Palm Beach County Water Utilities
Making of a “Green Utility”

CIMR Symposium
Local to Regional Adaptation
and Mitigation Strategies
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Palm Beach County Water Utilities

- Florida’s third largest water and wastewater utility
- Serves approximately 500,000 people with 2,000 miles of water mains and 1,500 miles of wastewater mains
- Recognized as an industry leader in reclaimed water and alternative water supply projects
- Received 20 year SFWMD Water Use Permit for innovative water supply plan
Conception of a Green Utility  
Regionalization and Conservation Rates

- 1986 Master Plan was the first comprehensive planning

- Conservation rate structure was adopted in 1986 after recommendation by the PBC WUD Citizens Advisory Board

- Southern Region Water Reclamation Facility was completed in 1991 with 4 MGD of reclaimed water capacity
Birth of a Green Utility
Alternative Water Supply

- Increased reclaimed water capacity from 4 MGD to 6 MGD in 1996
- In 1997 adopted a mandatory reclaimed water service area within a one-mile radius of the Southern Region Water Reclamation Facility
- Constructed the 39 acre Wakodahatchee Wetlands in 1997
Coming of Age as a Green Utility
20 Year Alternative Water Supply Plan

AWS Plan was adopted in 2001 and was incorporated into the SFWMD Lower east Coast Water Supply Plan

- Aquifer storage and recovery
- Expanded reclaim water
- Blending of membrane concentrate into reclaimed water
- Wetlands
150 acre created wetland to receive secondary treated wastewater

Nature Center for public education
Two boardwalks

Over 500 million gallons ground water recharge in 2007

Environmental and recreational benefits
Alternative Water Supply

- Reclaimed Water – 25 MGD
- Created Wetlands – 5 MGD
- Industrial Cooling Water Reuse for the FP&L West County Energy Center - 27 MGD
- Palm Beach County Water Utilities Water Conservation Leader in South Florida – over 13 billion gallons/year
Partnerships formed in becoming a Green Utility

South Florida Water Management District
  • Alternative Water Supply

Palm Beach County Parks & Recreation
  • Green Cay Wetlands

Palm Beach County Solid Waste Authority
  • Pelletization of Biosolids

Florida Power & Light
  • WCEC Reclaimed Water
  • Energy Performance Contracting
Reclaimed Water Filters 27 MGD for 3750 Mega Watts of Power Generation - Cooling Water used for Evaporation
Future Challenges to become a Green Utility

- Regional Water Supply
- Regional Water Storage
- Conservation
- Energy efficiency
- Reduce carbon footprint
- Climate Change
Energy Efficiency

- Comprehensive study completed by CH2M Hill in 2006
- Energy efficiency projects added to CIP budget
- O&M costs are tracked monthly for each plant
- Florida Power & Light – Energy Performance Contracting (ESCO) contract issued in 2010
Climate Change and Greenhouse Gas Reduction

- **Climate Change Paradigm Shift**
  - Reduce energy consumption
  - Consider Greenhouse gas Emissions

- **Triple bottom line**
  - Life Cycle Costs
  - Environmental Benefits
  - Social Aspects
Energy Goals (2020)

- Energy conservation 10% per customer (40kWh/customer)
- Alternative “Green Energy” 5% per customer (20kWh/customer)
- Savings $1.5M per year in electrical costs
Energy Reduction Initiatives

- Miex Treatment to replace energy intensive ozone system in 2011
  - Energy conservation (6kWh/customer)
  - Improved water quality will reduce flushing
Energy Reduction Initiatives

- Southern Region Water Reclamation facility

- Effluent pumping improvements in 2011

- Energy conservation (4kWh/customer)
Renewable Energy Initiatives

- SRWRF biogas
  - Renewable energy (18kWh/customer)
- Closing the recycling loop:
  - Reclaimed Water for irrigation
  - Biosolids – pelletization for fertilizer
  - Biogas – generate electricity
Best Water, Best Service, Best Environmental Stewardship