

BROWARD COUNTY CAPITAL BUDGET

PROGRAM
General Capital

PROJECT
Naturescape Program

Funding Summary

| | <i>Actual Expenses Through FY 07</i> | <i>Modified FY 08 Budget</i> | FY 2009 - 2013 | | | | | | <i>Total</i> |
|-------------|--------------------------------------|------------------------------|-----------------------|-----|------------------------|----|-----------------|-----|--------------|
| | | | <i>Design FY</i> | | <i>Construction FY</i> | | <i>Other FY</i> | | |
| | | | | | | | | | |
| Naturescape | 107,179 | 167,520 | 0 | --- | 72,000 | MY | 0 | --- | 346,699 |

Project Comments

- The Naturescape program provides for the replacement of invasive exotic plants at County-owned facilities with native plantings, which generally require little water and are naturally pest resistant. The program also promotes xeriscaping, which uses plants that have low water requirements and are compatible with the environment.
- \$55,800 is provided in fiscal years 2009-2011 to continue the creation of landscapes that conserve water, protect water quality and create wildlife habitat at County facilities.

Funding Schedule

| <u>Funding Sources</u> | <u>FY 09</u> | <u>FY 10</u> | <u>FY 11</u> | <u>FY 12</u> | <u>FY 13</u> | <u>TOTAL</u> |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| General Construction Revenues | 32,200 | 21,800 | 18,000 | 0 | 0 | 72,000 |
| TOTAL | 32,200 | 21,800 | 18,000 | 0 | 0 | 72,000 |
| <u>Funding Requirements</u> | | | | | | |
| Landscaping | 32,200 | 21,800 | 18,000 | 0 | 0 | 72,000 |
| TOTAL | 32,200 | 21,800 | 18,000 | 0 | 0 | 72,000 |

BROWARD COUNTY CAPITAL BUDGET

PROGRAM

General Capital

PROJECT

Broward County Integrated Water Resource Plan

Funding Summary

| | <i>Actual Expenses Through FY 07</i> | <i>Modified FY 08 Budget</i> | FY 2009 - 2013 | | | <i>Total</i> |
|--------------------------------|--------------------------------------|------------------------------|-----------------------|------------------------|-----------------|--------------|
| | | | <i>Design FY</i> | <i>Construction FY</i> | <i>Other FY</i> | |
| Integrated Water Resource Plan | 1,532,253 | 3,660,782 | 1,626,000 MY | 600,000 MY | 0 --- | 7,419,035 |

Project Comments

- In 1997, Broward County initiated the County-wide Integrated Water Resource Program (IWRP) in order to increase the efficiency of local water resource management to meet the current and future water supply needs of the urban and natural systems.
- The earliest phase of IWRP implementation consisted of data collection and analyses, needs assessments, hydrologic model development, and the identification of priority capital improvement projects. Results include the quantification of water deliveries required for natural system rehydration, the generation of a robust County-wide hydrologic model; and the identification of secondary canal improvement projects for reuse of stormwater, and other source waters, to increase recharge of the Biscayne Aquifer and abatement of saltwater intrusion. To ensure consistency with state and regional water management objectives, and the Everglades restoration plan, the objectives and projects pursued under the IWRP will continue to be updated to reflect changes in the Lower East Coast Water Supply Plan, the CERP project implementation schedule, and water policies.
- As part of Phase III of the planning process, projects that support optimization of local water resources and the development of alternative water supplies are being implemented through partnerships, with emphasis on hydrologic modeling and technical analyses to guide planning efforts and resource management, the construction of secondary canal interconnections, and water conservation programs. Such projects support alternative water supply strategies and allow for more efficient local water resource management through aquifer recharge, natural system hydration, and saltwater abatement to protect well fields. These efforts serve to reduce urban reliance on the regional system.
- IWRP capital projects presented as part of the Natural Resource Planning and Management Division's FY 2009 budget will provide water resource benefits that protect and/or generate 73 million gallons of potable water per day through wellfield recharge, saltwater management and water conservation activities. This figure is approximately 27% of the total water currently withdrawn from wellfields within Broward County.
- In prior fiscal years, the County funded the development of a variable density model for northern Broward County to better understand the effects of climatologic and operational influences on saltwater intrusion into the Biscayne Aquifer and identify possible mitigation strategies. Between FY 2009 and FY 2010, the County will invest an additional \$260,000 to expand this model to central Broward County with the intent to complete the southernmost component in the future.

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- The Alternative Water Supply aquifer recharge feasibility and design study was funded in FY08. Studies to increase recharge of the Biscayne Aquifer in areas subject to saltwater intrusion will be undertaken. This project includes the construction of a recharge well and installation of an infiltration trench, with associated pumps, wiring, valves, and open hole tests. The rate of recharge water infiltration will be measured to establish the viability of aquifer recharge via infiltration. The results of this project could produce 5 million gallons per day of offset to withdrawals from the Biscayne Aquifer. The project is scheduled for completion in 2009. The South Florida Water Management District will provide a cost share of this project and the City of Pompano Beach will provide in-kind services.
- In FY 2008, the County also provided \$463,050 to support geotechnical analysis of the Upper Floridan Aquifer with benefits for alternative water supply planning. The project will identify permeable zones and semi-confining layers and the extent, thickness, porosity, and permeability, and distribution of permeability within these layers. This information is expected to help guide the development and operation of Floridan well aquifer storage and recovery systems. Additional funding is provided in FY 2011 to collect additional geotechnical data for refining the County-wide mapping of the Upper Floridan, as needed.
- Broward County continues to provide funding to facilitate the feasibility analysis and design of water management projects that have sub regional water supply benefits and to provide an incentive for interlocal partners and the South Florida Water Management District (SFWMD) to support the construction phase of the projects. Funding for the design of additional water management and alternative water supply projects is provided in FY 2009-FY 2013.
- Wetlands construction projects are programmed from FY 2010 to FY 2013. These projects consist of the construction of pipelines and installation of pumps which allow for the conveyance of water from water sources to wetlands systems in need of additional hydration, and provide the added benefit of enhancing recharge to the Biscayne Aquifer.
- These IWRP efforts serve to reduce urban reliance on the regional system consistent with the Regional Water Availability Rule adopted by the South Florida Water Management District in April 2007. This rule restricts urban reliance on the regional system and the Biscayne Aquifer to levels measured prior to April 2006 and thus requires the development of alternative water supplies to meet future water supply needs.

Funding Schedule

| Funding Sources | FY 09 | FY 10 | FY 11 | FY 12 | FY 13 | TOTAL |
|-----------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| General Construction Revenues | 330,000 | 480,000 | 716,000 | 350,000 | 350,000 | 2,226,000 |
| TOTAL | 330,000 | 480,000 | 716,000 | 350,000 | 350,000 | 2,226,000 |
| <b style="text-decoration: underline;">Funding Requirements | | | | | | |
| Variable Density Model Development | 130,000 | 130,000 | 0 | 0 | 0 | 260,000 |
| Aquifer Storage & Recovery | 0 | 0 | 366,000 | 0 | 0 | 366,000 |
| Alternative Water Supply | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 | 1,000,000 |
| Wetlands Construction | 0 | 150,000 | 150,000 | 150,000 | 150,000 | 600,000 |
| TOTAL | 330,000 | 480,000 | 716,000 | 350,000 | 350,000 | 2,226,000 |