

# *A Living River to The Reviving River:*

*how the Lower Santa Cruz  
River project differs from  
the original Living River*

Evan Canfield

Pima County Regional  
**FLOOD CONTROL**  
DISTRICT

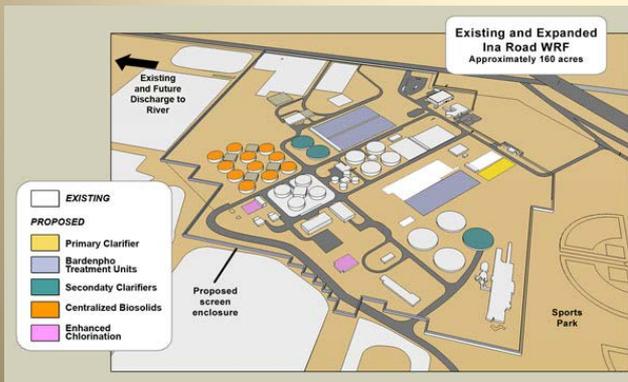


# Why Pima County would like to see a 'Living River' - type project?

**Regional Wastewater Reclamation Department**— Want to know how ROMP upgrades impact wetlands (i.e. what did we get for our \$660mil?).



**Regional Flood Control District** – Major landholder in the Santa Cruz River, implements Pima County Riparian Program. Interested in riparian management, infiltration and sediment transport.



**Office of Sustainability & Conservation** – Lead organization for Implementing the Sonoran Desert Conservation Plan (SDCP), including conservation of native species along the Santa Cruz River. The SDCP also resulted in formation of the Conservation Effluent Pool.



# Pima County Riparian Program

## *Title 16 Section 30* of the Floodplain Ordinance, *Watercourse and Riparian Habitat Protection and Mitigation Requirements*

Pima County  
Department of Transportation  
and Flood Control District



### **Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines**

Supplement to Title 16 Chapter 16.54 of the  
*Watercourse and Riparian Habitat Protection  
and Mitigation Requirements*

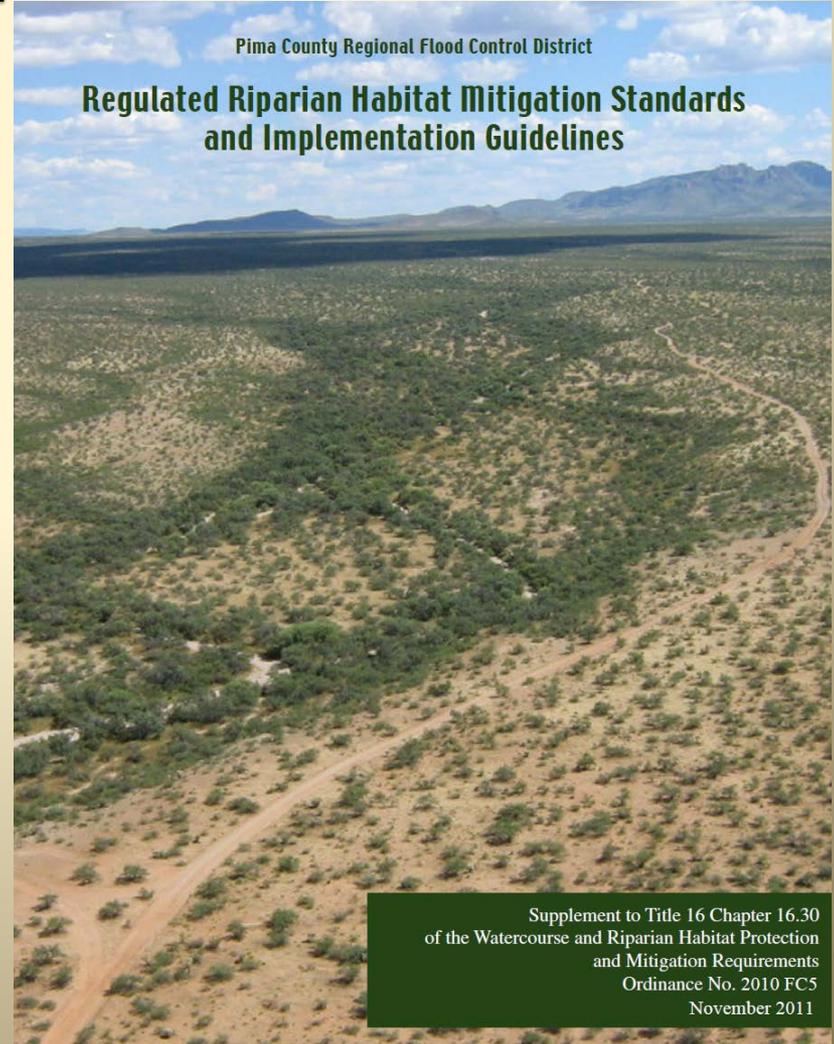


Pima County Floodplain  
Management District  
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Printed July 2001

Pima County Regional Flood Control District

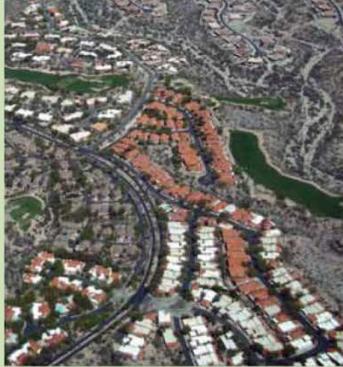
### **Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines**



Supplement to Title 16 Chapter 16.30  
of the Watercourse and Riparian Habitat Protection  
and Mitigation Requirements  
Ordinance No. 2010 FC5  
November 2011

**2011-2015**

***Action Plan for Water Sustainability***



A City of Tucson and Pima County  
Cooperative Project

# Pima County/City of Tucson Planning Study

## Goal

### **Respect for the Environment Goal #4:**

Ensure the future of riparian and aquatic habitat along the effluent-dependent reach of the Santa Cruz River

## Action Plan

### **Respect for the Environment Program #4:**

**'Lower Santa Cruz River  
Management Plan'**

(2011-2015)

# EPA Region IX – Wetland Program

## Wetland Grant Goal - Increase Quantity and Quality of Wetlands



The Reviving River Project will *'refine the (existing) wetlands program to more effectively protect restore and manage wetlands in the Lower Santa Cruz River in light of improved water quality.'*

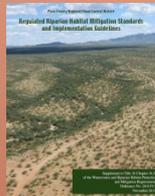


- *'Define Wetlands Monitoring Objectives and Strategies.'*
- *'Select a core set of indicators to represent wetland condition.'*
- *'Analyze monitoring data to evaluate wetlands extent and condition/function.'*

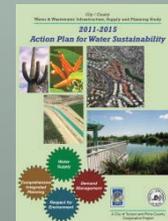
# Integration of the 'Reviving River' Annual Report into Other Efforts

*EPA Wetland Program:  
'Reviving River'  
Annual Report  
of Indicators*

**Regulatory:**  
Refine the Existing  
Wetland (Riparian)  
Program  
(Title 16.30)



**Planning:**  
Development of a  
Lower Santa Cruz  
River Management  
Plan



# Project Differences

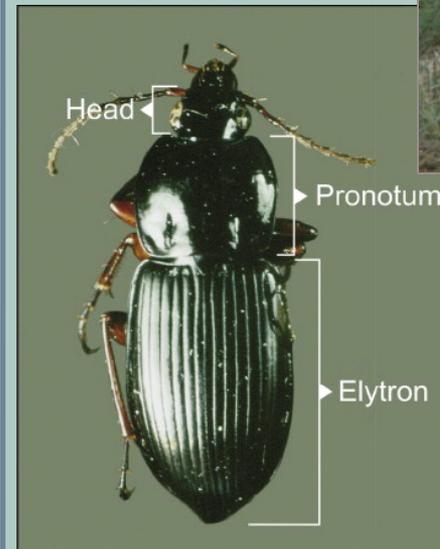
	A Living River	The Reviving River
<i>Monitoring Focus</i>	River Health	Wetlands Quality
<i>Setting</i>	Rural; shallow groundwater; natural flood plain	Urban; deep groundwater; bank- protected channel
<i>Nexus with Regulatory Program</i>	None	Informs Pima County and State Regulatory Wetland Programs
<i>Nexus with Planning Efforts</i>	Informs Santa Cruz County Efforts to Develop Management of Santa Cruz as <i>A Living River</i>	Informs the Pima County and City of Tucson Efforts to Develop a <i>Lower Santa Cruz River Management Plan</i>
<i>Data Collection</i>	Available Data Sets Only	Available Data Sets <u>AND</u> Supplemental Data Collection chosen by Technical Committee
<i>Summary of Existing Data</i>	First report served as baseline with no summary of historical conditions	Historical conditions summarized in a <u><i>Historical Conditions Report</i></u> ; and a <u><i>Selection Process Report</i></u> to document the indicator selection
<i>Timeframe of Indicator Selection</i>	Quarterly Meetings for One Year	Monthly Meetings for Six Months

# Supplemental Data Collection Resources Available to the *Reviving River* Technical Committee

Water quality sampling and analysis provided by PC Wastewater



Funding for annual monitoring of wetland resources

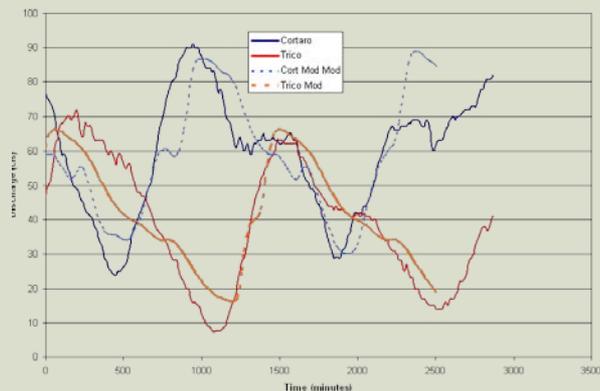


# Supplemental Data Analysis Efforts Available to the *Reviving River* Technical Committee

## Data analysis by Pima County staff



November 22, 2010



## Data analysis by consultants



# Supplemental Background Information Provided to the *Reviving River* Technical Committee

**Historical Conditions Report** summarizing:

- Channel Change
- Water Quality
- Vegetation
- Macroinvertebrates
- Infiltration Change
- Sediment Transport modeling of effluent flows
- Woody Species Structure