

Environmental Operating Principles

- 1. Strive to achieve Environmental Sustainability.*
- 2. Recognize the interdependence of life and the physical environment.*
- 3. Seek balance and synergy among human development activities and natural systems*
- 4. Continue to accept corporate responsibility and accountability*
- 5. Seek ways and means to assess and mitigate cumulative impacts*
- 6. Build and share an integrated scientific, economic & social knowledge base*
- 7. Respect the views of interested individuals and groups*

“Leaders set the Direction”

Environmental Sustainability

A process whereby environmental and economic considerations are effectively balanced in project planning, design, construction, operation and maintenance ...



... Not “bolted on” at the end

Policy for Environmental Sustainability

- Consistent with *Principles and Guidelines*
 - Formulate multi-purpose plans that produce both economic and environmental benefits
 - More fully integrate the consideration of the environment throughout the life cycle of the project
- “Build projects for all stakeholders”*

Civil Works Strategic Plan

March 2004

Goal 1: Provide sustainable development and integrated management of the Nation's water resources

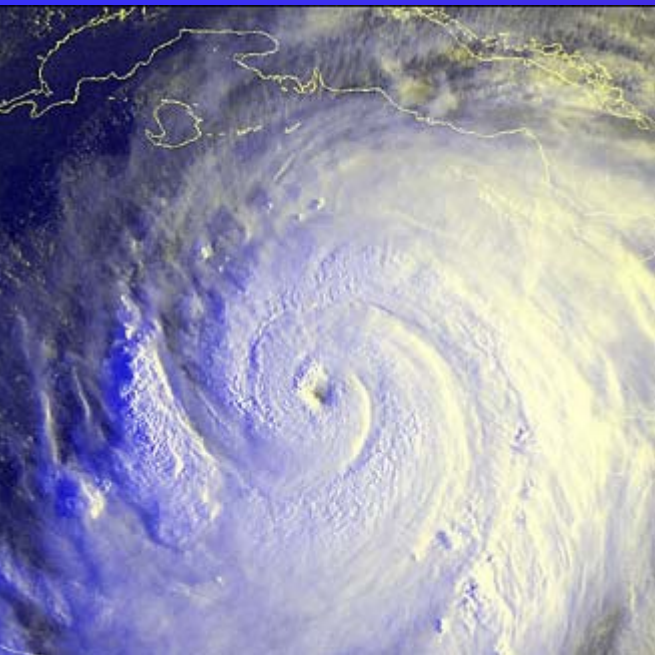
Goal 2: Repair past environmental degradation and prevent future environmental losses

Goal 3: Ensure that projects perform to meet authorized purposes and evolving conditions



Civil Works Strategic Plan

March 2004



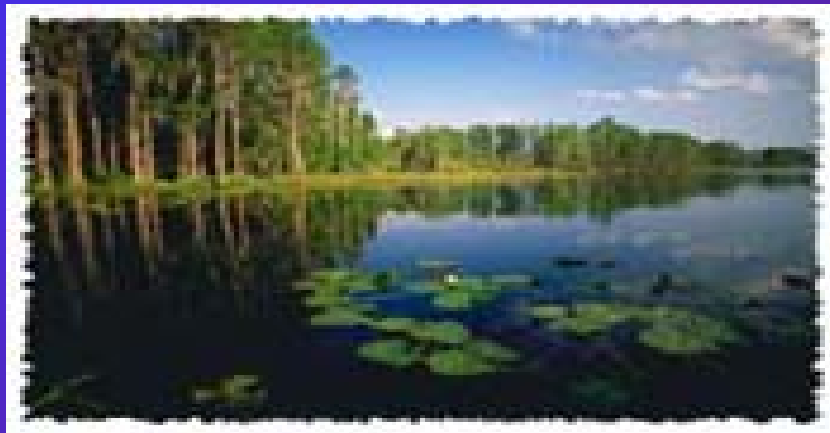
Goal 4: Reduce vulnerabilities and losses to the nation and the Army from natural and man-made disasters, including terrorism

Goal 5: Be a world-class public engineering organization

Comprehensive Everglades Restoration

Multiple Purpose Focus

Framework for restoring this ecosystem and providing for other water-related needs of the region



Comprehensive Everglades Restoration

Collaborative Partnership

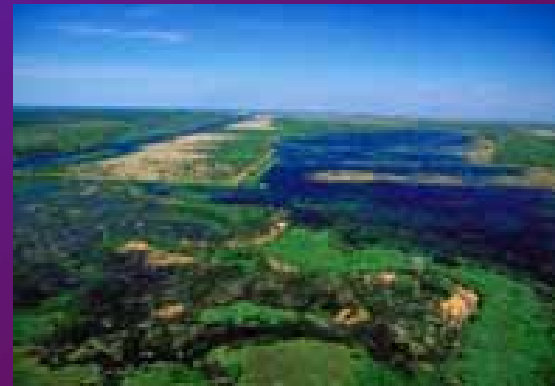


- 16 county governments,**
- over 130 municipalities**
- 2 tribal governments,**
- numerous special interests**
- 6 Metropolitan Planning organizations**
- 5 Regional Planning Councils**

South Florida Water Management District

5 State environmental and planning agencies

8 Federal agencies



Louisiana Coastal Area Ecosystem Restoration



Comprehensive Coastwide Ecosystem Restoration Feasibility Study

- **Sustain a coastal ecosystem with the essential functions and values of the natural ecosystem through development of a comprehensive plan**
- **Study will identify and explore long-range, large-scale ecosystem restoration strategies to restore and protect coastal Louisiana**
- **Corps-State partnering agreement signed in Baton Rouge, 31 Jan 05**

Proposed Actions from Coast 2050 Studies

Protect Shoreline

Keep shoreline in place in critical areas.



Maintain Shoreline Integrity

Let shore roll back, but prevent interior marsh erosion.



Maintain Sabine River Inflow



Maintain Atchafalaya Mudstream

Continue shoreline accretion along Chenier Plain.



Improve Hydrology Drainage

Lower water levels in swamps. Allow more natural flow of water. Provide flood protection if necessary.



Reduce Sedimentation in Cote Blanche Bays and Vermilion Bay and Maintain as Brackish



Lower Water Levels

Modify flow patterns to tidal marshes to the south.



Move Fresh Water South into Tidal Marshes

Move Atchafalaya waters into tidal marshes. In Chenier Plain, use water from lakes to freshen southern brackish marshes.



Beneficial Use of Dredged Material or Dedicated Dredging

Create marsh in various sites along the coast.



Maximize Land Building in Atchafalaya Delta

Separate navigation from delta. Train lobe toward Four League Bay.



Maintain Land Bridges

Preserve the three land bridges to prevent marine forces from moving inland and large lakes from joining.



Small Diversions from Mississippi River (<5,000 cfs)

Allow river water and nutrients to nourish swamps and marshes. Flood protection where needed. Provide outfall management.



Optimize Atchafalaya Flow to West and East

Use Atchafalaya sediments and nutrients to preserve marshes.



Conveyance Channel from Mississippi River to Build Deltas

Build marsh and nourish adjacent wetlands in area of highest land loss.



Solve the Mississippi River Gulf Outlet Problem

Close MRGO when deep draft container facilities are available on river. In interim, stabilize north bank, purchase oyster leases, create marsh in southern lobes of Lake Borgne.



Delta-building Diversions from Mississippi River (15,000-100,000 cfs)

Build marsh and nourish adjacent marsh. Address oyster issues.



Multi-purpose Control of Navigation Channels

Prevent saline waters from continuing to damage marshes to north. Retain fresh water.



Restore/maintain Barrier Islands, Headlands, Shorelands

Use most cost-effective means to protect these first lines of defense from storms.

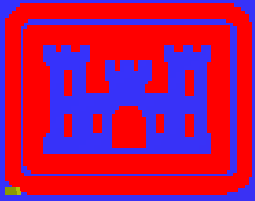


Prevent Loss of Sediments into the Deep Gulf

Separate navigation from riverine processes. Build sediment trap and pump out to create marsh.



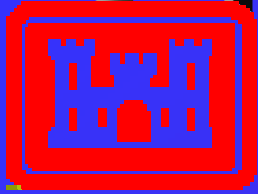
Coast 2050 Ecosystem Strategies



STUDY AUTHORITY

- ☞ HOUSE RESOLUTION 2425,
ADOPTED MAY 17, 1994**

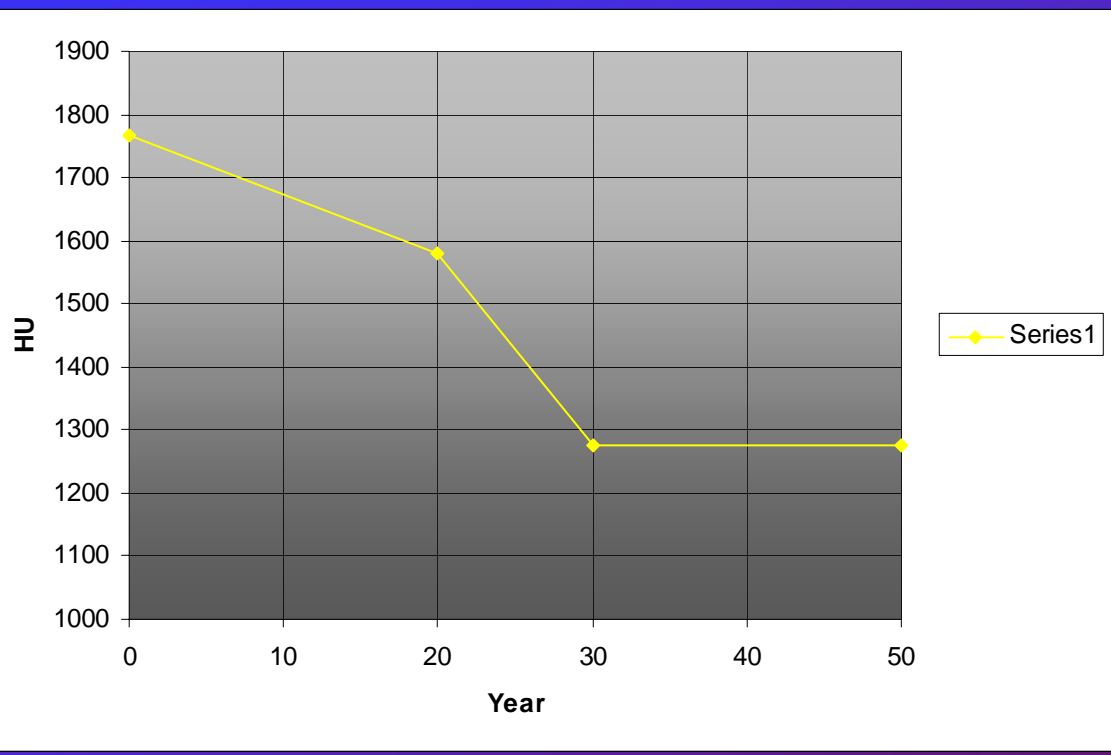
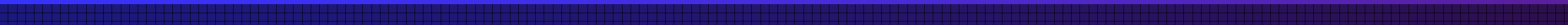
- ☞ GILA RIVER AND TRIBUTARIES,
FLOOD CONTROL ACT OF 1938**



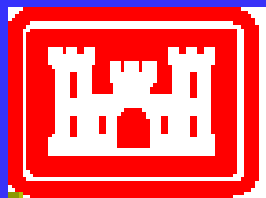
STUDY PURPOSE

- **ESTABLISH FEASIBILITY OF ENVIRONMENTAL RESTORATION, FLOOD CONTROL AND RECREATION**
- **PRESENT STUDY RESULTS AND FINDINGS**
- **SHOW COMPLIANCE WITH STATUTES, EXECUTIVE ORDERS, AND POLICY GUIDANCE**
- **DOCUMENTATION REPORT FOR DECISION MAKERS**

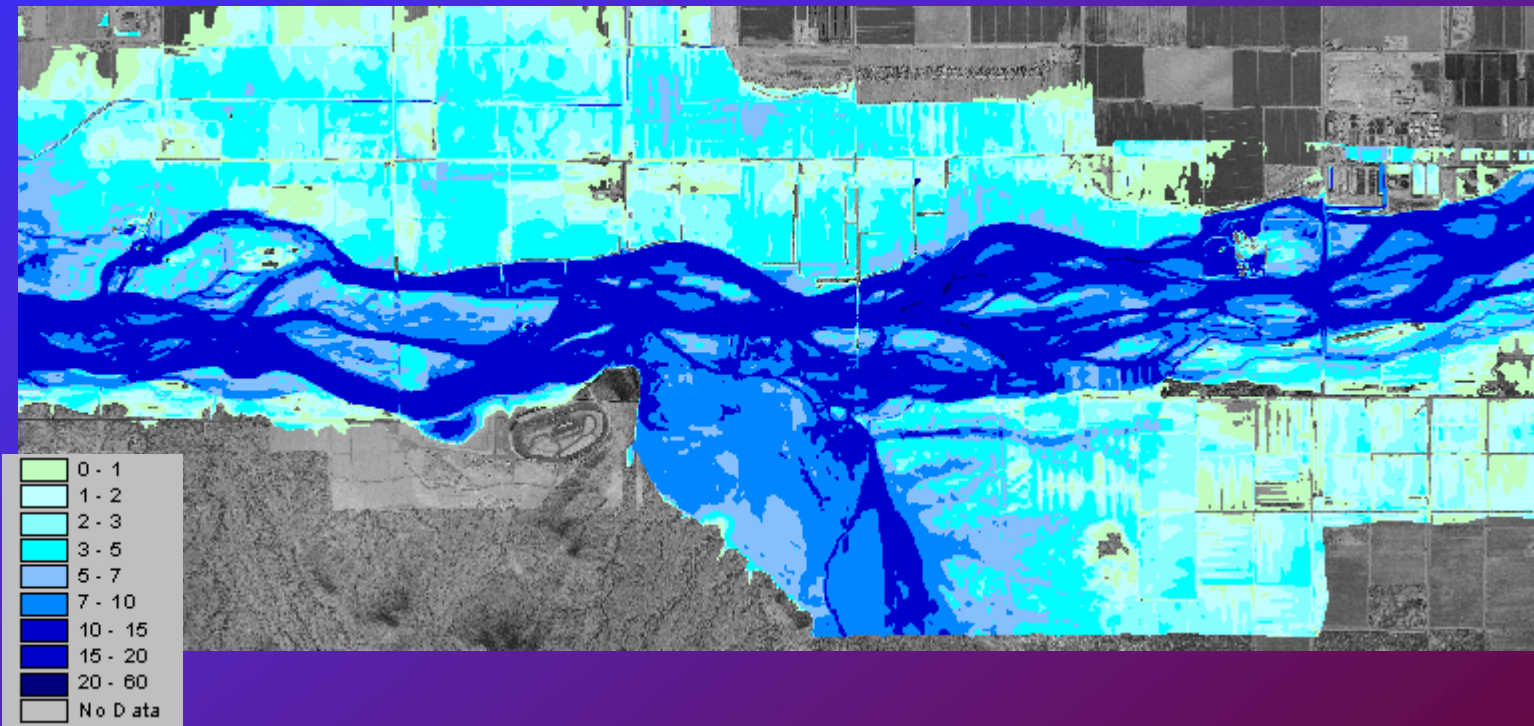
U.S. Army Corps of Engineers





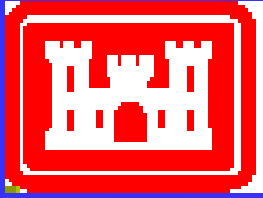


100 YEAR WITHOUT



Depth Grid

FLOOD DAMAGES



TYPE

OF UNITS

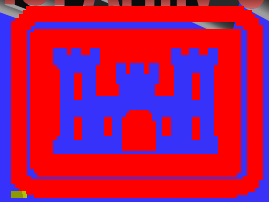
**STRUCTURES AND
CONTENTS**

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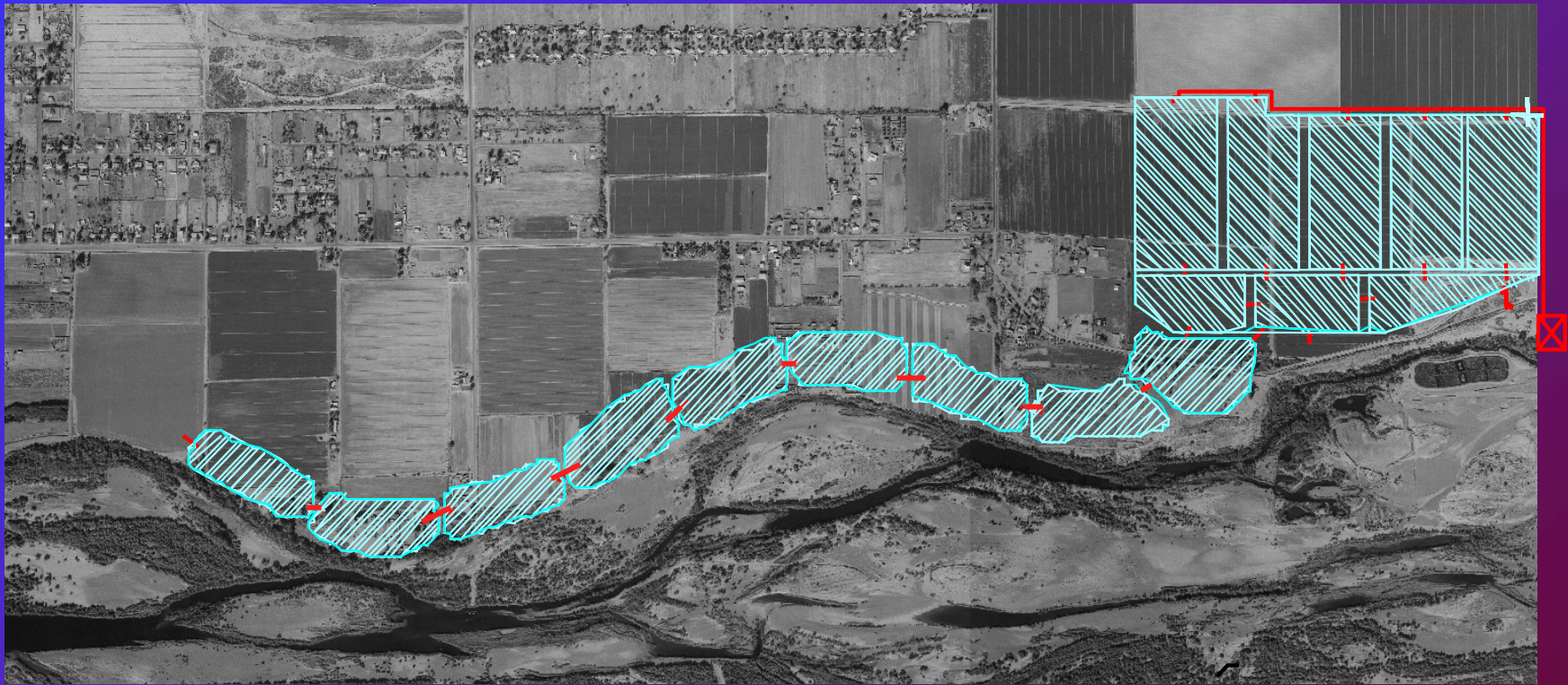
AGRICULTURE

2005 ACRES

**EMERGENCY AND
CLEAN-UP COSTS**

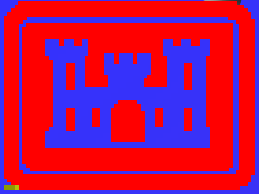


CONSTRUCTED WETLANDS

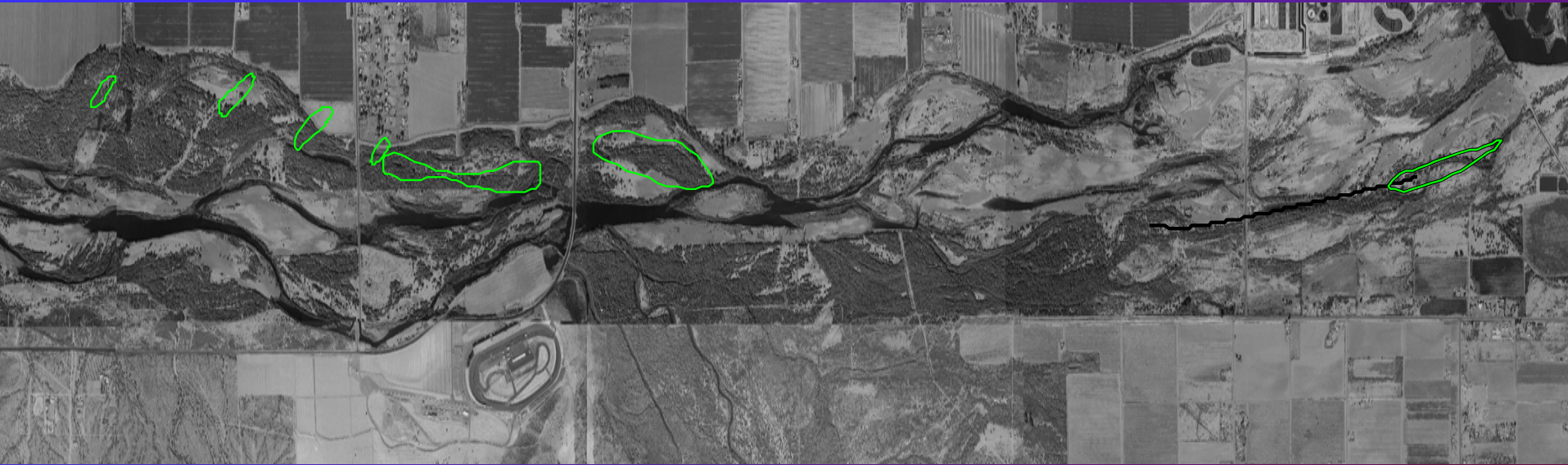




CONSTRUCTED WETLANDS

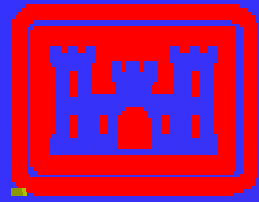


RIPARIAN CORRIDORS



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OPEN WATER MARSH



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RIO SALADO, SALT RIVER, AZ

TYPE: Construction General – Environmental Restoration

LOCATION: City of Phoenix between I-10 and 19th Avenue. City of Tempe along 1.3 miles of Indian Bend Wash and portions of the Salt River both upstream and downstream of Tempe Town Lake.

AUTHORIZATION: Water Resources Development Act of 1999

NON-FEDERAL SPONSOR: Cities of Phoenix and Tempe.

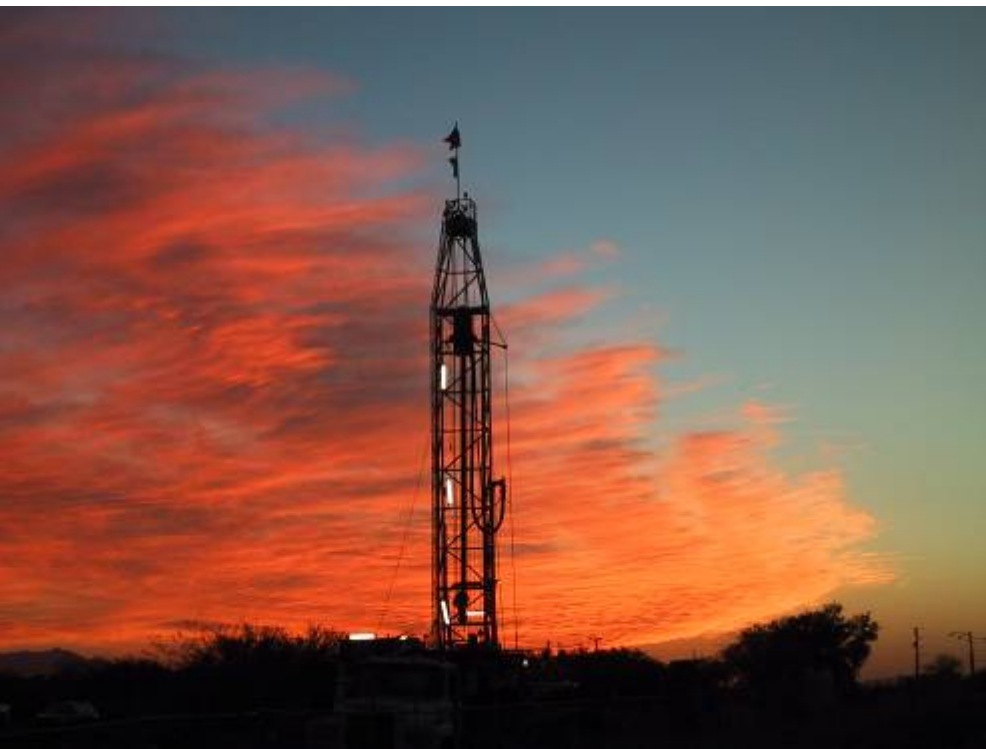
U.S. Army Corps of Engineers

Tempe Town Lake After Construction



Rio Salado Water Supply

Five Wells Installed





CONSTRUCTED WETLANDS

RIPARIAN CORRIDORS



RIO SALADO PROJECT COST

- **Total Restoration First Cost**

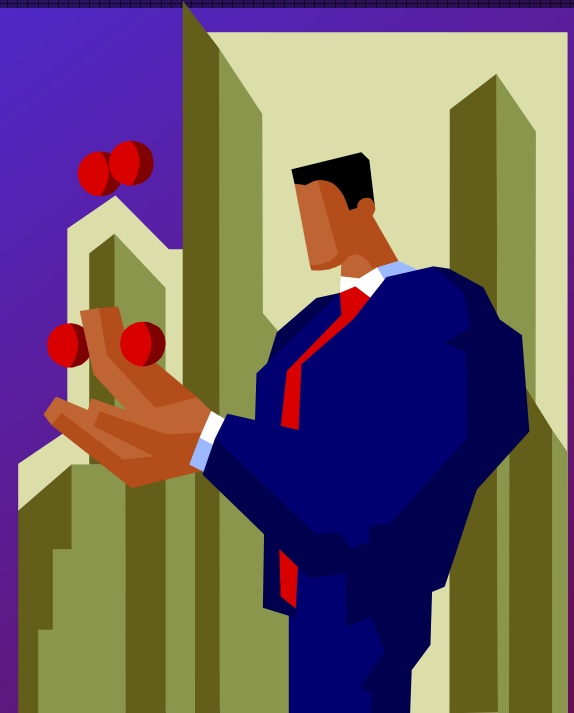
- Phoenix \$78,652,000
- Tempe \$ 6,974,000
 - Cost Sharing 65% Federal & 35% Sponsor

- **Total Recreation First Cost**

- Phoenix \$6,837,000
- Tempe \$ 726,000
 - Cost Sharing 50% Federal & 50% Sponsor

Performance Based Budgeting

- **Concept:** Fund government activities providing most benefits per tax dollar.
- **Authorized in Gov't Performance & Results Act, 1993; introduced in FY05 and FY06 budgets.**
- **Funding prioritization, amounts going to projects and activities, will vary greatly from that traditionally seen.**
- **Priority to activities best meeting performance measures**
- **No business, account or regional element guaranteed a "pot".**
- **All activities will live by their performance.**



Which Projects Make the Cut?

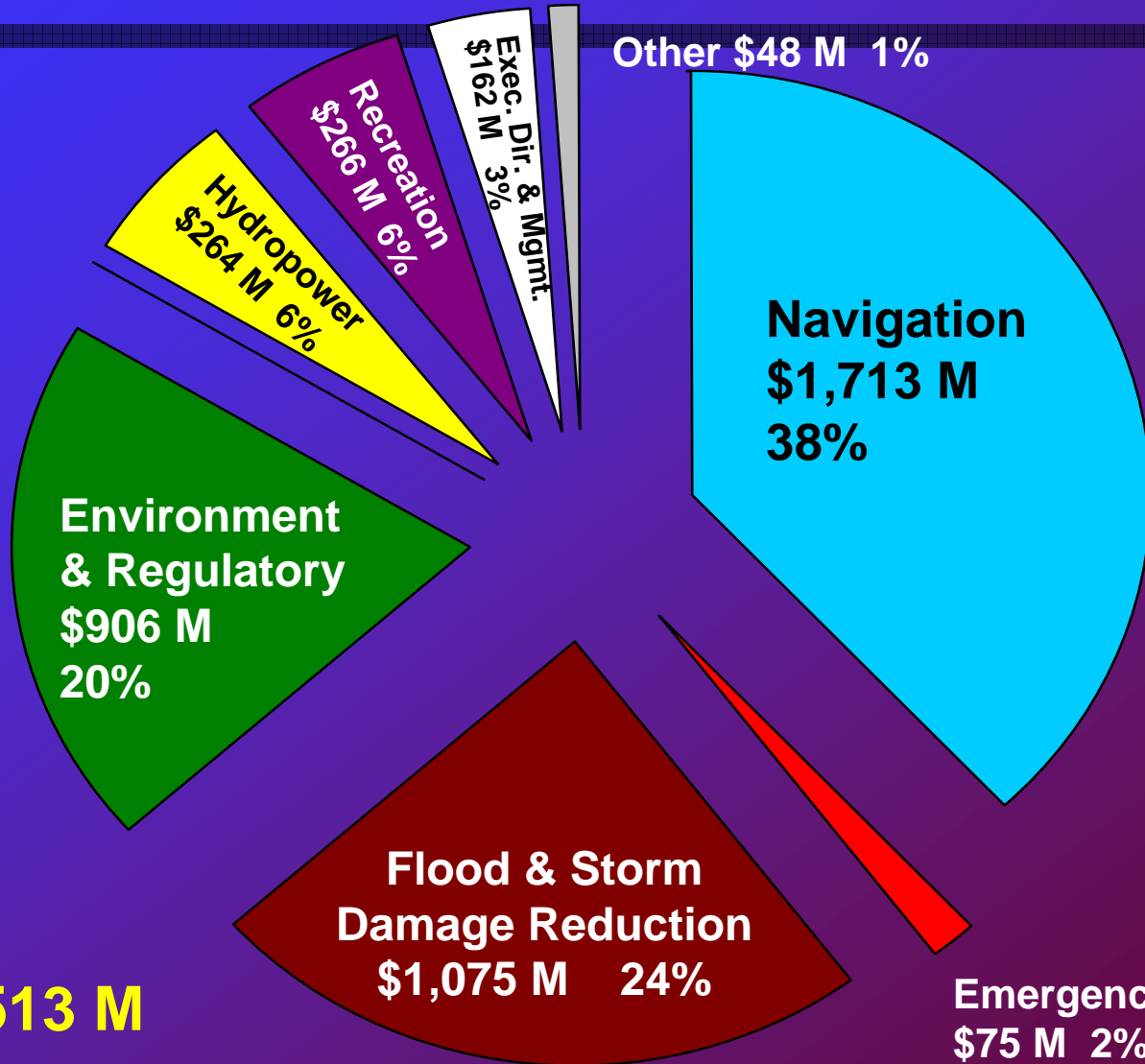
Performance Measures

- Remaining benefit-cost ratio (project specific)
- Annual Net Benefits
- % of projects recommended that apply watershed principles
- % of time navigation infrastructure with high levels of commercial traffic sustains functional purpose
- % of Corps administered mitigation acres meeting requirements

Ranking Criteria

- Remaining Benefit-Cost Ratio
- # People at risk in 100-year floodplain
- Years to complete phase (study, PED or project)
- Continue construction at last year's level, then Remaining Benefit-Cost Ratio
- Last year feasibility
- "Normal" operations high use
- Loss prevention for significant natural resources
- Endangered Species Act activities

FY 06 Budget by Business Line



Total = \$4,513 M

**Emergency Management
\$75 M 2%**

The Budget Future

- **Continued operations in a fiscally constrained environment**
- **Growing Congressional interest in 5-Year plan to focus \$ on high pay-off projects and hold back others**
- **Refine performance and prioritization measures**
- ***One Team!***



Only so much fishin' you can do in a small pool