

Miami-Dade Water and Sewer Department

Historical Context

- WASD created in 1972 as a regional utility by merging City of Miami and County systems
- All investor-owned utilities acquired
- Municipal utilities are wholesale customers
- WASD is largest utility in Florida and top 10 in the nation
- FY 10-11 Budget: Operating, \$648.5 M; Capital, \$563.8 M; Staff: 2624 positions

MDWASD Overview

- Largest water and sewer utility in Florida, serving more than 2.3 million residents
- Water System:
 - 3 large regional and 5 small water treatment plants
 - Supplying 313.3 million gallons per day (MGD)
 - 90% of the County's public water supply
 - Per capita water use 140 gpcpd
 - 420,367 retail customers
 - 15 wholesale customers
 - 100 water supply wells
 - 7,739 miles of pipes, 120,000 valves
 - 37, 214 fire hydrants
 - Nationally Recognized Leak Detection Program

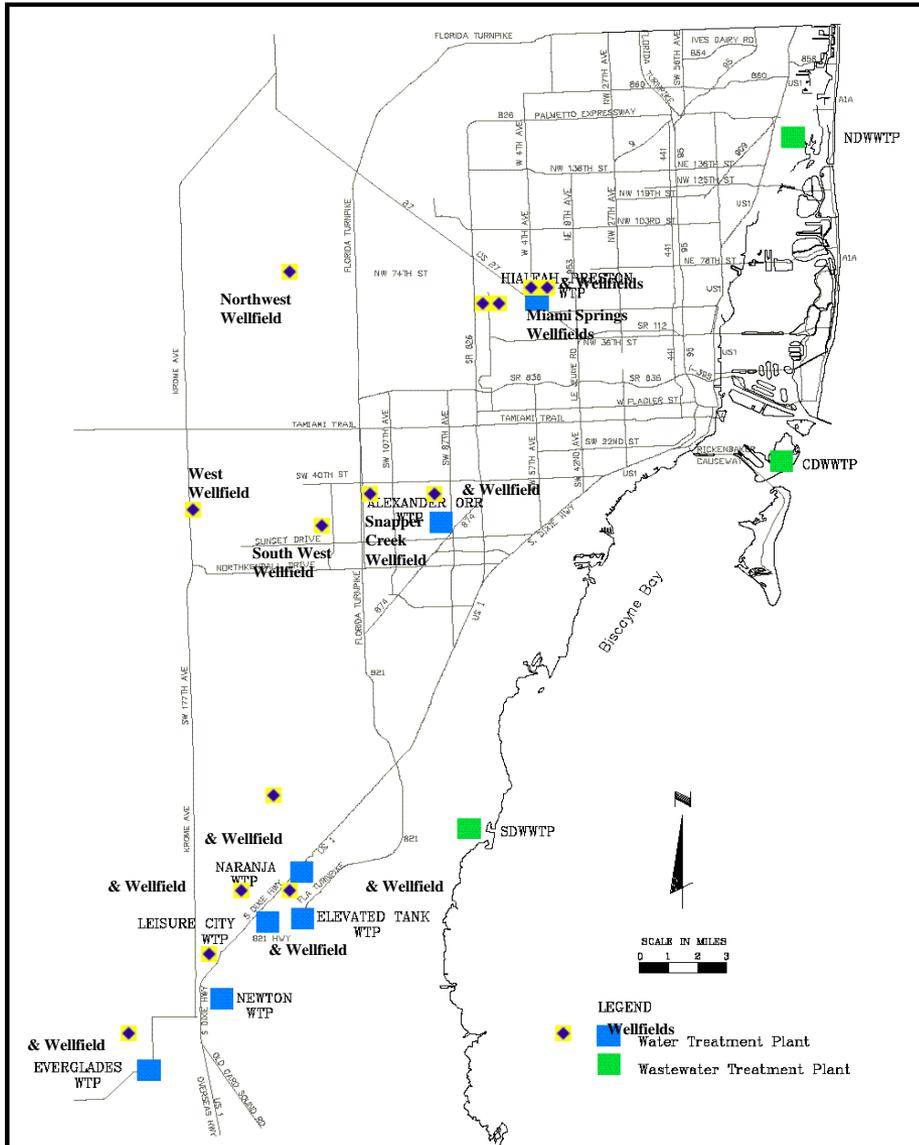


MDWASD Overview (continued)

- Wastewater System:
 - 3 wastewater treatment plants
 - 2 ocean outfalls and 21 deep injection wells
 - Collecting, treating, and disposing 294 MGD
 - 338,368 retail customers
 - 12 wholesale customers
 - 6,231 miles of mains and laterals
 - 1,039 sewer pumps stations
 - Reusing 13 MGD of wastewater
 - System Wide I/I Program



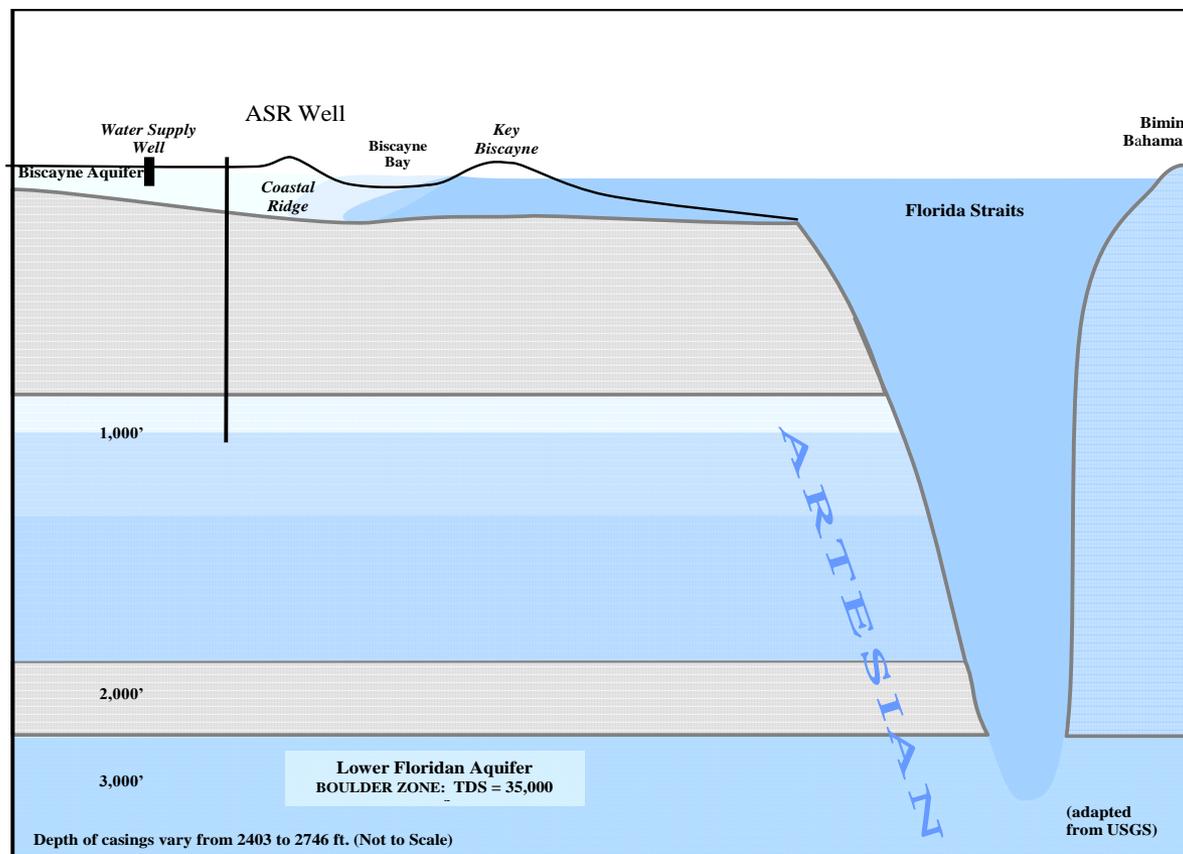
MDWASD Water & Wastewater Treatment Facilities



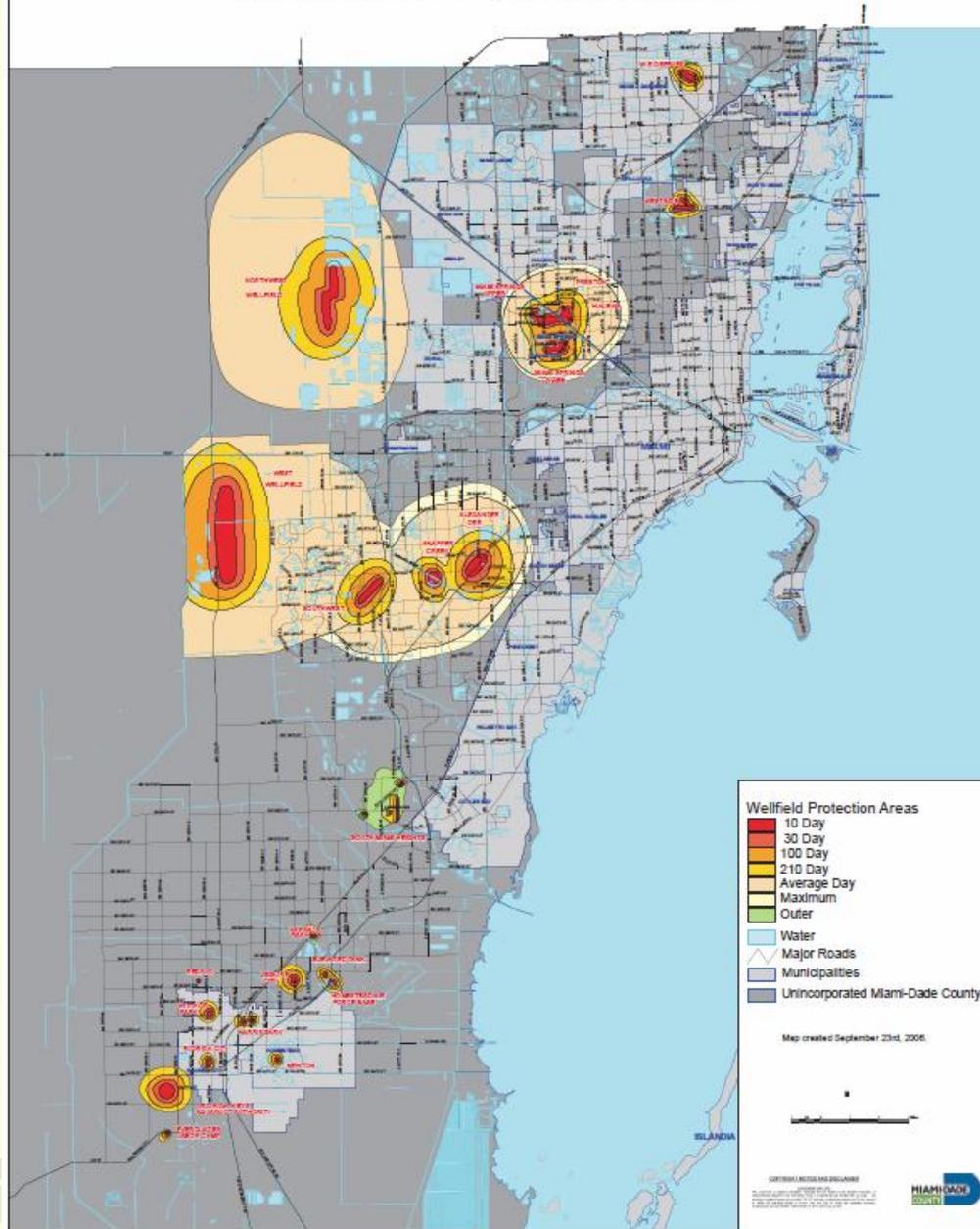
MDWASD - Water and Wastewater
Treatment Plant Locations

Figure
1

Generalized Cross-Section of the Biscayne and Floridan Aquifers



Miami-Dade County Wellfield Protection Areas



Alexander Orr WTP



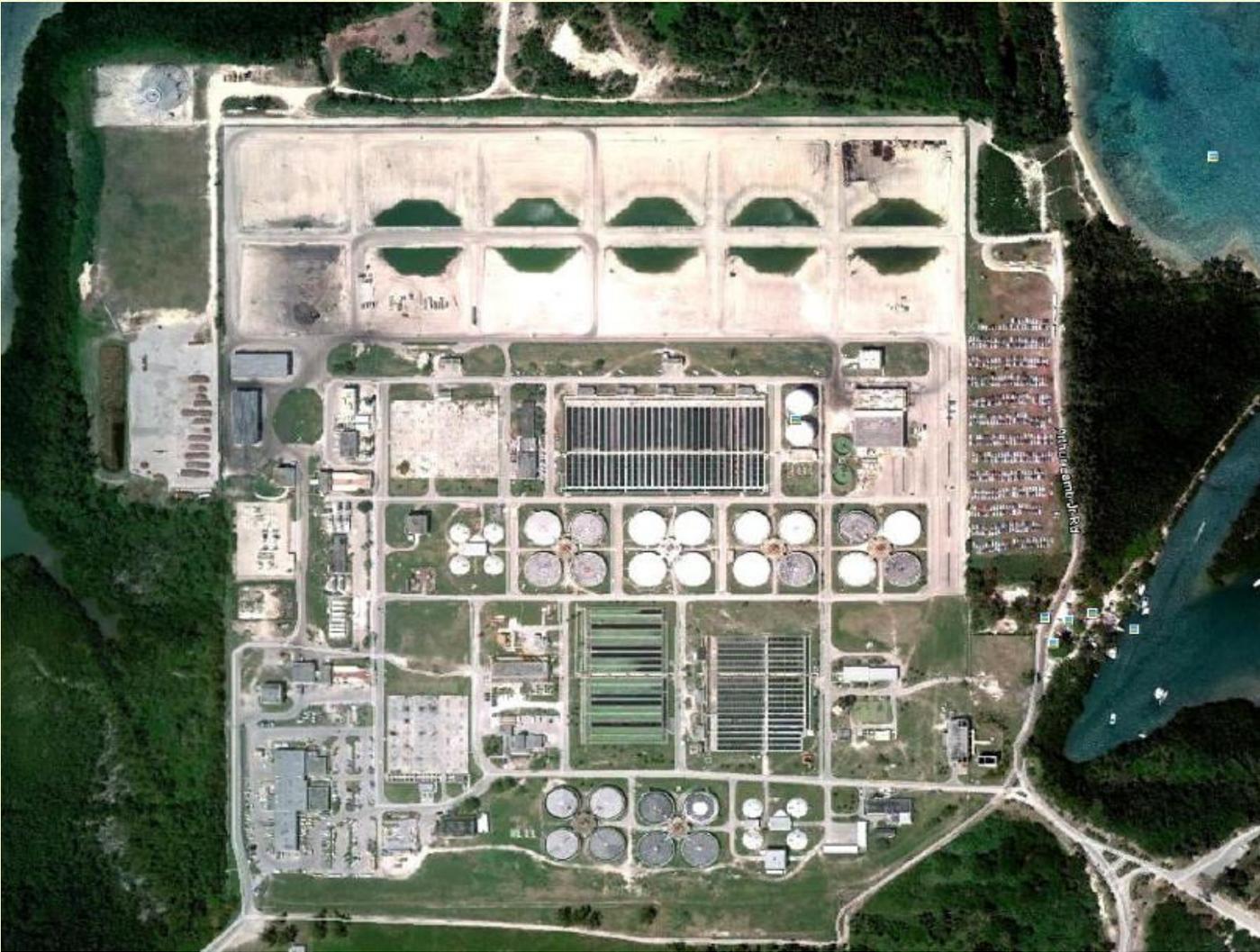


Hialeah/Preston WTP

North District Wastewater Treatment Plant



Central District Wastewater Treatment Plant



South District Wastewater Treatment Plant



Major Issues

- Aging (and failing) pipelines and plants
- Regulatory mandates (alternative water supply, ocean outfalls, wastewater reuse, peak flow management)
- Fixed costs and reduced demands
- Financial Constraints: Reserves, Operations, Capital

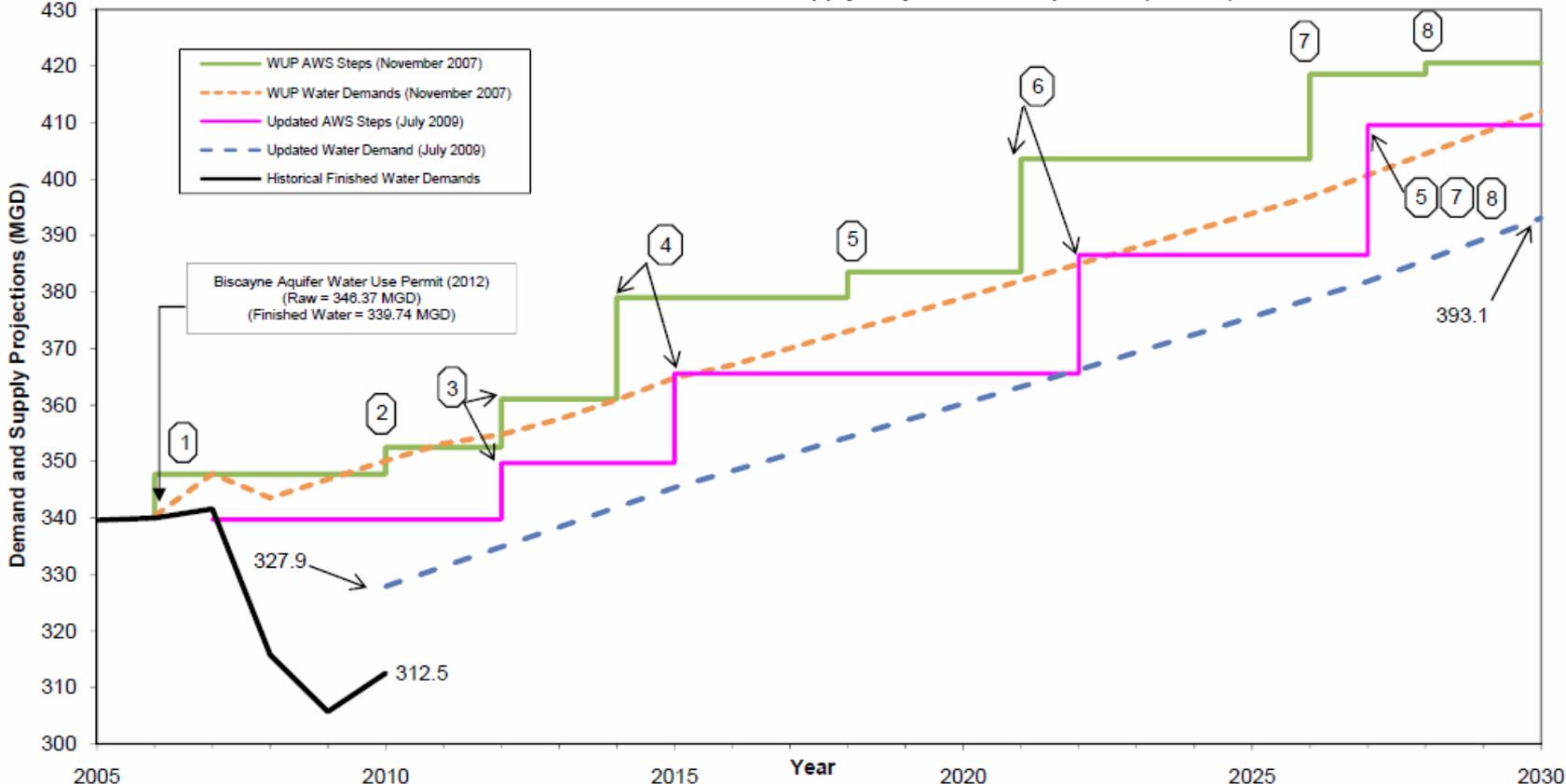
Major On-Going Projects

- Assess and Replace Large Diameter Pipes
- High Level Disinfection at South District Wastewater Plant
- Relocation of Pipelines under Gov't Cut for Seaport Dredging
- Hialeah Reverse Osmosis Water Plant
- South Miami Heights Water Treatment Plant
- Additional Water Treatment at NW Wellfield

Longer Range Bond Funded Projects

- Wastewater Plant upgrades to remove outfalls from service and provide required reuse
- Water and Wastewater facilities to meet 20 year demand projections
- Wastewater Pump Station upgrades to meet peak flow requirements
- Reduce safety risks from transporting and storage of gaseous chlorine
- Replace deficient small diameter pipes
- More than \$14 billion in capital needs identified over the next 20 years

MDWASD Finished Water Demands and Water Supply Projections Comparison (7/29/10)



- AWS Projects:
- | | |
|--|--|
| 1. Floridan Aquifer Blending at Alex-On WTP (7.2 MGD, \$8.4M) | 5. Hialeah Floridan Aquifer R.O. W.T.P. Phase 2 (5.0 MGD, \$25.6M) |
| 2. Floridan Aquifer Blending Wellfield at Hialeah/Preston (4.7 MGD, \$10.2M) | 6. West District W.R.P. Canal Recharge Ph 2 (21 MGD, \$632.0M) |
| 3. Hialeah Floridan Aquifer R.O. W.T.P. Phase 1 Capacity (10.0 MGD, \$116.0M, Operational 2/29/12) | 7. West District W.R.P. Canal Recharge Ph 3 (16 MGD, \$594M) |
| 4. South Distr. W.R.P. Groundwater Recharge Ph 1 (18.6 MGD, \$359.0M) | 8. New Upper Floridan RO WTP Phase 3 (2.0 MGD, \$9.7M) (Capacity = 17.5 MGD) |

Conclusions

- The utility system is used by virtually all residents and visitors everyday
- Most of the system is more than 40 years old
- Regulatory requirements in addition to system condition are driving capital needs, which will substantially increase operating costs
- Economic growth cannot occur without a viable utility system