

Executive Summary

The Update to the Miami-Dade Water and Sewer Department's (MDWASD) 20-Year Water Supply Facilities Work Plan is prepared as required by Section 163.3177(6)(c)3 of the Florida Statutes. Said statutory provision requires all local governments to adopt a water supply work plan that identifies the alternative water supply projects, traditional water supply projects and conservation and reuse measures necessary to meet projected water demand. The work plan is to be updated, at a minimum, every five years and within 18-months of an adopted update to the regional water supply plan. The Lower East Coast (LEC) Regional Water Supply Plan was adopted by the South Florida Water Management District Governing Board in September 2013.

The Water Supply Facilities Work Plan Update presents MDWASD's water supply systems and provides a plan for implementing water supply facilities, including the development of traditional and alternative water supplies necessary to serve existing and new development.

This Water Supply Facilities Work Plan Update includes the following primary sections:

- Section 1 - Introduction
- Section 2 – Water Service Area
- Section 3 – Existing Water Supply Facilities
- Section 4 – Population and Water Demand Projections
- Section 5 – Planned Water Supply Facilities
- Section 6 – Climate Change and Sea Level Rise Plan

The County's projected finished water demands are now significantly lower than anticipated when the first 20-year water use permit application was submitted to South Florida Water Management District (SFWMD) in 2007. The updated water demand projections have resulted in a 71 million gallons per day decrease by the year 2030. This demand reduction has eliminated the anticipated supply shortages which were the basis for an ambitious schedule of several costly alternative water supply projects which are no longer required or needed. As such, reuse projects to address water supply have been eliminated. However, MDWASD will be implementing a total of 117.5 mgd of

reuse to address the Ocean Outfall Legislation which includes 27.6 mgd of Floridan Aquifer Recharge and up to 90 mgd of reuse water to FPL for Turkey Point Units 5, and 6.

The decrease in water demands has been a result of the successful implementation of the County's Water Conservation Plan, and new population projections based on the 2010 Census. Through 2013, a total of 11.2 mgd have been saved through the implementation of the Water Conservation Plan Best Management Practices. Additionally, Miami-Dade County has enacted water use efficiency-legislation including permanent landscape irrigation restrictions, landscape ordinances requiring Florida Friendly landscaping in new construction, in right of ways, and the installation of high efficiency plumbing fixtures in new construction

Based on the decrease in water demands, MDWASD submitted an application for modification and extension of the 20-year Water Use Permit (WUP) on June 20, 2014. The requested modification to the WUP included new population data, revised water demand projections and alternative water supply projects to support water demands through the year 2033. The alternative water supply project include a new South Miami Heights Reverse Osmosis Water Treatment Plant with a capacity of 17.45 mgd. This update to the Water Supply Plan reflects the water supply projects required per the WUP Modification request, which is anticipated to be approved by November 2014.

In addition, MDWASD's evaluation and planning for sea level rise and climate change is detailed over the planning horizon in the Work Plan. The primary concern to MDWASD water supply is salt water intrusion into the freshwater Biscayne aquifer, the primary source of drinking water in Miami-Dade County. Results of evaluation and data analysis completed to date indicate that within the next thirty years, MDWASD will be able to operate its wellfields and water treatment facilities as designed, as groundwater modeling indicates even with a high level of projected sea level rise, the wellfields will not be impacted by salt water intrusion. Further modeling is currently underway to extend the planning scenarios fifty years out, and will include climate change such as increases and decreases in annual precipitation, and extreme weather events.