and corridors of natural biological diversity, and meets the land acquisition goals of the Sonoran Desert Conservation Plan.

Cost Estimate:

This Project: \$12,000,000

Funding Sources:

\$10,000,000 General Obligation Bonds
\$2,000,000 Additional funds from the FCD Tax Levy

Project Duration:

Ongoing as funding and floodprone properties are available.

Project Considerations

Multi-jurisdictional Considerations:

Project footprints include numerous areas in the Green Valley, Town of Marana, City of Tucson, and includes all of the Supervisor Districts.

Right-of-Way Impacts:

None.

Environmental Concerns:

Project goal is based on reducing flood risks and preserving or improving natural floodplain function.

O&M Impacts/Funding:

Operation and maintenance cost are usually negligible, including the occasional cost of fencing or removing debris, and are the responsibility of Pima County Flood Control District.

Pima County Bond Project Proposal

Flood Control District

Addendum: Specific sub-project efforts critical to the overall success of Environmental Restoration Projects and Potential USACE projects.

Tres Rios del Norte Environmental Restoration Project

Land acquisition for Environmental Preservation and Restoration particularly within the reach between El Camino del Cerro and Ina Road.

Channel Stabilization Design and construct in-channel modifications (i.e.: pilot channels and grade control structures), channel bank terracing, and low flow erosion stabilization particularly within the SCR between El Camino del Cerro and Avra Valley Road.

Tributary Watersheds Design and construct modifications for tributary washes to provide detention basins to enhance storm water harvesting and alleviate drainage problems.

Tributary watersheds to include Gardner Lane/Ruthrauff Basins and Interstate-10/Cortaro Farms floodplain.

Riparian Restoration Design and construct riparian vegetation and irrigation distribution system for plant irrigation within the study area. Including restoration along the Lower Santa Cruz River utilizing effluent from the Rillito and Marana Treatment Facilities.

Groundwater Recharge Transform abandoned sand and gravel pits into recharge basins.

Paseo de las Iglesias Environmental Restoration Project

Land acquisition for Environmental Preservation and Restoration Acquire land particularly within the reaches between Silverlake Road and Ajo Highway, Irvington Road to Valencia Road, the sand and gravel operation upstream of Valencia Road and properties along the Old West Branch of the Santa Cruz River.

Channel Stabilization Design and construct in-channel modifications (i.e.: pilot channels and grade controls) throughout the study reach. Design and construct channel bank terracing and stabilization particularly along the SCR between Silverlake Road and Ajo Highway and Irvington and Valencia Roads.

Tributary Watersheds Design and construct modifications for tributary washes to alleviate drainage problems and enhance water harvesting.

Riparian Restoration Design and construct riparian vegetation and irrigation distribution system for plant irrigation within the study area.

El Rio Antiguo Environmental Restoration Project

Land acquisition for Environmental Preservation and Restoration Acquire land particularly in the river bend area.

Channel Stabilization Design and construct in-channel modifications (i.e.: pilot channels and grade controls), channel bank terracing and stabilization throughout the study reach.

Tributary Watersheds Design and construct modifications for tributary washes to alleviate drainage problems and enhance water harvesting including Finger Rock Wash water harvesting and restoration.

Riparian Restoration Design and construct riparian vegetation and irrigation distribution system for plant irrigation within the study area.