

CHAPTER 7

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Potable water service within the unincorporated area represents the complete spectrum of facilities, consisting of individual wells, package plants, and area-wide systems. The majority of the package plants are privately-owned. The area-wide systems serving portions of the unincorporated region include both privately-held and publicly-owned facilities. The publicly-owned systems are either operated by municipalities or the County. The Volusia County Water Resources and Utilities Division serves as the county utility for approximately seven percent (7%) of the entire county. The division has interlocal agreements with other utility service providers to ensure that residents of Volusia County are adequately served by the potable water system. A map depicting the generalized location of utility service providers is included in the map section of the Comprehensive Plan. The County continues to negotiate water service area agreements with municipalities. Unless provisions are required to recognize any existing water lines in non-urban areas which are within municipal service areas, the County's requirements for connection to potable water service shall remain effect within these agreed upon service areas.

Potable water service issues include improving existing facilities to County-approved service standards, expanding the water service area to developing areas, maintaining adequate supply and pressure for fire protection, improving quantity and quality of water treatment, planning and funding the maintenance, repair, replacement and extension of the system, and monitoring the availability of water supply sources and facilities to meet the projected potable water demand. These issues will be addressed in conjunction with the Central Springs/East Coast Regional Water Supply Plan, standards for level of service, concurrency and capital budgeting improvements. The provision of potable water is intended to adequately accommodate the projected population. The County's Capital Improvements Program addresses the necessary funding for improvements to existing facilities and the development of new facilities. It incorporates regional water supply projects identified in the Central Springs/East Coast Regional Water Supply Plan. The Capital Improvements Plan also includes recurring funding to address TMDL requirements, land acquisition, stormwater improvements, waste water treatment plant upgrades, potable water, water and sewer line upgrades, sewer extension to DeLeon Springs, lift station repair and replacement, as well as recharge projects.

The following Future Land Use categories are considered to be urban and require the provision of Potable Water facilities: Urban Low Intensity, Urban Medium Intensity, Urban High Intensity, Commercial, Industrial, Mixed Use, Activity Center, Planned Community, and Low Impact Urban. Individual potable water wells are only allowed if a parcel is not designated as an urban land use, if the lot is greater than 2 ½ acres in size within a single family subdivision, if the well is installed with the construction of a new single family residence on a single lot or in a subdivision of less than six lots, and only if connection to a central water service is not available or located within a special assessment district for a potable water system.

The provision of potable water within the unincorporated areas of the County falls under four categories: 1) unincorporated areas served by Volusia County Utilities; 2) unincorporated areas served by municipal water systems; 3) unincorporated areas served by private community systems or non-community systems; and 4) unincorporated areas using private individual wells. Some of the population within the unincorporated area of the County utilizes private individual water wells as a water supply source.

The potable water supply production, treatment, storage, and distribution facilities owned and operated by Volusia County are comprised of geographically separated systems of various sizes. The County's potable water supply system is grouped into several water supply planning areas including Deltona North, Southwest, Northwest, Spruce Creek, and Southeast. Each of these areas has level of service standards for unincorporated Volusia County. The county's Water Resources and Utilities Division maintains 16 water and wastewater treatment facilities, along with 26 water production wells, and several hundred miles of potable water, reclaimed water, and sanitary sewer mains. Funding is set aside annually for well rehabilitation, minor plan improvements, security and technology upgrades, and water main replacements.

Some water customers within the unincorporated area of Volusia County are also provided potable water service from a municipal provider. Many of these interlocal agreements for water delivery have existed for many years and were initially developed because at one time, the County did not have an established water utility system. The adjacent cities who had established water systems extended them into the unincorporated area. In some cases, the water system may have started as a private utility and then was acquired by a city and integrated into the city's system.

The most important aspect of water supply planning in Volusia County is the need for coordination between utility service providers. This is done on the local level and on the regional level in an effort to maximize the services and water saving technologies necessary to meet the future water supply needs. Funding is provided by the county, with support from the other utility service providers, the St. John's River Water Management District, and the Florida Department of Environmental Protection. The following projects in the Central Springs/East Central Florida Regional Water Supply Plan and the county's work program have been incorporated into the five-year capital improvements plan:

Project	Total Expenditures (\$)
Aerial Canal	1,924,630
Gabordy Canal	3,199,960
Lakeside Drive Stormwater Treatment	863,972
Land Acquisition for flood mitigation and water quality	993,172
Local Projects	6,416,842
Mosquito Lagoon Reasonable Assurance Plan	536,795
NPDES Reporting	234,241
North Peninsula Stormwater Improvements	4,576,832
Thornby Park Water Quality Improvement Project	498,282
TMDL Requirements	781,507
Volusia Retention Pond	222,724
Blue Springs Borrow Pit for wetland and aquifer recharge	2,150,000
Glen Abbey WTP Water Quality Improvements	16,517,207
Total Expenditures	38,916,164

GOALS, OBJECTIVES AND POLICIES

GOAL:

- 7.1 Ensure that an adequate public supply, treatment, and distribution of potable water to areas appropriate for service within the unincorporated area of Volusia County.

OBJECTIVE:

- 7.1.1 Volusia County shall require that the following policies which establish minimum level of service standards are met when planning capital improvements and reviewing applications for development approval.

POLICIES:

- 7.1.1.1 Volusia County adopts minimum level of service standards of 300 gallons of potable water per day, per ERU of the unincorporated service areas.

Potable Water Level Of Service Standards			
	Residential Connection (ERU/GPD*)	Non-Residential	
		Office	Retail, Institutional, & Industrial
Deltona North	265	0.15 GPD per sq. ft. of Building Area	0.10 GPD per sq. ft. of Building Area
Southwest	265		
Northeast	200		
Spruce Creek	200		
Southeast	200		

*ERU – Equivalent Residential Unit/GPD - Gallons per Day

Within unincorporated areas encompassed by an adopted service area agreement with a municipality, the municipal level of service standards shall be applicable.

Within unincorporated areas without an adopted service area agreement with Volusia County, a level of service value of 200 GPD/ERU is recommended.

- 7.1.1.2 Volusia County shall require the installation of both a central potable water system and potable water treatment plant in accordance with County land development regulations where connection to a central potable water system is not available. Connection to a central potable water system shall be required when the system is available within areas designated for urban uses by the Future Land Use Map.
- 7.1.1.3 Volusia County shall require the construction of facilities for providing a minimum fire flow as a condition of development approval. Applicable fire flow rates for individual land uses shall be required as provided for by the Land Development Code.
- 7.1.1.4 Volusia County may require the developer to provide and dedicate to the County the potable water distribution system and treatment facilities within any new development. The design criteria and construction standards for any addition to the water system shall be in conformance with County design and construction standards.
- 7.1.1.5 Volusia County shall treat its water supply in accordance with State and Federal water quality standards.
- 7.1.1.6 Volusia County shall require that all new development which is located within an area encompassed by an adopted municipal water service area agreement shall comply

with the Potable Water element and the level of service standards adopted by said municipality.

- 7.1.1.7 The extension of water lines or establishment of central systems of potable water outside of the water service areas shall be prohibited unless said extension or facility construction will mitigate existing or potential problems of public health, safety, or welfare or other exceptions under the guidelines delineated in the Future Land Use Element, or otherwise required by State, Federal, or other agencies.
- 7.1.1.8 Volusia County may negotiate agreements with developers for the County to provide potable water facilities for the affected service area.
- 7.1.1.9 Existing privately-owned potable water systems that are not located in an area encompassed by an adopted water service area agreement, a County water service area, Rural Community or Rural Recreational area, may expand only so long as said expansion is for the purpose of correcting existing or potential conditions which have been determined to be a hazard to the public health, safety or welfare. Expansion of said systems will require that the facility comply with the appropriate level of service standards and other applicable County rules and regulations.
- 7.1.1.10 Central potable water systems may be installed in Rural Communities and Rural Recreational Areas that are established in the Comprehensive Plan provided that said systems are designed to serve only the development within the geographic area encompassed by the Rural Community or Rural Recreational area.
- 7.1.1.11 Central water is not required for non-urban areas. Lines should only be extended if the absence of such facilities would result in a threat to the public health or safety or a designated rural area is inside an approved water service area with an agreement that describes the method and timing of when these services would be provided, or the Comprehensive Plan is amended to change rural areas to urban areas.
- 7.1.1.12 Individual potable water wells are only allowed under any one of the following applicable circumstances provided that the well has been approved by the Volusia County Department of Health permitting or other agencies, as appropriate;
 - a. the lot is not designated for urban land uses by the Future Land Use Map, or
 - b. the lot is two and a half (2-1/2) acres in size or larger and is designated as either Low Impact Urban or Urban Low Intensity by the Future Land Use Map and the lot is within a single-family subdivision (new or previously approved under Volusia County Ordinance 72-2 or 88-3, as amended), or
 - c. The potable water well is installed in conjunction with the construction of a single family residence on an existing single family lot or a new subdivision of six (6) lots or less in size, (exempt or approved under Volusia County Ordinance 72-2 or 88-3, as amended) which is designated for urban land uses by the Future Land Use Map and which the lots are less than two and a half (2-1/2) acre in size provided that;

- i) that central service is currently not available to the lot. Connection to central water service is required when said service becomes available, and
- ii) the lot is not located within a Special Assessment District which has been established for the purpose of installing a potable water system.

or

- d. The potable water well is installed in conjunction with non-residential construction on an existing lot (exempt or approved under Volusia County Ordinance 72-2 or 83-3, as amended) which is designated for urban land uses by the Future Land Use Map, provided that central potable water service is not currently available and said well complies with applicable provisions as specified in Chapter 62-532, Florida Administrative Code. When a central system becomes available, connection to said system is required.

- 7.1.1.13 An existing potable water well may be upgraded, provided that a central potable water system is not available. However, connection to a central potable water system is required where said system is available.
- 7.1.1.14 The establishment of package treatment plants outside of water service areas is prohibited except for Rural Communities and Rural Recreational Areas permitted by this element or where State, Federal or other agency, has determined that such a facility is necessary to correct existing or potential problems of public health, safety, or welfare.
- 7.1.1.15 Within the County water service areas, package water treatment plants may be permitted as an interim measure, provided that said plants are constructed and designed to County standards including provisions to allow the interim system to be connected to a central water system when said connection is available. Interim water package treatment plants serving residential developments shall be dedicated to the County. When the interim facility is located within an area encompassed by an adopted water service area agreement, the plant may be dedicated to the entity providing water service to the region.
- 7.1.1.16 When an existing privately-owned package treatment facility is phased out and connected to a central public potable water system, the owner of said private plant shall be required to assume the cost of the connection.
- 7.1.1.17 The County shall not approve interim package treatment facilities within the boundaries of an adopted service area agreement unless the facilities are approved by both the County and the appropriate entity responsible for providing the service. The Interlocal Agreements shall require that the County and a municipality shall develop a set of criteria to address the following items for interim treatment facilities: system design operation, construction standards, future dedication/acquisition and payment of capital charges.
- 7.1.1.18 The County will ensure that adequate water supplies and facilities meet LOS

standards and are available and in place within the County's service areas. Consistent with the level of service standards prior to issuing a Certificate of Occupancy or its functional equivalent.

- 7.1.1.19 The County shall not issue development orders or development permits without first consulting the appropriate provider to determine whether adequate water supplies and facilities to serve the new development will be available no later than the anticipated date of issuance by the County of a Certificate of Occupancy or its functional equivalent.

OBJECTIVE:

- 7.1.2 The county shall correct inadequacies in specific locations where the County water systems have unacceptable supply, storage, treatment, and/or distribution facilities.

POLICIES:

- 7.1.2.1 Volusia County shall designate a portion of its annual budget to be used for the correction of existing deficiencies in its potable water systems.
- 7.1.2.2 The County may create Special Assessment districts encompassing existing lots or subdivisions for the purposes of installing central potable water systems.

OBJECTIVE:

- 7.1.3 Volusia County shall provide adequate public potable water sources commensurate with growth to service the needs of current and future residents.

POLICIES:

- 7.1.3.1 Volusia County Water Resources and Utilities Division shall maintain a Work Plan that is coordinated with the St. Johns River Water Management District Central Springs/East Coast Regional Water Supply Plan and the plans of other area utility service providers to address water supply facilities necessary to meet the existing and projected demand within the County's water supply planning areas.
- 7.1.3.2 Volusia County adopts the following water supply strategies:
- a. Continue to use ground water supplies to meet projected potable water demands consistent with CUP constraints;
 - b. Pursue an increase in the CUP ground water allocation as an interim measure to meet the projected demand for the Southwest and Deltona North water supply planning areas until such time as an alternative source becomes available;
 - c. Continue to obtain potable water through wholesale arrangements for the Stone Island and Southeast water supply planning areas;

- d. Continue to implement the water conservation program to reduce system-wide potable water demand by 10 percent by 2035 consistent with Objective 7.1.5;
 - e. Continue to expand the County's reuse system to reduce potable water demand; and
 - f. Partner with other utility service providers to pursue withdrawal of surface water as an alternative water supply source.
- 7.1.3.3 Volusia County shall annually review and update its workplan to incorporate regional water supply initiatives.
- 7.1.3.4 Facility improvements in the Water Supply Facilities Work Plan shall be incorporated into the County's five-year capital improvements program and annual update to the Capital Improvements Element.
- 7.1.3.5 Volusia County will continue to utilize the Central Springs/East Coast Regional Water Supply Plan and its assessment of the long-term potable water needs and sources.

OBJECTIVE:

- 7.1.4 Provide water facility extensions and/or expand the treatment capacity of Volusia County water supply systems where feasible to meet the demands of future growth within the respective service areas.

POLICIES:

- 7.1.4.1 Volusia County shall develop sufficient water treatment capacity to meet the projected demand consistent with the Central Springs/East Coast Regional Water Supply Plan and the county's water supply facility work plan.
- 7.1.4.2 Volusia County shall collect and use impact fees to offset the cost of the capacity necessitated by the impact of new users.
- 7.1.4.3 County water service areas includes undeveloped land inside existing unincorporated urban areas where the developer agrees to provide necessary urban services. If those areas are not able to be served by the County, an enforceable Development Agreement may authorize a facility that is constructed and operated by a third-party provider.
- 7.1.4.4 The County may seek alternative sources of funding, (i.e., grants and loans) to finance potable water system construction and/or expansion.

OBJECTIVE:

- 7.1.5 Volusia County shall continue to expand its program of water conservation to reduce system-wide potable water demand by 10% by the year 2035.

POLICIES:

- 7.1.5.1 Volusia County shall maintain the customer rate structure, such that the unit cost of water will not decrease with increased usage, subject to County regulations in effect for the purpose of reducing demand for potable water.
- 7.1.5.2 Volusia County shall continue to require the use of water-conserving plumbing fixtures in all new development, subject to County regulations in effect and use of incentive programs to encourage retrofits for older buildings.
- 7.1.5.3 The Water Wise Landscape Irrigation Ordinance shall continue to be enforced to reduce the amount of potable water used for landscape irrigation.
- 7.1.5.4 Volusia County shall maintain its leak detection program for County-owned potable water facilities and distribution systems.
- 7.1.5.5 The County shall continue to enforce watering restrictions along with educating residents of the benefits of reduced watering for landscaping.
- 7.1.5.6 The County shall comply with conservation efforts outlined in the Consumptive Use Permit issued by the SJRWMD.
- 7.1.5.7 The County shall continue to undertake meter calibration, water audit, and leak detection programs to reduce the potential for any wasteful system losses.
- 7.1.5.8 The County shall continue to explore and study methods to reduce the average potable water demand with particular emphasis placed on reducing landscape irrigation demand.
- 7.1.5.9 The County shall regularly monitor conservation programs to assess their success.

OBJECTIVE:

- 7.1.6 Volusia County shall maximize the use of existing facilities in the water service areas, so as to discourage urban sprawl.

POLICIES:

- 7.1.6.1 The County will acquire and upgrade available water systems and consolidate them by interconnecting service area water systems where feasible to eliminate water service voids in water service areas.
- 7.1.6.2 Volusia County shall develop strategies, as needed, to balance fluctuation in water demand, safeguard continuance of supply in case of plant or water main breakdown, and to provide required fire flow.

- 7.1.6.3 The "infilling" of urban areas shall be directed to locations where an existing central system of potable water is available and where capacity is adequate to service the intended development or to those areas where funds have been committed for the provision of adequate capacity, unless otherwise vested under the County's Concurrency Management Ordinance, Vested Rights Ordinance, or Land Development Regulations or as may be determined by the County Council.
- 7.1.6.4 Volusia County shall continue to implement its established programs and schedules (i.e., continuing education for plant operators and schedules of routine maintenance) that are intended to promote facility longevity and optimum operating levels.
- 7.1.6.5 Volusia County shall require connection to a central water system where available. The use of existing wells serving land uses within the water service areas may continue in the manner consistent with the County's Comprehensive Plan and applicable local and state regulations.

OBJECTIVE:

- 7.1.7 The Water Resources and Utilities Division will plan and budget on an annual basis the necessary funds to maintain, repair and replace water system components owned and operated by Volusia County.

POLICIES:

- 7.1.7.1 The Volusia County Water Resources & Utilities Division shall maintain records and procedures for identifying needed repairs, their cost and subsequent implementation.
- 7.1.7.2 The Volusia County Water Resources & Utilities Division shall meter all water customers for billing purposes.
- 7.1.7.3 The Volusia County Water Resources & Utilities Division shall maintain a water conserving rate schedule based upon the cost of providing service and adjust rates and fees periodically to produce sufficient water revenues to finance existing operations, repair and replacement and future expansion that also encourages a reduction in demand.
- 7.1.7.4 Volusia County shall begin planning for expanded or replacement treatment facilities on or before the annual average water flow meets 80% of the permitted capacity.

OBJECTIVE:

- 7.1.8 Volusia County shall coordinate the provision of potable water service to the unincorporated area so as to ensure the safe, efficient, and economical delivery of this service.

POLICIES:

- 7.1.8.1 Negotiate necessary interlocal agreements with adjacent cities for the purpose of establishing interconnections with the municipalities' water systems to achieve:
- a. Improvement of system reliability in the event of diminished water supplies, line breaks, or excessively high localized, water demand conditions.
 - b. The option of purchasing water by "wholesale agreement" from adjacent water systems or regional water supply authorities, should this alternative prove to be more economically desirable than developing additional County water supply wells and transmission lines, for developing areas.
- 7.1.8.2 Volusia County shall negotiate water service area agreements with adjacent municipalities to better coordinate the orderly, efficient, and economical distribution of water throughout the County.
- 7.1.8.3 Volusia County shall coordinate the utility and transportation planning efforts to take advantage of the most economical construction and maintenance costs possible when installing utility lines and roads.
- 7.1.8.4 The County may provide, or allow the provision of, potable water service within agreed upon municipal or private utility service areas in a manner which is consistent with the adopted interlocal agreement.
- 7.1.8.5 The duties and responsibilities which flow from an interlocal agreement previously entered into between the County and a municipality shall prevail over subsequent amendments to the Comprehensive Plan until and unless such interlocal agreement is renegotiated as deemed appropriate by the County and a municipality.
- 7.1.8.6 The County shall initiate a program with the owners of the various privately-held potable water systems serving portions of the unincorporated region.
- 7.1.8.7 The County shall seek to establish and strengthen ties to the Florida Public Service Commission and other appropriate regulatory agencies.
- 7.1.8.8 Volusia County, in partnership with SJRWMD and other utility service providers, shall pursue development of an alternative water supply source or sources to meet the projected demand of the Central Springs/East Central Florida Regional Water Supply Plan.