

City of Boca Raton Water Use Permit Modification/Renewal



Marjorie G. Craig, P.E.

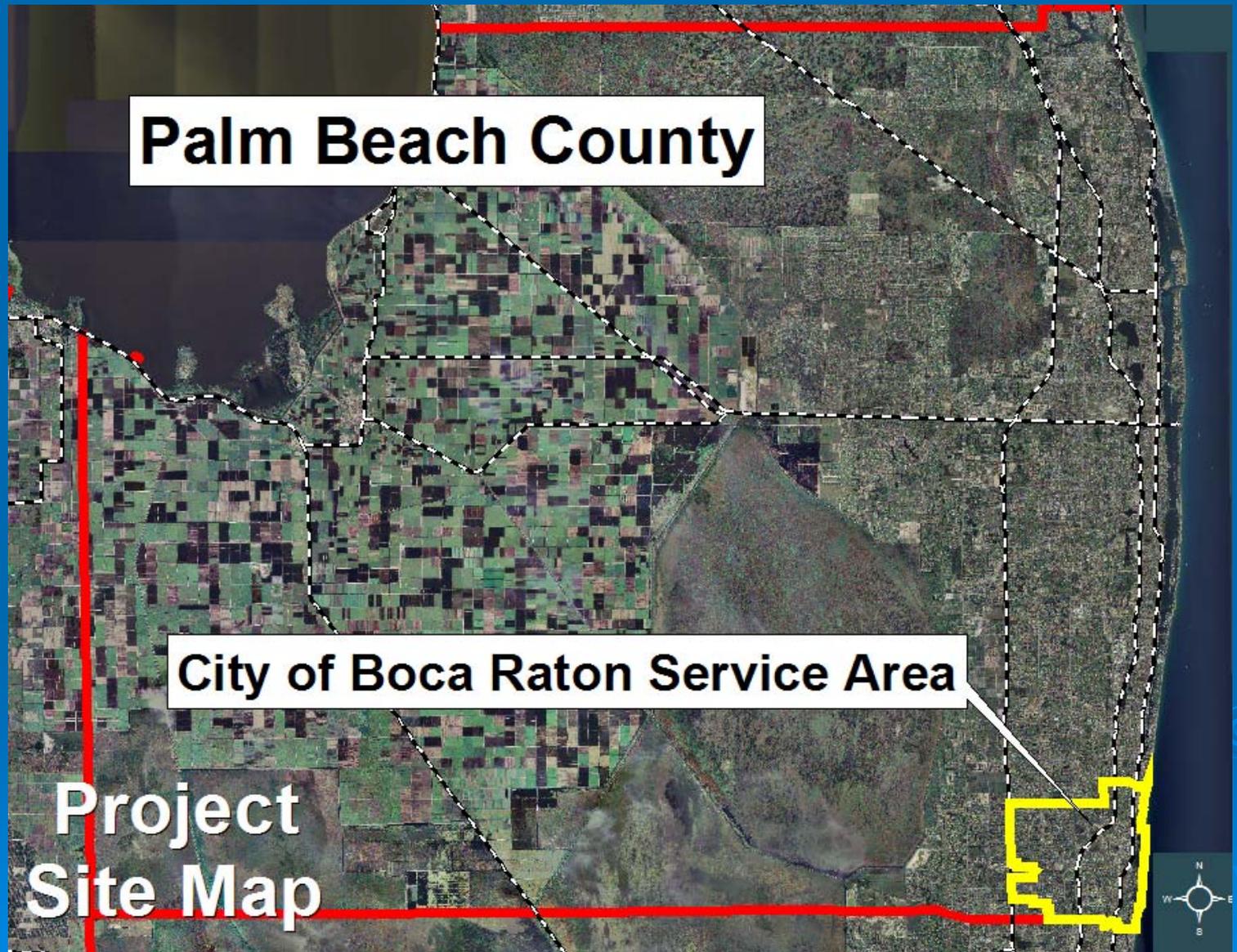
Director, Water Supply Department

Governing Board - July 10, 2008



sfwmd.gov

Project Site Map

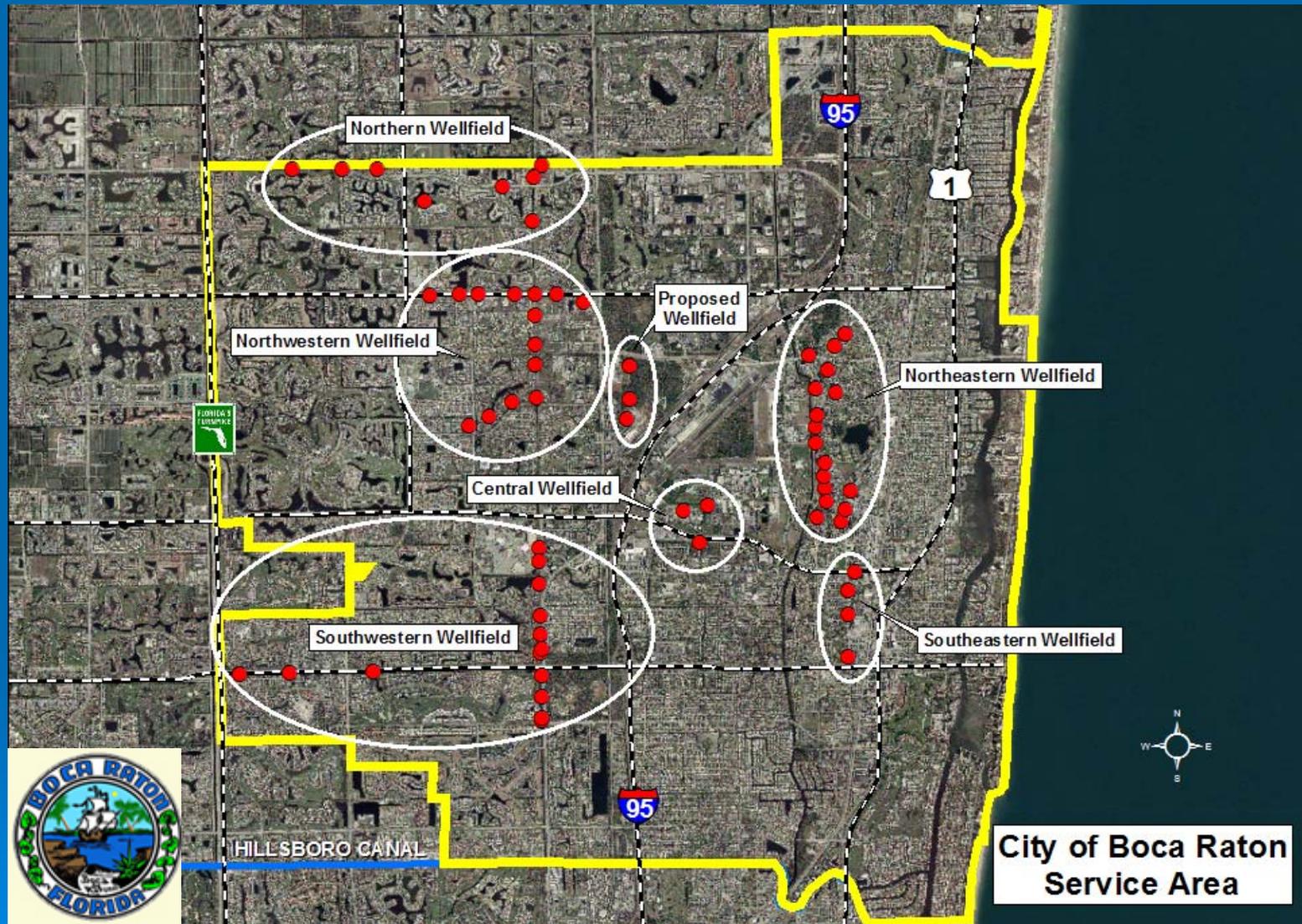


Palm Beach County

City of Boca Raton Service Area

**Project
Site Map**

Project Site Map



City of Boca Raton Utilities Permit Summary



Water Resource (Aquifer)	Existing (Annual Average) * MGD	Proposed (Annual Average) * MGD	Expires Years
Surficial Aquifer System - Biscayne	48.60 (Base Condition)	51.53 (Add'l 2.93 MGD - offset by transferring large users to reclaimed water)	20
TOTAL (MGD)	48.60	51.53	20

Reclaimed *(MGD)	5.24	11.54	(FDEP permit)
------------------	------	-------	---------------

* MGD - Million Gallons Per Day

Customers Converting from Potable Irrigation to Reclaimed

➤ Scheduled transfers in permit from Biscayne Aquifer irrigation to reclaimed water:

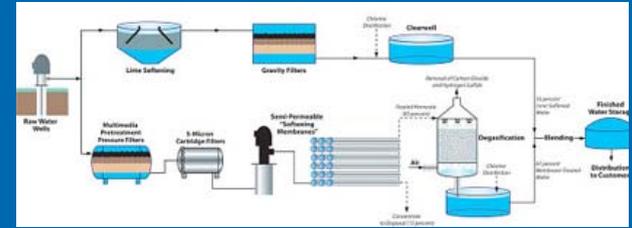
- Royal Palm Yacht Club, Lynn University 1.7 MGD
- Etheridge Middle School 0.1 MGD
- Henderson School, Lynn University (additional), Broken Sound West, Florida Atlantic University 2.4 MGD
- Patch Reef Park, Broken Sound East, Patch Reef Estates 1.0 MGD
- Woodfield Country Club 1.0 MGD
- Arvida – Broken Sound 0.1 MGD

Total potable irrigation converted to reclaimed

6.3 MGD



Boca Raton Utilities



- Indoor water use per capita 125 GPCD, unadjusted/untreated water use per capita 376 GPCD
- Treatment losses for membrane – 15%
- Large-user water sales
 - Florida Atlantic University – 29,000 people
 - Lynn University
 - Town Center Mall
- A city ordinance prohibiting private irrigation wells; all irrigation is accomplished with potable water

Boca Raton Utilities



- Existing Ordinance limiting irrigation to 3 days/wk
- A top performer in water shortage compliance
- 770 existing reclaimed customers with 5.2 MGD reclaimed water use in 2006
- Transfer of customers from potable water irrigation to reclaimed where possible
- Reclaimed use will increase to 11.54 MGD

Water Conservation Plan

- Permanent Irrigation Ordinance
- Xeriscape requirements
- Ultra-low Volume Plumbing Fixture Ordinance
- Water Conservation Rate Structure (for potable AND reclaimed)
- Leak Detection
- Rain Sensor Device Ordinance
- Water Conservation Education Program
- Water Conservation Plan Updates



*Irrigation-Weather
Sensor Station*



Boca Raton

Meets Water Use Permitting Criteria

- **Meets Regional Water Availability Rule**
 - Allocation – as users are converted from potable to reclaimed, the users current allocation will be retired and/or transferred to Boca Raton
 - Boca Raton is paying for reclaimed pipes run to these new users
 - Net reduction in water use from regional water supply over the life of the permit
- **Boca is proactive with efforts to eliminate ocean outfall – even before legislation**

City of Boca Raton Water Use Permit



Staff Recommends Governing Board Approval

“Approve the modification of Water Use Permit 50-00367-W (Application No. 060411-13), for the City of Boca Raton to increase its allocation from the Biscayne Aquifer to 18,811 million gallons per year, and counteract the increase by reducing or retiring Biscayne aquifer use through provision of reclaimed water, through June 2028, subject to 31 limiting conditions.”

City of Boca Raton Utilities Permit Summary



CBRU	Existing	Projected	Planning Horizon (Years)
Population (people)	128,107	137,100	20
Per Capita-Source Water Unadjusted (GPCD)*	382 (1988- 387)	376 Large-user water sales to FAU, Lynn University & Town Center Mall Irrigation ordinance	20

*GPCD - Gallons Per Capita per Day

Boca Wastewater Treatment Plant

Operational Since 1974

- **Ocean outfall disposal permit 17.5 MGD**
- **Total wastewater effluent (treated) – permitted 17.5 MGD – current annual average treated 15 MGD**
- **11.70 MGD current ocean outfall discharge**
 - **4.5 MGD of this from drinking water plant membrane concentrate**
 - **7.2 MGD of this from wastewater plant**
- **5 to 7 MGD of wastewater currently reclaimed for use**
- **Reclaimed water system will be expanded by at least 6.3 MGD**

Reclaimed Water

➤ IRIS

- *In-City*
- *Reclaimed*
- *Irrigation*
- *System*

➤ **Approximately 5.24 MGD (2006)**

➤ **770 Customers**

- Single- family homes,
- Florida Atlantic University