

Executive Summary

ES.1 Background

Chapter 163, Part II, (F.S.), requires local governments to prepare and adopt 10-Year Water Supply Facilities Work Plans into their comprehensive plans within 18 months after the South Florida Water Management District (SFWMD) approves a regional water supply plan or its update. The 2013 Lower East Coast Water Supply Plan Update (2013 LECWSP Update) was adopted by the District's Governing Board on September 12, 2013. Therefore, local governments within the Lower East Coast Region are required to amend their comprehensive plans and include an updated 10-year Water Supply Facilities Work Plan and related planning elements by March 12, 2015.

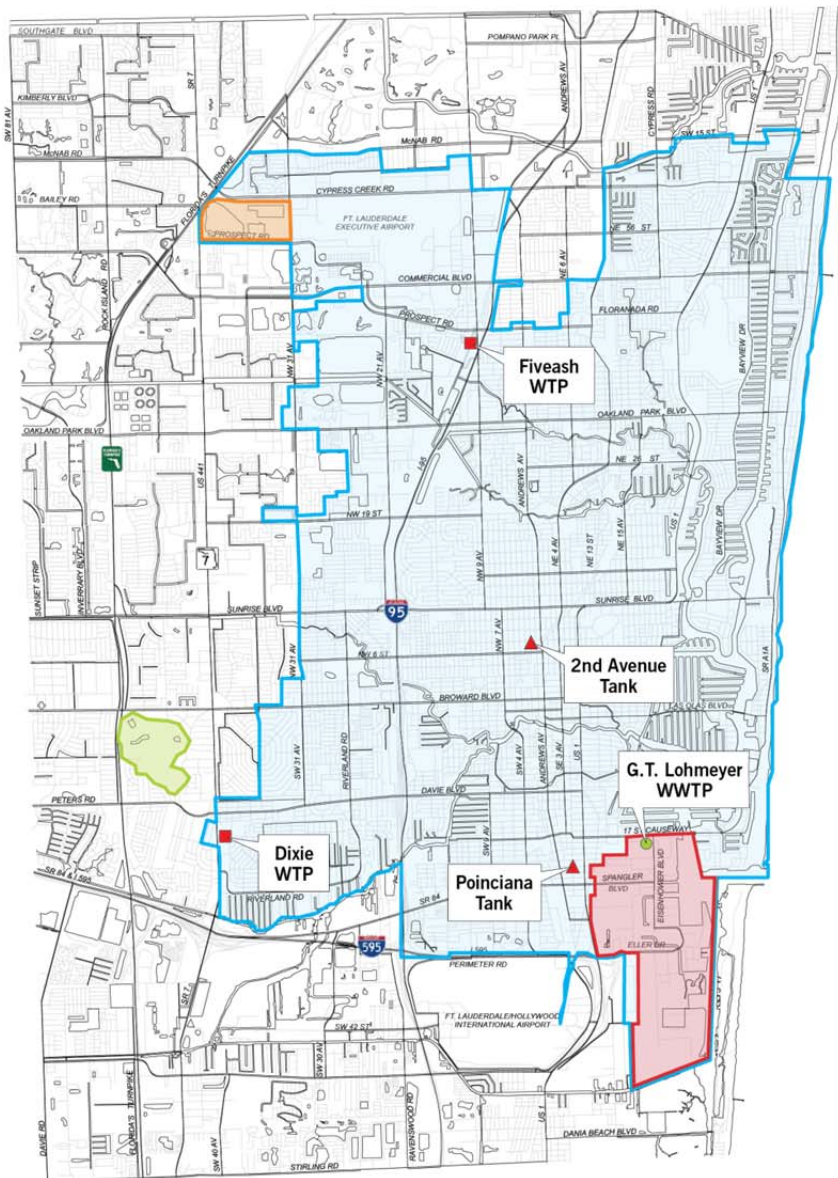
The State of Florida requires that the 10-year Water Supply Facilities Work Plan - 2014 Update address the development of traditional and alternative water supplies and management strategies, including conservation and reuse. The data and analyses, including population projections, water demands and service areas must cover at least a 10-year planning period and be consistent to the LECWSP and the updated comprehensive plan amendment.

This executive summary provides a brief summary of the key findings in the 2014 City of Fort Lauderdale 10-Year Water Supply Facilities Work Plan.

ES.2 Water Service Area

The City of Fort Lauderdale is the single largest purveyor of potable water in Broward County. This includes retail customers residing in the Roosevelt Gardens, Franklin Park, Washington Park, and Boulevard Gardens communities of unincorporated Broward County. These communities are expected to become incorporated by the end of the planning period. The utility's service area encompasses a total area of 43 square miles, approximately one-tenth the total area of urban Broward County. Other retail customers include residential, commercial, and industrial properties within the City of Fort Lauderdale, Lazy Lake, and a portion of Lauderdale-by-the-Sea. The utility also maintains wholesale agreements for potable water supply with the Cities of Oakland Park, Wilton Manors, Tamarac (east of 34th Avenue), Town of Davie and Port Everglades. **Figure ES-1** depicts the water service area (inclusive of all retail and wholesale customers).

Figure ES-1 also depicts the location of key City water supply assets including the following: 1) Dixie Wellfield; 2) Prospect Wellfield; 3) Peele-Dixie Water Treatment Plant; 4) Fiveash Water Treatment Plant; 5) 2nd Avenue Water Tank and Pump Station; 6) Poinciana Park Water Tank and Pump Station; and 7) George T. Lohmeyer Wastewater Treatment Plant.



- Legend**
- Fort Lauderdale Water Service Area including Wholesale Customers
 - Prospect Wellfield Biscayne Aquifer
 - Dixie Wellfield Biscayne Aquifer
 - Port Everglades Service Area



Figure ES-1 – City of Fort Lauderdale Water Service Area

ES.3 Water Demand Forecast

The water demand forecast was developed based on current utility operations and the existing customer base, compared to population projections through the year 2035. The population modeling was based upon the University of Florida’s Bureau of Economic and Business Research (BEBR) as refined by the Broward County Planning and Redevelopment Division (BCPRD). The current water service area population is estimated at 227,000 and is expected to rise to about 267,000 by the year 2035.

Figure ES-2 graphically illustrates the raw water demand forecast on an annual average day basis for the City’s water service area (including all wholesale customers). The current finished water demand (i.e., the water needed to be pumped from the water treatment plants) on an annual average per capita day basis is 179 gallons per person per day. The City has committed to conservation efforts in its Water Use Permit (Permit No. 06-00123-W) to reduce the annual average finished water per capita demand to 170 gallons per person per day by the year 2028.

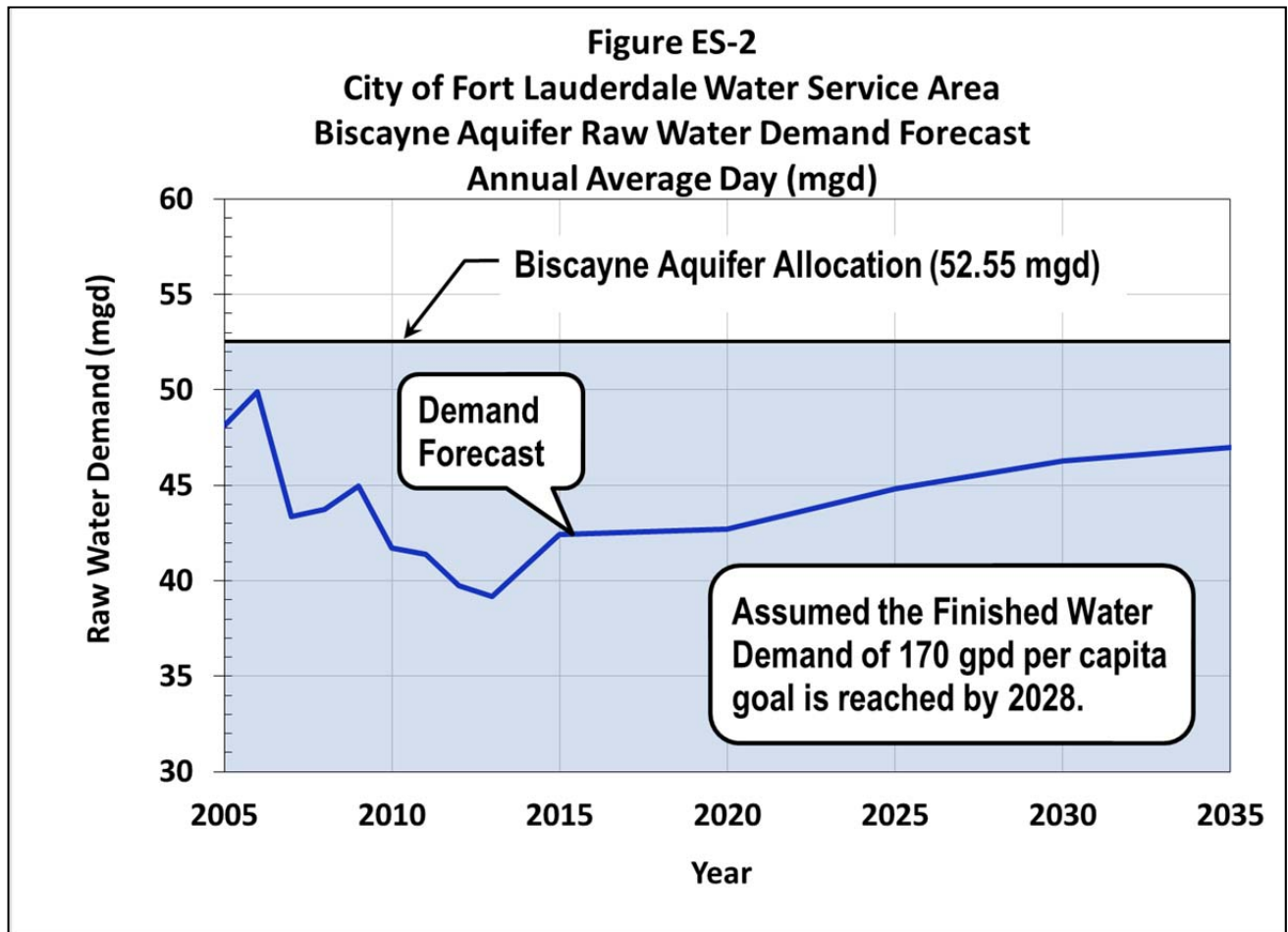


Figure ES-2 indicates that the annual average day raw water demand does not exceed the annual average day Biscayne Aquifer allocation in its Water Use Permit through the year 2035. Hence, it is anticipated that water supply capacity expansion can be delayed for at least the next 10 years and likely the next 20 years. However, the age and reliability of the Fiveash Water Treatment Plant may warrant investment in additional treatment capacity. The ongoing Comprehensive Utility Strategic Master Plan for the water and wastewater systems, expected to be completed near the end of 2015, will assess this issue.

ES.4 Conservation

Conservation is a proven strategy for delaying implementation of expensive alternative water supply technologies. The City has established a goal of reducing annual average day finished water demand to 170 gallons per person per day by the year 2028. The City of Fort Lauderdale has been promoting water conservation for more than 25 years. Selected ongoing conservation efforts are listed below.

City Goal: Reduce finished water demand to 170 gallons per person per day (gpcd) by 2028

- Broward Water Partnerships - collaborate on water conservation implementation with other municipalities;
- ConservationPay\$ Program - The City's Sustainability Division estimates that the conservation program currently saves approximately 23,450 gallons per day;
- NatureScape Irrigation Services – promote efficient irrigation and environmentally-friendly landscape practices, estimated water saved from 2010 through 2014 is roughly 70.5 million gallons;
- Water Matters Day - a one day water conservation event to promote long-term water demand reductions;
- Conservation Rate Structure - progressively higher rates as water usage increases to encourage a water conservation ethic;
- Florida-Friendly Landscaping™ and Green Infrastructure - the City is currently developing a change to the Code of Ordinances to require Florida-friendly Landscaping for new development and re-development. In addition, in 2014, the City adopted an update to the City's Downtown Master Plan to include transit oriented development (TOD) guidelines. Part of these guidelines recommend that green stormwater infrastructure and green landscaping be integrated into site design for new development in Downtown Fort Lauderdale;
- Irrigation System Design Code - all new irrigation systems permitted after 2009 require rain sensors to automatically shutdown if rain is detected;
- Landscape Irrigation Restrictions – the City has implemented progressive landscape irrigation restrictions that meet the requirements of the SFWMD;

- Water Conservation Education Program - the City publishes a variety of brochures and literature, promoting water conservation along with maintaining a website that includes water conservation information;
- Sustainability Action Plan 2011 Update - the City's Sustainability Action Plan 2011 Update identified specification conservation actions that are ongoing;
- 2035 Fast Forward Vision Plan - the Fast Forward Plan is a compilation of ideas/goals that are used to guide the City's decision making. A key aspect of the 2035 Vision Plan is ensuring that the City enhance water conservation efforts to ensure a sustainable water supply;
- 2018 Press Play Strategic Plan – the Press Play Strategic Plan establishes specific initiatives to be completed over the next 5 years to make progress at reaching the City's conservation goals (including working with partners to identify and implement wastewater reuse opportunities and participating in regional long-term water supply strategies such as the C-51 reservoir project);

ES.5 Capital Improvements

ES.5.1 Water Supply / Treatment Projects Needed from 2015 to 2025

Based upon the raw water demand forecast, development of traditional water supply, alternative water supply, and reuse projects are not required to meet the demand within the City of Fort Lauderdale's water service area over the period from 2015 to 2025. Hence, the City plans on the following actions relative to water supply planning over the next 10 years:

1. The City of Fort Lauderdale will continue to implement its ongoing conservation programs.
2. The City of Fort Lauderdale will continue to participate in the C-51 reservoir regional stormwater capture project in collaboration with the Broward County Water Resources Task Force Technical Team.
3. The City of Fort Lauderdale will develop a Comprehensive Utility Strategic Master Plan for the water and wastewater systems by the end of 2015. This document will take a holistic view of water supply, treatment, storage, distribution, and conservation along with wastewater collection, transmission, treatment, disposal, and reuse to identify improvement needs through the year 2035 to ensure sustainable, reliable and adaptable water and wastewater infrastructure.

ES.5.2 Improvements Needed for Infrastructure Sustainability

The City has made a prolonged effort over the last 15 years (such as the WaterWorks 2011 program) to invest in enhancing its water infrastructure sustainability. However, certain elements, such as the Fiveash

Water Treatment Plant, require a substantial investment over the next 20 years due to the age of the infrastructure.

The City has initiated a Comprehensive Utility Strategic Master Plan for the water and wastewater systems that will assess long-term water supply needs and recommend capital improvement projects (including: traditional sources; alternative sources such as reuse and the Floridan Aquifer; demand management; and possible expansion of conservation programs) to meet future water demand. It is anticipated that the Comprehensive Utility Strategic Master Plan for the water and wastewater systems would be completed near the end of 2015. The findings of this study would be incorporated, where appropriate, into future Community Investment Plans.