12 YEARS OF EVERGLADES RESTORATION

Idealism, Realism, War, Elections, Recession and Reform – Where are We Going Now?

Presented by Barbara Cintron
Planning Division, Jacksonville District
U.S. Army Corps of Engineers
Presentation Outline

- First Five Years – Euphoria Tempered with a Dose of Realism
- The Learning Curve: Processes, Priorities, and Funding
- WRDA 2007
- The Fruits of Planning Adaptively
- Lessons Learned
In the Beginning: Euphoria
The Road to Comprehensive Everglades Restoration Plan (CERP) Authorization

1996
Feasibility Study of Central and Southern Florida Project Authorized

1997
Feasibility Study Start

1998
Feasibility Report Completed

1999
CERP or “Yellow Book” authorized by Congress

2000
On December 11, 2000, the President signed WRDA 2000, approving the:

Comprehensive Everglades Restoration Plan (CERP)

providing for the restoration, preservation, and protection of the south Florida ecosystem - while providing for other water-related needs of the region.
Initial Cost: 7.8 Billion Dollars!

- 68 individual elements
- 4 project types:
  - above-ground storage (reservoirs)
  - underground storage (aquifer storage and recovery)
  - re-diversion or re-routing of water
  - conveyance/removal of barriers
Comprehensive Everglades Restoration Plan

- 68 Components
  - Storage
  - STAs for water quality
  - Seepage management
  - Removing barriers to flow
  - Revised operations

- 30+ year implementation
Big Ideas
“Getting the Water Right”

Quality | Quantity

Timing | Distribution
Big Ideas

Restoration, Coordination and Verification (RECOVER)
- Scientific guidance to projects (before and after construction)
- Monitoring and Assessment Program (MAP)/ CERP-wide monitoring ($10 million dollars per year for 10 years)

Cooperative Planning Effort
- 50/50 cost share with SFWMD
- Cost share includes O&M after construction
- Active participation of Department of Interior agencies
- Multiple Federal, state, county, and stakeholder organizations collaborating in detailed project planning
More Big Ideas…

Adaptive Management

- Builds robustness into each project – verifies plan is working as expected
- Plan is conceptual - “tweaking along the way” expected

Project Implementation Reports (PIRs)

- Must include analysis of water reserved for the environment, assurances of no loss of other C&SF Project purposes (e.g., flood risk management, water supply)
- New type of report - to assure that previous C&SF project purposes would NOT be lost
Big Projects

With enthusiasm, interagency planning teams are set up to study some of the “big” projects the Plan proposes:

- South Golden Gate Estates (Picayune Strand Restoration)
- Biscayne Bay Coastal Wetlands
- East Coast Water Preserve Areas
- Indian River Lagoon-South
- Everglades Agricultural Area Storage
- Some “pilot” projects

and then....
BREAKING NEWS
TWO PLANES CRASH INTO TOWERS OF WORLD TRADE CENTER

9/11
Reality Begins to Set In...
Change Begins Almost Immediately

- 9/11 changes the national focus
- President Bush begins a government-wide response to the Al Qaeda terror threat
- More national resources are assigned to national defense
- Ecosystem restoration becomes less of a national priority
During the First Five Years...

- Administration enthusiasm for ecosystem restoration is tempered by the reality of fighting a global war on terrorism and its budgetary demands.
- Meanwhile, we are fully engaged (inside the Corps) in complicating the process of writing CERP PIRs.

Timeline:
- 2001: Early Studies Well Underway
- 2002: President George W. Bush Announces Iraq Invasion
- 2003: CERP Programmatic Regulations are Published
- 2004
- 2005
Process, Process, Process...

- The Programmatic Regulations (Pro Regs) invent special rules for CERP – for the planning, approval, and administration of projects.
- Due to the likely high price of “big” projects and the large number of stakeholders, each step in the process is slow and painful.
- Stakeholders are concerned whether their needs will be addressed.
Meanwhile, in the South Florida Water Management District…

- Stimulated by delays in WRDA passage, South Florida Water Management District took the initiative to begin construction on Corps “advanced planning” (but **NOT** Congressionally unauthorized) projects.

- State input included developing plans and specifications and initiation of construction on CERP projects that were either in advanced planning or approved but unauthorized.
Acceler8 Projects

- IRL S C-44
- Picayune Strand
- C-43 Storage Reservoir
- EAA Storage Reservoir
- Biscayne Bay Coastal Wetlands
- C-111 Spreader Canal
- WPAs
  - Site 1
  - C-9, C-11
  - Seepage Management
  - Acme B
- EAA STAs (B&C)
2004: First PIR Completed
Indian River Lagoon (IRL) - South

- PIR cost: $1.2 billion!
- 2004: The Chief’s Report recommends congressional authorization and appropriations for a $1,200,000,000 project
- 2007: Congress approves IRL-S for $1.2 billion
Indian River Lagoon (IRL) - South Project

- Recognized as one of the most ecologically diverse estuaries in the U.S.
- Stressed by wide fluctuations of salinity and high, seasonal discharges of nutrient-laden waters
- Project includes reservoirs, STAs, and conveyance canals
- Benefits the northern estuaries (St. Lucie River, Indian River Lagoon) and nearshore ocean habitat
- Complemented by better regulation of Lake Okeechobee discharges (future)
- Above-ground reservoirs and STAs will retain waters, releasing flows more slowly to the estuary, buffering discharges
C-44 Basin Components
- C-44 - Reservoir
- C-44 - Stormwater Treatment Area (East)
- C-44 - Stormwater Treatment Area (West)
- Palmar Complex - Natural Storage and Water Quality Area

C-23/24 Basin Components
- C-23C-24 - North Reservoir
- C-23C-24 - South Reservoir
- C-23C-24 - Stormwater Treatment Area
- Allapattah - Complex Natural Storage and Water Quality Area
- Cypress Creek/Trail Ridge Complex - Natural Storage and Water Quality

C-25, Northfork and Southfork Basin Components
- C-25 - Reservoir
- C-25 - Stormwater Treatment Area
- Northfork Natural floodplain Restoration
- Muck Remediation and Artificial Habitat
2005: Second PIR Completed
Southern Golden Gate Estates Project

- Project name changed to Picayune Strand Restoration
- Re-hydrates over 55,000 acres of over-drained lands proposed for a large-scale housing development in the 1950’s.
- Provides additional habitat for the extremely endangered Florida Panther
- Authorized Cost: $345,000,000 (WRDA 2007)
Picayune Strand Restoration Plan

**ELEMENTS**

- 3 Spreader Canals
- 3 Pump Stations
- Canal Plugs
- Primary All Weather Roads
- Secondary Roads
- Private Lands Boundaries
- Berm

**Elements**

- **3 Spreader Canals**
- **3 Pump Stations**
- **Canal Plugs**
- **Primary All Weather Roads**
- **Secondary Roads**
- **Private Lands Boundaries**
- **Berm**
2006: Third PIR Completed
Site I Impoundment

- Size reduced from “Yellow Book”
- Reduces seepage out of WCA-1 (Loxahatchee National Wildlife Refuge) with Site 1 storage, and reduces excess flows of fresh water to tide
- Assures protection of East Coast well fields and reduction of saline intrusion into aquifer
- Authorized cost (WRDA 2007): $ 80,840,000
Site 1 Plan (Phase 1 ARRA)

D-525N (L-40 Modifications) and Miscellaneous Features

- S-530 Spillway
- Loxahatchee National Wildlife Refuge
- Wildlife Wetland Area
- D-525N (L-40 Levee Modifications)
Only Three PIRs Completed by 2007 - Why the Delay?

- The world changed between 2001 and 2007 affecting available Federal and state funding
  - Middle East conflicts drained funds from the Federal budget
  - By 2007, migration to Florida slowed and property values no longer rose at an accelerated pace - Florida, lacking an income tax, relies heavily on ad-valorem property taxes to fund all state activities
WRDA 2007
First Water Resources Authorization and Appropriation Vehicle Since 2000

- Vetoed by President Bush
- Approved by Democratic Congress over presidential veto (late 2007)
- Three CERP projects (three PIRs) authorized
- Added additional requirements for independent (outside the Corps) project review for projects over $45 M.
Not So Big – But Still Very Important

- Some studies were terminated – no Federal interest identified (Acme Basin B and Winsberg Farms)

- Some project reports delayed – but in queue for next WRDA (C-43 Reservoir, Biscayne Bay Coastal Wetlands, C-111 Spreader Canal, Broward County WPAs)

- Some projects, e.g. Melaleuca Control, as well as ASR pilot studies, did not require further Congressional approval (under construction or finalizing reports)

- Some projects “out of sequence” but expected to develop in upcoming years, e.g., some form of reservoir in the EAA
Water Management District Construction Under Aceler8

- Picayune Strand Restoration: Prairie Canal
- C-111 Western Spreader Canal.
- Biscayne Bay Coastal Wetlands (in part)
- Everglades Agricultural Area (suspended)
- Site 1 Impoundment (plans and specifications)
Prairie Canal, Picayune Strand Restoration
Example of Outstanding Success

- One of the four existing canals in PSRP plugged by SFWMD
- Restoration was visible almost immediately upon completion of construction
Prairie Canal
Picayune Strand
Restoration
State Issues Affecting Progress

- Responding to the bursting property bubble, Governor Crist announces reduced property taxes
- All water management districts’ revenues decrease, forcing retirements and reductions in staff
- Acceler8 activities suffer proportionate reductions
  (construction does continue on C-111 Western Spreader Canal and Biscayne Bay Coastal Wetlands)
What Happened?

- Planning projects has taken longer than we anticipated; review steps have increased throughout the decade.
- Real estate costs continued to climb throughout CERP-land until the real estate bubble burst in 2008.
- New PIR requirements produced extremely lengthy planning reports that have been near-impossible to review.
Lessons Learned

- Everything costs more than we estimated in the Yellow Book.
- Cost inflation is partly a function of time passing; partly due to design improvements.
- New structural requirements (levee safety) added to costs of all reservoirs.
- Cost-efficient levees (RCC with stepped sides) may adversely impact wildlife.
Step-sided Reservoirs
Entrap Wildlife
Lessons Learned

- In a global recession, both Federal and state funding will inevitably shrink.
- It may become impractical to try to run several or multiple planning efforts at the same time.
- A lengthy planning process is not conducive to a sustainable program nor beneficial to the nation.
Re-inventing CERP Planning

- 2010: In response to grumbling over lengthy project planning, Corps senior planners (HQ) pursue a tighter process
- At the same time SFWMD’s “River of Grass” studies develop some potential solutions that integrate components in the “core” area of CERP
- Both initiatives come together in 2011 to produce...
What’s Next?
Central Everglades

- Reduce undesirable discharges to east and west coast estuaries
- Deliver “new” sources of clean water to the Central Everglades and ENP
- Restore habitat in the central Everglades, focusing on the “River of Grass”
The Goal
Questions?