



City of Belle Isle

Exhibit A to the Infrastructure Element Water Supply Facilities Work Plan 2025-2034

1.0 Introduction

The City of Belle Isle (City) is a small, predominately residential community in Central Florida. It is located approximately five (5) miles south of the City of Orlando, in Orange County, Florida around the Lake Conway Chain of Lakes.

This Water Supply Facilities Work Plan is the City's plan to service current water demands and the anticipated growth in demand within its jurisdiction. This workplan is based on information provided by the City's Planning Department, the City's Comprehensive Plan, Orlando Utilities Commission and Orange County Utilities.

The City does not own, operate or maintain any of the water supply facilities or transmission mains serving the City. The City's potable water and wastewater service is provided by two (2) water suppliers:

1. Orlando Utilities Commission (OUC).
2. Orange County Utilities (OCU).

Figure 1 presents the current City boundaries and identifies areas serviced by OUC and OCU. The two water service providers serve approximately half of the City each. A small portion of the City, in the southeast, is serviced by OUC who provides the water supply, but the transmissions lines and related facilities are owned and maintained by OCU.

Both water suppliers included in the City's projected demand in their water supply plans and is included in their consumptive use permits.

Infrastructure Element Policy 4.1.1 and Capital Improvement Element Policy 1.3.4 establish the City's level of service standards for the potable water as follows:

- Residential: 350 gallons/unit/day
- Non-Residential: 2,000 gallons/unit/day

The City is largely built-out but anticipates some annexation of property which is already connected to potable water. Therefore, the annexations would not impact the water supply or increase demand as the areas of proposed annexation have existing water service provided by OUC and OCU.

Since the City is in a built-out condition and with plans for only a small amount of annexation, the water consumption for the City will not significantly change over the next ten (10) years. In addition, the majority of the property which is proposed for annexation already has existing water service; therefore, the overall impact will not increase. Thus, the assumption that sufficient water service will be available to the City via OUC and OCU has been made.

FIGURE 1: City of Belle Isle 2024 Water Service Areas



Source: Esri, Maxar, Earthstar, Geographics, and the GIS User Community

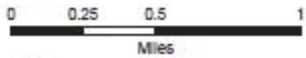


111 North Magnolia Ave
Suite 1350
Orlando, FL 32801
Tel: 407.775.6500
www.rvianr.com

City of Belle Isle • WATER SERVICE PROVIDER

- 📍 City of Belle Isle, FL
- 📅 Date: 7/19/2024
- 📞 # 23002514
- 📍 Belle Isle

- 🟡 Orange County
- 🟢 Orlando Utilities Commission



Information furnished regarding this property is from sources deemed reliable. RVI has not made an independent investigation of these sources and no warranty is made as to their accuracy or completeness. This plan is conceptual, subject to change, and does not represent any regulatory approval.

2.0 Provision of Potable Water Supplies and Facilities

Belle Isle is within both OCU and OUC's service areas. Both entities included the City of Belle Isle within their population and flow projections, which are used to calculate the flows in their consumptive use permits. The City's 2024 comprehensive plan update RVI Assessment Report/Plan Framework report (dated November 15th, 2023) shows that the city is expected to grow from the current 2020 estimate of 7,032 to 7,747 by 2040, an increase of +/- 10%.

Orange County Utilities (OCU)

The population of Orange County is anticipated to increase by about 51 percent between 2015 and 2040. OCU has historically have used potable groundwater from the Floridan aquifer as the primary source for public supply. Fresh groundwater is considered a traditional water source. However, the initial phase of the CFWI technical process concluded with a determination that the amount of traditional groundwater currently permitted in the five-county CFWI area, which includes Orange County, exceeded sustainable supply quantities. The CFWI process then provided guidance for a combination of water sources and water supply project options that could meet the needs of this region.

Orange County has identified that its most effective course of action with the planning horizon is to:

- Optimize the use of groundwater from the Floridan aquifer.
- Maximize the use of reclaimed water.
 - Continue aquifer recharge projects in areas of greatest benefit.
 - Expand reuse distribution facilities for irrigation and other beneficial use.
- Continue to implement effective water conservation measures.
- Develop additional AWS sources such as brackish groundwater, indirect and direct potable reuse, and surface water for potable supply and non-potable system augmentation.
- Investigate additional options such as aquifer storage and recovery (ASR), reservoir storage, and stormwater reuse for future implementation as feasible.

OCU's operations within the planning horizon will be based on this water supply strategy.

(Source: Orange County Water Supply Facilities Work Plan FY 2021/2022 to 2031/2032)

Orlando Utilities Commission (OUC)

The City of Orlando's growth projections, indicate that by 2045, the City of Orlando will have approximately 400,854 residents, an increase of 30% from 2020, which is consistent with the historic pattern of the City in recent years.

As the population continues to increase, the demand for water is expected to increase as well. From 2020 to 2025, an increase of 12% in the cumulative demand is expected. For 2045, the demand for potable water will reach 84.1 MGD for all land uses combined.

The City of Orlando and OUC have identified three (3) major strategies for meeting water demand with sufficient water supply, as follows:

1. Reclaim Water: Expand treatment and reclaimed wastewater for use as irrigation.
2. Conservation: Encourage conservation measures to decrease potable demand.
3. Alternative Water Sources: Identified alternative water sources other than traditional groundwater from the Florida aquifer. "

(Source: City of Orlando 2022 Water Supply Facilities Work Plan)

2.1 Regional Water Supply Plan Project Options

The City of Belle Isle does not have any supplemental regional water supply projects planned as it does not own the water utilities servicing the City. However, the City of Belle Isle is supportive of projects planned by the two water utilities servicing the area outlined above.

Since the City's water service is provided by OUC and OCU, the City will rely on OUC and OCU to partner with other utilities to implement alternative water supply projects for potable supply, improve potable water supply or establish agreements with other water suppliers.

2.2 Agreements with OCU and OUC

The City does not currently have formal interlocal agreements regarding the provision of water service with OCU or OUC. Instead, the City relies on its location with each entities respective territorial service area for the provisions of services.

Please note that the City's existing policies 1.4 and 1.4.1 within its Future Land Use Element that require coordination with and approval by the applicable service providers for new development. Please see referenced Future Land Use policies in the Comprehensive Plan.

3.0 Provision of Reuse or Other Non-Potable Water Supplies and Facilities

The City does not currently have a reuse pipe distribution system network and does not plan to retrofit residents in the next ten (10) years. The City's potable water providers do not have reuse water available nearby and there are no plans by OUC and OCU to bring reuse water service to the City.

3.1 Agreement with Other Non-Potable Water Suppliers and Users

The City does not currently have formal interlocal agreements regarding the provision of wastewater service with OCU or OUC. Instead, the City relies on its location with each entity's respective territorial service area for the provision of services.

4.0 Water Conservation Practices

The City does not currently have a conservation plan of its own. Instead, the residents of the City are bound by the conservation corresponding to the water supplier's service area in which they reside. However, the City does provide public education and outreach programs by printing and distributing information on water conservation to its citizens. In addition, the City has language in its Land Development Code that encourages drought tolerant plants to be used in landscaping as well procedures that promote water conservation through the more efficient use of landscape irrigation, specifically, Chapter 32, Article II, Sec. 32-31 restricts addresses within the City to certain days and times for landscape irrigation, which is consistent with the SJRWMD's lawn and landscape irrigation rule that limits irrigation to two days per week between the hours of 10 a.m. and 4 p.m. when Daylight Savings Time is in effect and one day per week between the hours of 10 a.m. and 4 p.m. when Eastern Standard Time is in effect, with some exceptions. The City's code is (enforced by the Belle Isle Police Department who issues warnings and upon second infraction issues a code violation citation. The following sections describe the City's conservation practices.

4.1 Water Conservation Policies

The City implements and maintains numerous water conservation practices through its LDC and Comprehensive Plan. Below is a listing of the Comprehensive Plan policies that provide enabling language for various water conservation practices. The following are policies containing water conservation practice directives:

- **Future Land Use Element**
 - Policy 1.4.6.j (use of irrigation and other technologies)

- **Infrastructure Element**
 - Policy 2.2.2 (xeriscaping requirement)
 - Policy 2.3.1 (coordination on water conservation education)
 - Policy 2.4.1.a (waterwise landscape and irrigation requirements)
 - Policy 2.4.1.b (water conservation education)
 - Policy 2.4.1.c (requiring water conserving fixtures)
 - Policy 2.4.1.d (promoting LID techniques)
 - Policy 4.2.1 (coordination on water conservation education)
 - Policy 4.2.2 (coordination on water conservation education)
 - Policy 4.2.3 (xeriscaping requirement)
 - Policy 5.1.4.a (waterwise landscape and irrigation requirements)
 - Policy 5.1.4.b (water conservation education)
 - Policy 5.1.4.c (requiring water conserving fixtures)
 - Policy 5.1.4.d (promoting LID techniques)

- **Conservation Element**
 - Policy 1.2.1 (water conservation education)
 - Policy 1.3.1.a (waterwise landscape and irrigation requirements)
 - Policy 1.3.1.b (water conservation education)
 - Policy 1.3.1.c (requiring water conserving fixtures)
 - Policy 1.3.1.d (promoting LID techniques)

- **Capital Improvements Element**
 - Policy 1.1.1 (funding water conservation efforts)