

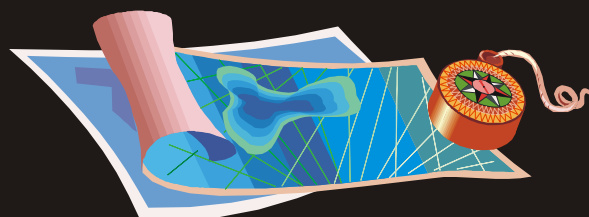
## POTABLE WATER ELEMENT

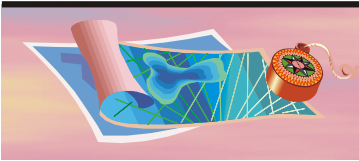
- Introduction
- Issues and Concerns
- Goals, Objectives and Policies
- Exhibits



POTABLE WATER

# VISION 2020





# Vision 2020 Comprehensive Plan Seminole County, Florida

## POTABLE WATER ELEMENT INTRODUCTION

Potable water is pumped from the ground, treated and distributed to residential and non-residential unincorporated Seminole County users through County, city and private water systems. The County currently owns and operates nine water treatment plants in three service areas:

- A Southwest Service Area - Served by the Lynwood plant;
- B Southeast Service Area - Served by the Consumers, Indian Hills, and Lake Hayes plants; and
- C Northwest Service Area - Served by the Heathrow, Hanover Woods, Lake Monroe, Country Club, and Greenwood Lakes plants.

Additional potable water service is provided to unincorporated users by the cities of Altamonte Springs, Casselberry, Lake Mary, Oviedo and Sanford, and by two major private water utilities.

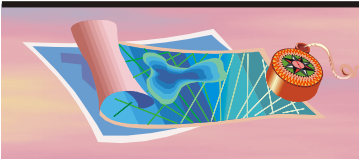
The County operates the potable water system as a fee-based enterprise. To ensure a continued supply of water, the Water and Wastewater Division of the County's Environmental Services Department does an annual budget and five-year capital plan for maintenance, replacement and capacity expansion based on a five year master plan. Additionally, the County works with the cities and private utilities to share wholesale service and works with the St Johns River Water Management District regarding the long term projected growth of demand for water services in Seminole County.

In the past decade, public health and safety has been furthered by the expansion of the water fluoridation program and the adoption of a cross-connection control (backflow prevention) ordinance to reduce the chance of water contamination within the distribution system. Additionally, the Public Safety Department operates an underground fuel storage tank replacement program to reduce the possibility of ground water supply contamination.



# Vision 2020 Comprehensive Plan Seminole County, Florida





# Vision 2020 Comprehensive Plan Seminole County, Florida

## POTABLE WATER ELEMENT ISSUES AND CONCERNS

### Issue POT 1

#### **Monitoring Of Proposed Regulations**

Proposed regulations of the Safe Drinking Water Act, if passed, may have significant effect on the County's ability to provide drinking water to the public using current treatment methods. Capital modifications to the County's water treatment plants may be necessary to meet the minimum standards established.

The Safe Drinking Water Act, as amended, addresses the allowable drinking water levels of lead, copper, inorganic and organic contaminants, disinfectants, coliform and radionuclides. Since the original enactment, numerous new requirements have been proposed by the Environmental Protection Agency. The exact timetable for enactment of these is not yet determined due to potential legal challenges and questions as to what levels should be set. If the new levels are set significantly below current levels, the County could face significant capital expenditure to attain compliance. Potential expenses could arise from the development of new well fields, installation of new disinfection equipment and/or the construction of new types of treatment facilities.

### Issue POT 2

#### **Fluoridation**

Fluoridation has proven itself to be of value in the prevention of tooth decay in children and should be provided to all central water customers served by the County.

Seminole County has committed itself to the implementation of a water fluoridation program. Currently eight (8) of the nine (9) County owned water treatment plants have fluoridation capabilities. Lake Monroe is not a priority for fluoridation due to the industrial/transient (motel) customer base.

### Issue POT 3

#### **Backflow Prevention**

The public water supply could become contaminated without the proper installation, testing, inspection, operation, maintenance and retrofitting of backflow prevention devices.

The State requires that each utility have a backflow program to protect water quality. A backflow device prevents water contamination from untreated water or liquid chemicals from being drawn into or pushed into the County's water mains. The proper installation of backflow prevention devices is important to the sanitary working of the water distribution system. The County's current ordinance requires backflow devices on all new construction, and requires that inspection, testing, monitoring or retrofitting of existing structures be done.

### Issue POT 4

#### **Conservation**

The State Comprehensive Plan requires that water conservation be promoted as an integral part of water management programs.



# Vision 2020 Comprehensive Plan

## Seminole County, Florida



The County requires wastewater reuse agreements where available of all new development. Other methods to increase conservation include public education; periodic amendment of the Building Code requirements to require use of water saving devices in development; amendment of the Land Development Code to require the use of drought tolerant species and water conserving irrigation techniques (known as Xeriscaping); and application of a surcharge for excessive consumption. Approved conservation methods should be used singly or in combination on a site-specific basis.

Additionally, St. Johns River Water Management District (SJRWMD) and Seminole County have a joint agreement to equally share the cost of permanently plugging abandoned artesian wells in Seminole County, with owner consent. Abandoned wells are plugged by pumping grout cement through PVC pipe into the bottom of the well. Since the SJRWMD-Seminole County Cost Share Program began in 1992, over 229 wells have been permanently plugged or repaired resulting in the reduction of approximately 22 million gallons per day from flowing onto the ground.

### Issue POT 5

#### Levels Of Service

The State requires that local jurisdictions assure that adopted levels of water service be maintained concurrent with the demand for those services.

The Goals, Objectives and Policies section establishes the County's level of service as 350 gallons of water per day (average daily flow) per Equivalent Residential Connection (ERC) for each individual service area. The amount of peak treatment facility capacity required is established as a minimum of 2.0 times the average daily flow. These levels of service shall also be applied for planning purposes to private and city utilities serving unincorporated customers unless a different level of service is authorized by the Florida Department of Environmental Protection or is adopted in a comprehensive plan.

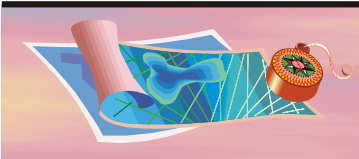
The County will continue to operate in compliance with all rules and requirements of FDEP, including, but not limited to, peak day, peak hour and service pressure requirements.

### Issue POT 6

#### Future Water Supply

During 2000 and 2001, the St Johns River Water Management District (District) has worked to identify the water needs of the District through the year 2020. The results indicate the potential need for new regional facilities, new water storage methods and a much stricter consumptive use permitting for new and existing wells. The County will continue to be fully engaged in the regional process of addressing and resolving these issues.





# Vision 2020 Comprehensive Plan Seminole County, Florida

## POTABLE WATER ELEMENT GOAL, OBJECTIVES AND POLICIES

### GOAL

The County shall provide quality public water facilities to serve existing and future development needs in a cost efficient, highly reliable, and environmentally sound manner.

### OBJECTIVE POT 1 ENVIRONMENTAL AND CONSERVATION POLICIES

The County shall ensure that the provision of water service and the operation of water treatment facilities under its control is accomplished in a manner which will minimize to the maximum practicable extent, any adverse impacts on the environment, public safety, residential neighborhoods and/or surrounding properties through the implementation of the following policies:

#### Policy POT 1.1 Back Flow Prevention

The County shall enforce its backflow prevention ordinance that enables the County to require inspection, testing and maintenance of backflow devices as well as the retrofitting of existing facilities to meet the requirements of the ordinance. The ordinance also provides for the use of sanctions such as citations and/or disconnection if standards are not met.

#### Policy POT 1.2 Safe Drinking Water Act

The County shall monitor amendments to the Safe Drinking Water Act, as amended. Significant amendments shall be brought to the Board's attention in a timely manner through a preliminary impact analysis statement provided to the Board by the Department of Environmental Services describing the range of known solutions, estimated cost of each and a future timetable to precisely identify the most appropriate and cost effective method of compliance.

#### Policy POT 1.3 Fluoridation

The County shall continue the existing program of water fluoridation.

#### Policy POT 1.4 Conservation Devices

Each update of the Land Development Code or Building Code shall include new requirements or revisions for water conservation devices and methods as needed. Such methods might include but are not limited to provisions for the use of drought tolerant species and water conserving irrigation techniques (Xeriscaping), and surcharges for excessive consumption. Approved conservation methods shall be used singly or in combination on a site-specific basis. The County shall coordinate with SJRWMD to reduce groundwater withdrawals for non-essential uses that consume large quantities of water (i.e. the filling of decorative fountains and ponds).



# Vision 2020 Comprehensive Plan Seminole County, Florida



## **Policy POT 1.5      Emergency Water Conservation**

The County shall continue to have and shall amend, as necessary, the emergency water conservation ordinance to enable the County to limit water usage by methods that may include, but are not limited to, citations with fines in order to enforce restrictions, and surcharges for excessive consumption and use methods as are otherwise authorized by law. The ordinance shall, at a minimum, be consistent with the St. Johns River Water Management District's Emergency Water Conservation requirements.

## **Policy POT 1.6      Effluent Reuse**

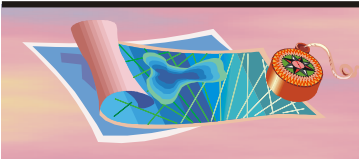
The County shall continue to require all development to enter into effluent reuse agreements as a condition of sewer service. Actual implementation of such agreements shall be based on, but not limited to, the following considerations: availability of effluent supply, distance from the facility, the nature of the soils and the nature of the development.

## **Policy POT 1.7      Required Connection to Central Water Service**

The County shall require within the unincorporated urban area, as described in *Exhibit FLU: Urban/Rural Boundary*, connection to central water service where available as defined by Chapter 64E-6, F.A.C. or when a County capital project is scheduled and authorized to begin construction in the County's then current adopted annual budget or construction is committed to begin within one (1) year in an enforceable schedule contained within a binding developer's agreement.







# Vision 2020 Comprehensive Plan Seminole County, Florida

## **OBJECTIVE POT 2 EFFECTIVE POTABLE WATER OPERATION**

The County shall correct deficiencies and maximize the use of existing facility capacity by using the most cost effective and efficient means of providing water production, treatment, and transmission to the service areas.

### **Policy POT 2.1 Continuation of User-fee Operation**

The County shall continue to construct and operate County-owned and operated water facilities by means of user fees and, when in the best interest of the County, make use of available Federal and State funds.

### **Policy POT 2.2 Priority of Water Service**

The County shall establish the priority of water service as follows in order of priority:

- A Maintenance to the existing water system where immediate threats to public health or safety exist;
- B Maintenance or upgrading of the existing water system to correct deficiencies, should they arise, and to meet the adopted level of service standards; and
- C Service to new development areas.

### **Policy POT 2.3 Minimum Construction Standards**

The County shall provide for regulation of the construction of facilities within unincorporated Seminole County by means of the water and sewer standards as set forth in the Land Development Code.

### **Policy POT 2.4 Acquisition of Utilities to Augment Capacity**

The County shall continue to pursue the acquisition of private water utilities to augment system capacity, upgrade potable water service, maximize facility use and increase cost effectiveness through economies of scale where economically feasible and supportive of the County's long term water planning strategy.





# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE POT 3 LEVELS OF SERVICE

The County shall establish and maintain a set level of service for each County potable water facility by providing facilities with sufficient capacity to meet projected service demands.

### Policy POT 3.1 Levels of Service Standards

The County shall maintain adopted levels of service standards through the day-to-day activities of the Department of Environmental Services and the implementation of the adopted Capital Improvements Element and the adopted annual budget.

The following levels of service standards are adopted for each individual service area:

- A 350 gallons/day/Equivalent Residential Connection. Flow demands for commercial, industrial or other special developments differing from the flow values established by the serving utility shall be established from existing records or by estimated projections, using the best available data.
- B Fire flows in single family residential areas shall provide 600 gpm at a 20 psi residual pressure. Fire flows in commercial, institutional, industrial areas and apartment or multi-unit complexes shall provide 1,250 gpm at a 20 psi residual pressure.
- C Each peak treatment facility capacity shall be maintained at a minimum of two times (2) the permitted capacity.
- D These levels of service shall also be applied for planning purposes to private and city utilities serving unincorporated customers unless a different level of service is authorized by the Florida Department of Environmental Protection or as adopted in a comprehensive plan.
- E The County shall continue to operate in compliance with all rules and requirements of FDEP, as well as all other applicable laws, rules and regulations, including but not limited to peak day, peak hour and service pressure requirements.

### Policy POT 3.2 Water Master Plan

The County shall update the Water Master Plan every five years. As part of the update, the County shall conduct a level of service review to determine if adjustment of the existing level is necessary based on, but not limited to, historical data and projected demand.

### Policy POT 3.3 New and Replacement Equipment

The County shall maintain the established levels of potable water service through the acquisition of new and replacement equipment in accordance with the adopted five year Capital Improvements Element.

### Policy POT 3.4 Transmission Lines

The County shall ensure that future transmission lines are sized to adequately meet the projected demands of development according to development phasing needs based upon the adopted/accepted Master Water and Sewer Plan which uses adopted future land uses as a basis for planning.



**Policy POT 3.5**

**Timing of Future Treatment Facility Expansion**

The County shall ensure that sufficient treatment facility capacity is maintained, once average daily flow (ADF) equals or exceeds 75% of a facility's permitted capacity or once the sum of current ADF plus future committed ADF equals or exceeds 90% of permitted capacity. A report shall be presented to the Board by the Department of Environmental Services on the need to increase capacity and, if capacity needs to be increased, the method of increase, estimated cost and timing.

**Policy POT 3.6**

**Adopted Potable Water Service Area Map**

*Exhibit POT: Water Service Areas* is the adopted potable water service area map for Seminole County. Whether central water usage is required for a particular piece of property within the service area is determined by reference to the Future Land Use Map Series, *Exhibit FLU: Services and Facilities By Classification* and the regulations governing that property according to its designation in the Series. Generally, when determined to be available in the urban area, new development or existing development with temporary well(s) shall connect to a central water system.



# Vision 2020 Comprehensive Plan Seminole County, Florida



## OBJECTIVE POT 4 COORDINATION AND URBAN SPRAWL

The County shall coordinate the extension of lines or increase of facility capacity with adjacent municipal and private facilities and discourage urban sprawl through implementation of the following policies:

### Policy POT 4.1 Evaluation of Service Area Expansion

The County shall evaluate the impact on delivering adequate service to residents within the adopted service area as depicted in *Exhibit POT: Water Service Areas* prior to the expansion of a potable water service area outside the adopted service area boundaries. The County shall not expand the service area if the adopted level of service in the existing service area cannot be maintained or if the expansion will encourage urban sprawl.

### Policy POT 4.2 Methods of Providing Potable Water Outside of the Adopted Urban Service Area

Outside of the Adopted Urban Service Area as depicted in *Exhibit FLU; Special Area Boundaries*, the County shall:

- A Continue to rely primarily upon individual wells as the method of providing potable water to the residents and other occupants outside the urban services area.
- B Encourage private central systems that exist as of the adoption date of this Plan to continue to provide an adequate level of service to users in their respective service areas, although the County shall discourage them from expanding their service areas.
- C New development outside adopted central service areas shall not be designed nor constructed with central water and/or sewer systems.
- D Public and private central systems may be permitted in the future if it is clearly and convincingly demonstrated by the proponents of the system expansion that a health problem exists in a built but unserved area for which there is no other feasible solution. In such cases, the service area expansion plans will be updated concurrent with an area-wide administrative land use update.

### Policy POT 4.3 Existing Package Plants

Existing package plants (i.e., schools, mobile home parks) shall be requested by the County to hook-up to the County system when it becomes available.

### Policy POT 4.4 Wholesale Agreements

The County shall enter into wholesale agreements with municipal and/or private utilities to encourage the most cost effective and efficient provision of water services and to avoid duplication of services during County expansion of capacity or lines when and where economically feasible and supportive of the County's long term water planning strategy.

### Policy POT 4.5 Extension of Service to New Development

The County shall continue to require new development to fund the cost of extending water lines to serve their development.

