



INFRASTRUCTURE ELEMENT

POTABLE WATER SUB-ELEMENT

GOALS, OBJECTIVES & POLICIES

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GOAL PW: PROVIDE ADEQUATE POTABLE WATER

It is the goal of the City of Casselberry to provide an adequate quantity of potable water for public use from the highest quality source available, and to do so in an efficient, orderly and sustainable manner.

OBJECTIVE PW 1. CORRECTION OF EXISTING DEFICIENCIES. Based on the adopted level of service standard, the City of Casselberry will take specific actions to enhance the management, operation, and provision of City potable water facilities and services.

Policy PW 1.1 The City's Level of Service for potable water supply will be 100 gallons per capita per day.

Policy PW 1.2 All potable water production, treatment and distribution systems owned by the City of Casselberry shall be operated in a manner that complies with all applicable City, regional, state, and federal potable water service standards.

Policy PW 1.3 The City shall implement the Water Master Plan according to the recommendations within the Master Plan in a timely fashion.

Policy PW 1.4 Existing potable water production, treatment and distribution facilities, structures and buildings shall be rehabilitated and reused as an alternative to new construction when rehabilitation and reuse is cost-effective.

Policy PW 1.5 The City shall require and implement preventive maintenance on all potable water facilities to discover and curtail wasteful losses of potable water and to maximize capacity and public safety by reducing loss through leaks and maximize efficiency of the system.

OBJECTIVE PW 2. FUTURE FACILITY CAPACITY. It is the City of Casselberry's objective to perform specific actions during the planning period (2009-2019) to meet the increased potable water capacity estimated necessary to meet the expected demands of the potable water service area's future population.

Policy PW 2.1 The City will require all new development to demonstrate concurrency with the established level of service capacity.

Policy PW 2.2 The City will continue to require that new developments extend potable water distribution and reclaimed lines along the entire property boundary for connection to adjacent properties.

Policy PW 2.3 Casselberry shall establish and maintain a current five year potable water facilities capital improvements program that will be updated annually to include prioritization of potable water and reclaim facilities improvements.

Policy PW 2.4 Site plans for future development will be reviewed for their impacts with regard to capacity analysis of existing potable water facilities.

OBJECTIVE PW 3. FINANCIAL RESPONSIBILITY. It is the City of Casselberry's objective to perform specific actions during the planning period (2009-2019) so the City's potable water operations are fiscally responsible.

Policy PW 3.1 User fees shall cover the full cost of operating and maintaining the Casselberry potable water system, including debt service.

Policy PW 3.2 The City of Casselberry Public Works Department will establish a capital improvements program. The program will incorporate a deficiencies correction schedule as identified in the City's latest, approved Water Master Plan.

Policy PW 3.3 Throughout the planning period (2009-2019), the following ranked criteria shall be used by the City of Casselberry to establish priorities for the provision of new potable water services:

- To existing developed areas within the service area that either present an immediate threat to public health or safety or produce serious pollution problems;
- To areas within the designated water service area as identified in the Master Water Plan, Capital Improvements program, and the City of Casselberry Comprehensive Plan;
- To areas contiguous to the City Limits, but outside the Service Area after annexation and if capacity is available; and
- To existing developed and undeveloped areas not claimed as service areas by other utilities.

Policy PW 3.4 The City will prioritize projects for maximum efficiency and cost-effectiveness. The schedule will serve as a guide for the City, will be updated annually, and will project a five year increment.

Policy PW 3.5 The Casselberry Public Works Department shall continue to pursue alternative funding sources and participate with other localities in order to plan and construct efficient potable water systems.

OBJECTIVE PW4. MAXIMIZING THE USE OF EXISTING PUBLIC FACILITIES. The City Casselberry will maximize the use of existing public potable water facilities.

Policy PW 4.1 The City of Casselberry Department of Public Works shall identify, develop, and implement a sustainable potable water production, treatment and distribution system by using the highest and best proven technology possible.

Policy PW 4.2 A GIS map of the entire potable water system of the City of Casselberry shall be continually updated in order to maintain the potable water system, and anticipate and facilitate system repair.

Policy PW 4.3 Accurate records of well-water production flows, maintenance, chemical usage, and other items related to efficient ongoing water service operation shall continue to be performed by the Public Works Department throughout the planning period (2009-2019).

OBJECTIVE PW 5. INFILLING OF EXISTING URBAN AREAS. It is the City of Casselberry's objective to take specific action during the planning period (2009-2019) to meet development needs within the existing potable water service urban area.

Policy PW 5.1 The City of Casselberry Water Service Area boundary will provide a basis for the encouragement of development in an orderly and economical manner.

Policy PW 5.2 Potable water service shall not be expanded beyond the present service area unless or until the new area requesting service annexes into the City.

OBJECTIVE PW 6. PROTECTION OF GROUNDWATER FROM CONTAMINATION. It is the City of Casselberry's objective to perform specific actions during the planning period (2009-2019) to protect public health by preserving groundwater from contamination.

Policy PW 6.1 Casselberry shall continue to meet or exceed all federal and state water facility regulations which provide for the protection of the environment.

Policy PW 6.2 To protect the quality and quantity of Casselberry's potable water supply, a wellfield protection zone will be established consisting of a 1000 foot radius around each potable water well.

OBJECTIVE PW 7. POTABLE WATER CONSERVATION. It is the City of Casselberry's objective to perform specific actions, to ensure the City's potable water system conserves water and reduces the per capita demand to the minimum possible rate through the implementation of water conservation techniques and programs, and through the establishment and use of non-potable supplies.

Policy PW 7.1 To further conserve the potable water supply by encouraging the use of reclaim water for all non-potable uses within the City limits.

Policy PW 7.2 The City shall continue, and expand, its reclaim water program. The City shall utilize alternative financing mechanisms for installation of the public facilities necessary to expand the existing facilities system.

Policy PW 7.3 The City shall require the installation of dual-water lines and meters in all new developments served by a water system to distribute potable and reclaim water even if reclaim water is not yet available.

Policy PW 7.4 Whereas Green Certified buildings demand on average 40% less water than conventional buildings, the City shall encourage the public and private-sector in the use of third-party sustainable building rating and certification systems, such as the United States Green Building Council's LEED rating system.

Policy PW 7.5 All new construction, redevelopment and renovation within the City of Casselberry will be required to use water saving plumbing devices.

- Policy PW 7.6** The City will provide incentives for increased water efficiency by providing a corresponding reduction in the standard water, sewer and reuse water impact fees for new developments with demonstrated water efficiency. The percentage of the impact fee reduction will be assessed according to the equivalent demonstrated percentage reduction in potable/reuse water demand and wastewater generation when compared to a conventional base line building that has been built to code. Proof of water efficiency can be provided by demand calculations signed and sealed by a licensed professional engineer demonstrating the percent decrease in water use from an equivalent conventional building; or proof of water efficiency can be provided through third party verification such as LEED certification paperwork that details the water efficiency credits.
- Policy PW 7.7** The City will provide further incentives for conservation by continuing its schedule of water use fees that will include a sliding scale of rates with higher rates being charged for higher volumes.
- Policy PW 7.8** A user fee study will be performed every three years and user fees will be adjusted annually.
- Policy PW 7.9** By the end of 2009, in cooperation with the local Department of Health office, the City will evaluate whether to require the use of waterless urinals in the construction of all new public and private male restrooms and provide incentives for the exchange of existing conventional urinals with waterless urinals.
- Policy PW 7.10** By the end of 2009, the City will pursue a high-efficiency toilet exchange program for retrofits of any existing toilets with a flush capacity greater than 1.6 gallons per flush.

OBJECTIVE PW 8. COORDINATION. It is the City of Casselberry's objective to take specific action during the planning period (2009-2019) to coordinate and educate the community about conservation, sustainable use, and protection of the quality and quantity of its water sources.

- Policy PW 8.1** Emergency Water Use Restrictions. In case of drought or other emergency conditions, the City shall enact a temporary ordinance restraining water usage for lawn irrigation, car washing, etc., as recommended by the St. John's River Water Management District or as recommended by the City's Water Resource Manager. Water restriction requirements shall follow those as required by the St. John's River Water Management District's rules.
- Policy PW 8.2** The City will require the use of reclaim water where available, for landscape, golf courses, farm irrigation, industrial use, and other appropriate applications.
- Policy PW 8.3** Distribution of Conservation Literature. Water conservation practices designed to reduce the per capita consumption of water shall continue to be encouraged through the distribution of public conservation literature by the Utilities Division of the Public Works Department throughout the planning period.
- Policy PW 8.4** Pursuant to 163.3177(4)(a), F.S., the City of Casselberry shall meet annually with adjacent governments, private utilities and State and Federal agencies, and shall seek to establish interlocal agreements on the provision of potable water services and service area boundaries.

Policy PW 8.5

The City's Water Supply Facilities Work Plan will be consistent with the Seminole County Water Supply Plan, St. Johns River Water Management District's Regional Water Supply Plan, and the Regional Planning Council's Strategic Regional Policy Plan.

Executive Summary

The quality and availability of water is important to the attractiveness and stability of an area to its residents. A potable water system normally consists of a water supply source, a treatment plant and a distribution and storage network.

The Floridan Aquifer is the supply source for Casselberry's water system. The founder of the City, Hibbard Casselberry, privately owned the original water facilities which have expanded extensively since then, most notably the City purchased water systems throughout the 1970's.

The Federal Environmental Protection Agency's Safe Water Drinking Act (1984) has undergone amendments which result in progressively more stringent standards. The Florida Department of Environmental Protection is the state agency and the St. John's River Water Management District is the regional agency regulating water facility permitting and quantity of aquifer withdrawal, respectively.

The City of Casselberry currently owns and operates three (3) water treatment plants with a combined daily design capacity of approximately 16 million gallons per day and an FDEP rated capacity of 14.25 mgd. Each treatment plant has three wells with an average production capacity of approximately 6.36 million gallons per day (mgd) and 2,190 million gallons per annum. Treatment at each plant includes aeration, addition of corrosion control inhibitor, and disinfection. Each of the plants has its own emergency power generator capable of powering the facilities at one-half their design capacities. The total average daily water flow for the City is approximately 5.0 mgd with peaks as high as 7.0 mgd.

The City adopted a Water Supply Facilities Work Plan in 2007 and completely revised the Potable Water Sub-Element of the Infrastructure Element. The Plan projects the City's water needs for the next ten (10) years, identifies and prioritizes the water supply facilities, includes Capital Improvements needed for a five-year period as well as a ten-year Capital Improvements Schedule.