

D. INFRASTRUCTURE ELEMENT

SANITARY SEWER SUB-ELEMENT

Goal D.1

St. Johns County shall maintain an efficient system of sanitary sewer disposal, which prevents the degradation of the existing resources, meets existing and projected demands, promotes orderly growth and development, and protects the public health of the community.

Objective D.1.1

Growth Management- Concurrency Management

The County shall implement procedures which will coordinate the extension of sewer facilities or the increase in capacity of sewer facilities, in order to: meet future needs, to correct existing sewer facility deficiencies, and to promote compact urban growth. All system improvements for replacement, expansion, or increase in capacity of sewer facilities shall comply with the existing or newly adopted level of service standards for the facilities.

Policies

- D.1.1.1 The County shall continue to encourage growth management practices within the Development Areas which promote contiguous, compact development through the availability of utility services.
- D.1.1.2 New public infrastructure shall continue to be planned and designed to be compatible with adjacent land uses, both existing and future, and shall not promote development located in Environmentally Sensitive Lands (ESLs).
- D.1.1.3 The County shall continue to direct development within the Development Area Boundaries as designated on the 2025 Future Land Use Map.
- D.1.1.4 New public infrastructure and public services shall continue to be constructed and expanded in an orderly manner, with costs shared as appropriate, on a proportionate basis, by those benefiting from the service.
- D.1.1.5 Both public and private sanitary sewer lines shall serve developments located within the Development Areas as identified by the 2025 Future Land Use Map. When it is necessary for sewer mains to be extended to connect one Development Area with another, the extension of such transmission lines shall not be construed as justification for development at intensities

greater than is allowed in the Rural/Silviculture (R/S) or Agriculture-Intensive (A-I) or other existing adjacent land use areas as designated on the 2025 FLUM.

D.1.1.6 In an effort to promote orderly contiguous compact development, the County shall adopt regulations establishing criteria identifying the extent of where sanitary sewer utility service areas will be located. Such regulations shall define the extent of where centralized potable water and sanitary sewer utility services will be provided by St. Johns County Utilities, and/or by municipalities, and/or by utilities certified by the Florida Public Service Commission and/or utilities certified by St. Johns County.

D.1.1.7 The extension of sanitary sewer services beyond the Development Area Boundaries shall be extended in a manner which prevents urban sprawl and leap frog development and is consistent with the adopted Utility Service Area ordinance. Such extensions must meet the following criteria:

- (a) Wastewater treatment capacity must be available;
- (b) The proposed extension is funded by the proposed development or the project is adopted by the capital improvement schedule;
- (c) The extension is consistent with the approval of a large scale comprehensive land use amendment as specified in the Future Land Use Element policies A.1.2.5 and A.1.2.6;
- (d) The extension is of sufficient capacity to provide for the connection of adjacent systems.

Provisions for the extension of sanitary sewer services beyond the Development Area Boundaries may be waived in emergency situations, such as failure of package treatment plants or septic tank systems.

D.1.1.8 The development of growth management strategies shall continue to be coordinated between the County Growth Management Department and the appropriate utility department.

D.1.1.9 New public infrastructure within the Coastal Area shall be planned and constructed in a manner which minimizes the impact upon coastal marshes, wetlands, and surface water. New infrastructure development within the Coastal Areas shall be subject to County Land Development Code.

- D.1.1.10 Public expenditures within the Coastal High Hazard Areas (CHHA) shall be limited pursuant to Objective H.1.4 and supporting policies unless required for the health, safety, or welfare of existing residents.
- D.1.1.11 Sanitary sewer availability by itself shall not provide justification for development approvals such as rezonings or Comprehensive Plan Amendments.
- D.1.1.12 Proposed developments in St. Johns County shall meet sanitary sewer concurrency management approvals as required by the Land Development Code.
- D.1.1.13 St. Johns County shall monitor total capacity and facility demand for each utility system in the county to assure that the adopted level of service (LOS) standards are maintained and the Concurrency Management System is up to date.
- D.1.1.14 The County shall discourage the discharge of any new or upgraded public or private sanitary sewer facility into the estuarine waters of the County.
- D.1.1.15 Coastal water and sewer development shall be subject to the County's Land Development Regulations, Utility Ordinance 97-63, Private Utility Ordinance 98-25, and the requirements established pursuant to Section 381.00655, F.S.
- D.1.1.16 The location of the County Utility's water and sewer lines can be obtained from the County's Utility Department upon request as allowed by Florida law.

Objective D.1.2

Level of Service Standards

The County shall adopt Level of Service (LOS) standards to measure the adequacy of sanitary sewer services and facilities.

Policies

- D.1.2.1 The County shall continue to ensure that sanitary sewer facilities which serves new development meets or exceeds the minimum level of service (LOS) as adopted in the Comprehensive Plan.
- D.1.2.2 The minimum Level of Service (LOS) standards for existing sanitary sewer facilities shall be established as 100 gallons per capita per day (GPCD).
- D.1.2.3 The level of service standards for sanitary sewer are hereby adopted as set forth in Policy H.1.2.1 and shall be used as the basis for determining the availability of facility capacity for the purpose of issuing development orders and development permits.

Objective D.1.3
Wastewater Systems

St. Johns County shall continue to discourage the use of wastewater systems that are package treatment plants; but when necessary, the county shall require the package wastewater treatment systems be constructed to run efficiently and effectively to prevent water degradation and be designed to meet advanced wastewater treatment (AWT) standards including use of treated effluent for use as reclaimed water irrigation.

Policies

- D.1.3.1 The County shall continue to replace package treatment plants with regional sewer facilities when they become available.
- D.1.3.2 The County shall ensure that, prior to the issuance of a development order or permit, the applicant has demonstrated that the project complies with Federal, State, and Local permit requirements for wastewater systems (package treatment plants).
- D.1.3.3 St. Johns County shall require wastewater disposal agreements whereby package treatment plants may be interconnected and replaced by regional treatment facilities in order to improve operating efficiencies. Such wastewater agreements shall state that at the time deemed appropriate by the county, the wastewater system shall be acquired by the county for operation and maintenance.
- D.1.3.4 Wastewater Systems (package treatment plants) shall be allowed within the Development Areas only as a temporary measure and shall be built according to applicable state or local standards. Once centralized sanitary sewer is available the County shall require private wastewater systems, through a wastewater disposal agreement, to be decommissioned and connected to the centralized utility system.
- D.1.3.5 The County will continue to require all new package treatment plants constructed in the County to construct their proposed facilities according to the St. Johns County Utility Department's sanitary sewer facility construction standards with an overall goal of reaching Advanced Waste Treatment (AWT) standards for all plants.
- D.1.3.6 Where applicable, by September 30, 2025, the County shall include a list of sanitary sewer service projects in the Five-Year Schedule of Capital Improvement, with an annual update as necessary, for increased capacity or

upgrade of treatment required to achieve the pollutant load reductions attributable to the County, to meet the Total Maximum Daily Load (TMDL) established in the Lower St. Johns River Basin Management Action Plan pursuant to Section 403.067(7), Florida Statutes. If the current TMDL is being met, no projects shall be listed.

Objective D.1.4 Septic Tanks

The County shall continue to review the use of on-site sewage treatment disposal system (OSTDS) facilities to assure compliance with Federal, State, Regional, and County regulations, and install regional facilities in accordance with the Capital Improvements Element in order to reduce the number of septic tanks installed annually.

Policies

- D.1.4.1 Septic tanks, at a minimum, shall comply with established State standards, including suitable soil types and minimum lot sizes. The County shall continue to ensure compliance with established State standards through the St. Johns County Health Department review of applications for septic tanks.
- D.1.4.2 The County shall continue to apply the State established minimum setback for septic tank drain fields in areas adjacent to any stream, creek, pond or other open water body.
- D.1.4.3 Pursuant to applicable law and as required by St. Johns County Land Development Code (LDC), residents using septic tank systems shall be required to tie into centralized sewer systems once that system becomes available in the area.
- D.1.4.4 On-site sewage disposal systems shall be prohibited within wetland systems.
- D.1.4.5 New developments above the St. Johns County Health Department's threshold(s) for septic tank use shall rely upon public or private sewer systems and wastewater treatment plants built to county/state specifications.
- D.1.4.6 In an effort to protect the health, safety, and welfare of its citizens, the County shall require the use of advance on-site treatment and disposal systems (OSTDS) for new development located within 100 feet of the surface waters along the Intracoastal Waterway and St. Johns River which is not served by centralized sewer service. The lot size and proximity to surface water for new developments shall be considered in the review of these systems.
- D.1.4.7 St. Johns County shall continue to encourage the use of advanced on-site treatment and disposal systems (OSTDS) for new development on a parcel

located within the Environmental Sensitive Lands (ESLs), as designated on the FLUM series, which does not have central sanitary sewer currently available.

- D.1.4.8 The County shall, in coordination with the St. Johns County Health Department, establish public education programs on the proper use, inspection requirements, maintenance, and abandonment of septic tanks. The tank abandonment process shall be based on applicable state and local regulations.
- D.1.4.9 Within the County's jurisdiction, for any development of more than fifty (50) residential lots, whether built or unbuilt, with more than one (1) onsite sewage treatment and disposal system (OSTDS) per one (1) acre, the County shall consider the feasibility of providing sanitary sewer services within a 10-year planning horizon and must identify the name and location of the wastewater treatment facility that could receive sanitary sewer flows after connection; the capacity of the facility and any associated transmission facilities; the projected wastewater flow at that facility for the next twenty (20) years, including expected future new construction and connections of OSTDS to sanitary sewer; and a timeline for the construction of the sanitary sewer system. The County shall update its feasibility analysis as needed to account for future applicable developments. By September 30, 2025, the County shall include in the Five-Year Schedule of Capital Improvement, with an annual update as necessary, a list of projects for providing sanitary sewer to the development(s), as applicable. This analysis shall be conducted pursuant to Section 163.3177(c)3 of the Florida Statutes, incorporated by reference in this element by July 1, 2024.

Objective D.1.5
Surface Water and Groundwater Quality

St. Johns County shall take measures to protect the surface and groundwater quantity and quality.

Policies

- D.1.5.1 St. Johns County shall support, encourage, and coordinate water quality monitoring by local, state, and federal agencies which will identify and formulate plans to address point and non-point sources of surface water pollution.
- D.1.5.2 St. Johns County, in coordination with the Department of Environmental Protection (DEP), shall adopt standards and procedures which promote and regulate the Marine Best Management Practices (BMPs).
- D.1.5.3 Disposal of sludge shall be allowed only in areas which will not adversely impact groundwater resources, recharge areas, or watersheds that drain into the surface water supplies.
- D.1.5.4 Land uses may be restricted if they adversely affect the quality and quantity of the water resources such as natural groundwater recharge areas, wellhead protection areas, and surface waters.
- D.1.5.5 St. Johns County shall continue to implement the Stormwater Management Ordinance for the reduction and elimination of pollutant discharges to the Municipal Separate Storm Sewer System.

Objective D.1.6
Water Conservation

The County shall coordinate with appropriate State, Regional, and Federal agencies to address current and future water sources, water use, and water conservation.

Policies

- D.1.6.1 The County shall continue to require all new golf course developments to be designed and constructed to accommodate reuse for irrigation on the golf course.
- D.1.6.2 The County, through public outreach to its citizens, shall publicize and promote Best Management Practices (BMPs) as suggested by the State of Florida and its Water Management Districts that illustrate the importance of water conservation.
- D.1.6.3 The County Utility through its rate structures will continue to promote and provide financial incentives that promote water conservation.
- D.1.6.4 The County will continue to promote “Florida-friendly landscaping” through its outreach programs.

Objective D.1.7
System Expansion/ Improvements

The County shall implement procedures, which will coordinate the extension of sewer facilities or the increase in capacity of sewer facilities, in order to meet future needs, to correct existing sewer facility deficiencies, and to promote compact urban growth. All system improvements for replacement, expansion, or increase in capacity of sewer facilities shall comply with the existing or newly adopted level of service standards for the facilities.

Policies

- D.1.7.1 Annual summaries of facility capacity and demand information prepared by the Utility Department shall be used to evaluate the need for, timing, and location of projects to extend or increase the capacity of existing facilities.
- D.1.7.2 The County's Wastewater Master Plan shall be updated every five years at a minimum.
- D.1.7.3 Proposed Capital Improvements projects shall be evaluated and ranked according to the following three priority level guidelines:
- (a) Level One - whether the project is needed to protect public health, safety, and welfare to fulfill the county's legal commitment to provide facilities and services or to preserve or achieve full use of existing facilities.
 - (b) Level Two - whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement costs, provides service to developed areas lacking full service, or promotes in-fill development.
 - (c) Level Three - whether the project represents a logical extension of facilities and services within the Development Area Boundaries.
- D.1.7.4 The County shall provide sanitary sewer service to areas where the lack of service is determined to be a public health threat. The cost for providing such a service shall be recovered through those connecting to the system and directly benefiting from the improvement.
- D.1.7.5 Major capital expenditures to finance the construction of centralized sanitary sewer facilities for St. Johns County Utilities shall be indicated in

the Capital Improvements Element of the Comprehensive Plan and shall be updated annually if necessary or at a minimum every five years.

- D.1.7.6 All improvements for replacement, expansion, or increase in capacity of sewer facilities shall be compatible with the existing, or newly adopted, level of service standards for such facilities.
- D.1.7.7 In order to manage future growth within St. Johns County, the following measures shall be established to ensure the minimum level of service standards are met:
- (a) begin planning for expansion when a plant's average daily demand is projected to equal or exceed 50% capacity.
 - (b) prepare plans and specifications for expansion when a plant's average daily demand is projected to equal or exceed 85% capacity.
 - (c) submit a complete construction permit application to the Department of Environmental Protection for expansion when a plant's average daily demand is projected to equal or exceed 90 % capacity.
- D.1.7.8 The County sanitary sewer system shall continue to operate as an enterprise system which is financially self-supporting.
- D.1.7.9 The County Utility Department shall fund sanitary sewer capital improvements and extensions through impact fees, developer's agreements, assessments, and other appropriate fees and funding mechanisms.
- D.1.7.10 The County shall pursue federal, state, and local funding sources available for the improvement and expansion of utilities.

D. INFRASTRUCTURE ELEMENT

SOLID WASTE SUB-ELEMENT

Goal D.2

St. Johns County shall provide an efficient and environmentally sound solid and hazardous waste management system which protects public health and sanitation, promotes orderly growth within the County, and meets current and projected demand for the management and disposal of waste.

Objective D.2.1

Service Concurrent with Development

Provide solid waste disposal services and facilities to meet current needs and projected future demands as indicated in the Future Land Use Element, and to prevent adverse effects on the natural environment.

Policies

- D.2.1.1 The County shall utilize the Tillman Ridge transfer station to accommodate up to 650 tons per day of solid waste and the Stratton Road transfer station to accommodate up to 1000 tons per day of solid waste, as permitted by FDEP.
- D.2.1.2 The minimum level of service (LOS) standards shall be established as four (4) pounds per person per day, and shall be used as the basis for determining the availability of facility capacity and the demand generated by new development, and for the purpose of issuing development orders and development permits.
- D.2.1.3 The St. Johns County Solid Waste Department shall receive an annual certified report from its contracted landfill documenting the existing available airspace.
- D.2.1.4 The County shall provide collection services at a frequency and level of convenience to protect the health and safety of the community.

Objective D.2.2
Environmental and Economic Feasibility

The County shall provide solid waste disposal in an environmentally sound and economical manner.

Policies

- D.2.2.1 The County shall continue to utilize FDEP standards as a comprehensive landfill and/or transfer station siting methodology and the County's Land Development Code to guide the future development of solid waste disposal facilities and ensure their location in environmentally suitable areas.
- D.2.2.2 The County shall achieve an integrated program of solid waste disposal through transferring solid waste material to a regional facility, recycling, and other technologies found to be suitable.
- D.2.2.3 Solid waste management facilities developed and operated by the County shall:
- (a) Comply with all federal, state, and local environmental regulations;
 - (b) Minimize adverse human and natural environmental impacts;
 - (c) Minimize development and operation and maintenance costs;
 - (d) Minimize environmental and economic risk; and
 - (e) Meet all applicable health and safety standards.

**Objective D.2.3
Hazardous Waste**

The County shall ensure the safe collection, handling, and temporary storage of hazardous waste and those provisions needed to properly manage and dispose of hazardous wastes within St. Johns County through the planning time frame (2010 to 2025).

Policies

- D.2.3.1 The County shall pursue public education programs to make the public aware of hazardous materials problems and techniques.
- D.2.3.2 Waste streams shall be monitored at landfill sites to prevent illegal dumping of hazardous waste.
- D.2.3.3 The County shall continue to require building permits to facilitate the tracking of hazardous waste.
- D.2.3.4 The County shall continue to investigate programs for the safe collection, handling, and temporary storage of hazardous wastes generated by small quantity generators (SQGs) as defined by applicable Federal regulations. In addition, the County shall identify possible sites for the location of storage facilities for hazardous wastes generated by SQG's.
- D.2.3.5 The County shall continue to operate a service which allows residents to dispose of household hazardous waste at designated drop off locations.
- D.2.3.6 The County shall continue to perform regular inspections of small quantity hazardous waste generators in compliance with Florida Statutes.
- D.2.3.7 The County shall encourage the Department of Environmental Protection (DEP) to perform regular inspections of large quantity hazardous waste generators (LQG's) and private licensed waste handlers to ensure that biohazardous waste which is generated by medical establishments and handled by private firms is properly managed.

Objective D.2.4
Reduction of Waste Volume

The County shall continue to implement waste reduction and recycling programs to reduce the amount of solid waste entering the waste stream.

Policies

- D.2.4.1 The recycling programs shall be continued countywide with a goal to reduce the amount of solid waste by 75 percent through 2020. The County shall continue to reduce the amount of solid waste through its Residential Recycling at Curbside Program and Commercial Recycling Ordinance.
- D.2.4.2 The County shall endeavor to expand its existing recycling programs to include commercial and industrial businesses.
- D.2.4.3 The County shall, within the existing budget, continue to develop and implement recycling programs designed to separate newspaper, glass, metal products, and plastics.
- D.2.4.4 The County shall, through informational brochures and advertisements, develop and implement public education and awareness programs to inform residents and businesses of the need to recycle, reuse, and compost.
- D.2.4.5 The County shall assist local schools in the development and implementation of information to inform students of the impact of recycling, hazardous waste management, and waste disposal.
- D.2.4.6 The County shall continue to assist local companies that manage tires, construction, and demolition debris and yard waste.
- D.2.4.7 By 2012, the County shall review and revise as appropriate purchasing practices to encourage the purchase of environmentally preferable, recycled, durable, and less toxic goods.

Objective D.2.5
Funding

The County shall develop and maintain an adequate system of funding solid waste management services while supporting solid waste management objectives and maximizing the use of existing facilities.

Policies

- D.2.5.1 The County shall cooperate with the Northeast Florida Regional Council, and other counties in the region, to investigate the feasibility of solid waste funding options.
- D.2.5.2 The County shall continue to pursue funding sources and public education programs to make the public aware of problems and techniques of waste disposal and recycling techniques.

D. INFRASTRUCTURE ELEMENT

STORMWATER MANAGEMENT SUB-ELEMENT

Goal D.3

St. Johns County shall provide an efficient and environmentally sound system of Stormwater Management. This system shall increase the efficiency of the existing system, afford reasonable protection from flooding, and protect the quality of surface water and groundwater in St. Johns County.

Objective D.3.1

Surface Water Management

The County shall seek funding to implement the recommendations of the Countywide Master Drainage Study. This Master Drainage Study includes inventories of existing drainage facilities, geographic locations, land uses, operating entities, design capacities, existing capacity usage, general performance, impacts of the facilities on the natural environment, problems and opportunities for solutions to the deficiencies.

Policies

- D.3.1.1 The County shall coordinate with the Department of Environmental Protection (DEP) and the St. Johns River Water Management District (SJRWMD) in the identification of all drainage basins in the County to assure uniformity of basin designation.
- D.3.1.2 The County shall implement the recommendations of the Countywide Master Drainage Study by continuing to fund the Countywide Stormwater Model and establish the priorities as the drainage models for each sub-basin or quadrant are completed. Priorities should be based on the potential damage created by flooding, the water quality in the area to include nutrient removal criteria, and the impacts to areas of special concern (e.g. OFW, Class II, etc.).
- D.3.1.3 The County shall continue to implement the Master Drainage Study and shall take action to address deficiencies for the affected areas by identifying appropriate implementation mechanisms and possible revenue sources. The County shall also continue to update its inventory of all private and public drainage facilities, easements, and rights of way and shall continue to map these facilities as well as land uses, soil types, and topographical information and continue to update maps which identify where major

drainage problems have occurred and which drainage problems the County has corrected.

- D.3.1.4 There shall be no reduction in the flood storage capacity or the other natural functions and values of the floodplain in St. Johns County in areas designated as regulatory floodway as updated by FEMA Flood Insurance studies in St. Johns County. Encroachments shall be prohibited within designated regulatory floodway including, but not limited to, fill, new construction, and development improvements that would result in any increase in flood levels.
- D.3.1.5 The County shall regulate development within the flood prone areas to minimize flood storage capacity reduction, so that the post-development conditions does not exceed pre-development conditions and ensure that there will not be any adverse impacts either upstream or downstream which will afford protection of life and property within flood prone areas and/or floodplains.
- D.3.1.6 St. Johns County shall continue to coordinate with the SJRWMD and FDEP and participate in the ongoing programs of the Lower St. Johns River Surface Water Improvement Management (SWIM) program and the Northern Coastal Basins SWIM programs, and work with the SJRWMD on the long term ambient water quality monitoring program, establishing pollutant load reductions goals and monitoring freshwater inflow as well as the pollutant and nutrient goals identified in the Total Maximum Daily Load (TMDL) criteria.
- D.3.1.7 St. Johns County shall continue to coordinate with DEP and SJRWMD to utilize water quality data and other appropriate biological indicators to design water management practices that facilitate the maintenance and/or improvement of the existing water quality.
- D.3.1.8 St. Johns County shall continue to work with DEP and SJRWMD to develop management practices for water resources to mitigate urban and agriculture non-point sources of water degradation.
- D.3.1.9 The use, storage, transmission, or generation of hazardous substances, or substances that may artificially accelerate the eutrophication of the wetlands and water bodies, is prohibited within wetland systems.
- D.3.1.10 The County shall seek new funding sources to develop and implement best management practices for water resources identified as shellfish harvesting areas.

- D.3.1.11 The County shall work with the St. Johns River Water Management District (SJRWMD) and the Florida Department of Environmental Protection (FDEP) and the U.S. Environmental Protection Agency (EPA) to educate and distribute information on the surface water resources in the County.
- D.3.1.12 The County shall maintain compliance with the National Pollution Discharge Elimination System (NPDES) permit and the requirements of the Federal Clean Water Act amendments. The County will continue with planning activities and implementation of the stormwater management program.

Objective D.3.2 Future Development

St. Johns County shall continue to update their Land Development Regulations which shall require the implementation of stormwater management procedures that ensure water quality and quantity is improved and that adequate facility capacity is available to serve future developments.

Policies

- D.3.2.1 New development shall be required to construct adequate stormwater management facilities according to State, Regional, and County standards.
- D.3.2.2 The County shall continue to manage and regulate development within the 100-year floodplain through enforcement of the County floodplain management regulations.
- D.3.2.3 The County shall require a vegetative buffer between contiguous wetlands and developed areas to protect the water quality of the drainage course as established in the County Land Development Regulations and Policy E.2.2.4 of the Comprehensive Plan.
- D.3.2.4 The County shall coordinate with the SJRWMD and FDEP to ensure that current roadway and drainage standards contained in the County's Land Development Code (LDC) are consistent with state law.
- D.3.2.5 The County shall establish a coordination mechanism between the Growth Management Department and Engineering Division to ensure that plans developed for drainage facilities are consistent with, and support, the Land Use Element.
- D.3.2.6 The County shall continue to determine the feasibility of requiring all stormwater management facilities with a surface area greater than one half (1/2) acre for irrigation and/or water reuse purposes.
- D.3.2.7 St. Johns County shall require that the drainage systems that are submitted for review be incorporated into the Countywide Stormwater Model to ensure that areas downstream or upstream of a proposed development have the capacity or hydraulic gradient to accept the proposed developments discharge, or that the proposed development improves the downstream or upstream drainage system.

- D.3.2.8 The County shall require that the Stormwater Management facilities meet or exceed the adopted Level of Service Standards (LOS) and that capacity is available concurrent with the impacts of the development.
- D.3.2.9 The level of service standards for stormwater management are hereby adopted as set forth in Policy H.1.2.1, and shall be used as the basis for determining the availability of facility capacity for the purpose of issuing development orders and development permits.
- D.3.2.10 The County shall continue to coordinate review of subdivision approvals, rezonings, and final development plans with the County Public Works Department.
- D.3.2.11 The Growth Management Department and Engineering Divisions shall coordinate their data gathering and analytic efforts in the preparation of the update of the Comprehensive Plan.
- D.3.2.12 As the master drainage study and model provided for Objective D.3.1. completes planning, design, and environmental analyses for the sub-basins studied, findings shall be presented to the Board of County Commissioners for review and recommendation concerning consistency with, or needed amendment of, the Plan.
- D.3.2.13 St. Johns County shall encourage the incorporation of natural features into the construction of new stormwater management facilities that provide vegetation and buffers that promote wildlife habitat. In addition, St. Johns County shall coordinate with FDOT and SJRWMD to investigate additional requirements to enhance existing stormwater management facilities for wildlife habitat.

Objective D.3.3
Maintenance

The County shall continue to utilize the Computerized Maintenance Management System (CMMS) for all County Controlled drainage facilities.

Policies

D.3.3.1 The County shall utilize a CMMS to establish a schedule for all County maintained drainage facilities.

D.3.3.2 The County shall utilize its CMMS to document and categorize drainage complaints. This inventory in conjunction with the Countywide Stormwater Model shall be utilized to prioritize drainage problem areas which need frequent maintenance or drainage facilities replacement or additional studies.

D.3.3.3 The County shall adopt regulations to require routine maintenance of privately controlled drainage facilities in a manner consistent with maintenance criteria established for publicly maintained facilities.

Routine maintenance schedule (as prioritized from least to the most intense) shall include, but shall not be limited to, the following:

- (a) mowing the retention and detention areas and their respective drainage swales;
- (b) limitation of trash or debris;
- (c) cleaning out ditches, swales, pipes, and structures;
- (d) sedimentation and erosion prevention through re-grading or vegetating;
- (e) dredging of ponds.

Objective D.3.4
Correction of Existing Problems

The County shall continue to utilize its CMMS and Countywide Stormwater Model to continue its program for the correction of existing stormwater management deficiencies and shall address anticipated future deficiencies and include corrections of these problems.

Policies

- D.3.4.1 The County shall implement the Countywide Stormwater Model for analysis of facility improvements of the Comprehensive Stormwater Management Program as funding becomes available.
- D.3.4.2 The County shall prioritize the correction of existing drainage problems beginning with those identified in this document and the Comprehensive Stormwater Management Program. Priority should be given to those problems with the most severe problems.
- D.3.4.3 The program shall include a summary of drainage problems, recommendations for structural and non-structural actions for reducing drainage problems, a proposed schedule, and budget for corrective actions.
- D.3.4.4 At a minimum, the program schedule shall be reviewed every two years. This program shall establish a mechanism for increasing the priority of projects, as private or public donation of lands or funds are made available which would significantly reduce the cost of implementing the project.
- D.3.4.5 All improvements for replacement, expansion of or increase in capacity for stormwater management facilities shall be compatible with the existing, or newly adopted, level of service standards for such facilities.
- D.3.4.6 The County will work in conjunction with the SJRWMD and other federal, state, and regional agencies to require retrofit of stormwater treatment facilities in older developed watersheds that discharge into the St. Johns River, Intracoastal Waterway, and their tributaries.

D. INFRASTRUCTURE ELEMENT

POTABLE WATER SUB-ELEMENT

Goal D.4

St. Johns County shall maintain an efficient system of potable water supply and distribution, which prevents the degradation of the existing resources, meets existing and projected demands, promotes orderly growth and development, and protects the public health of the community.

Objective D.4.1 Growth Management\Concurrency Management

The County shall implement procedures which will coordinate the extension of potable water facilities or the increase in capacity of potable water facilities, in order to: meet future needs, correct existing potable water facility deficiencies, and promote compact urban growth. All system improvements for replacement, expansion, or increase in capacity of potable water facilities shall comply with the existing or newly adopted level of service standards for the facilities.

Policies

- D.4.1.1 The County shall encourage growth management practices within the Development Areas which promote contiguous, compact development through the availability of utility services.
- D.4.1.2 Both public and private potable water lines shall serve developments located within the Development Areas as identified by the 2025 Future Land Use Map (FLUM). When it is necessary for potable water lines to be extended to connect one Development Area with another, the extension of such transmission lines shall not be construed as justification for development at intensities greater than is allowed in the Rural/Silviculture (R/S) or Agriculture-Intensive (A-I) or other existing adjacent land use areas as designated on the 2025 FLUM.
- D.4.1.3 In an effort to promote orderly contiguous compact development, the County shall adopt regulations establishing criteria identifying the extent of where potable water utility service areas will be located. Such regulations shall define the extent of where centralized potable water and sanitary sewer utility services will be provided by St Johns County Utilities, or by municipalities, or by utilities certified by the Florida Public Service Commission or utilities certified by St. Johns County.

D.4.1.4 The extension of potable water services beyond the Development Area Boundaries shall be extended in a manner which prevents urban sprawl and leap frog development and is consistent with the adopted County Utility Service Area ordinance. Such extensions must meet the following criteria:

- (a) Potable water capacity must be available;
- (b) The proposed extension is funded by the proposed development or the project is adopted by the capital improvement schedule;
- (c) The extension is consistent with the approval of a large scale comprehensive land use amendment as specified in the Future Land Use Element policies A.1.2.5. and A.1.2.6.

Provisions for the extension of potable water services beyond the Development Area Boundaries may be waived in emergency situations, such as failure of package treatment plants or potable water wells.

D.4.1.5 New public infrastructure and public services shall be constructed and expanded in an orderly manner, with costs shared as appropriate, on a proportionate basis, by those benefiting from the service.

D.4.1.6 New public infrastructure shall be planned and designed to be compatible with adjacent land uses, both existing and future, and shall not promote development located in Environmentally Sensitive Lands (ESLs).

D.4.1.7 The County shall, through its Future Land Use Map and Comprehensive Planning activities, direct development to Development Areas, as designated on the 2025 Future Land Use Map, served by existing or planned regional water and sewer facilities.

D.4.1.8 The development of growth management strategies shall be coordinated between the County Growth Management Department and the appropriate utility department.

D.4.1.9 New public infrastructure within the Coastal Area shall be planned and constructed in a manner which minimizes the impact upon coastal marshes, wetlands, and surface water. New infrastructure development within the Coastal Areas shall be subject to the Land Development Regulations and the requirements established pursuant to Objective E.1.7.

D.4.1.10 Public expenditures within the Coastal High Hazard Areas (CHHA) shall be limited pursuant to Objective H.1.4. and supporting policies.

- D.4.1.11 Water availability by itself shall not necessarily provide justification for development approval.
- D.4.1.12 Proposed developments in St. Johns County shall meet potable water concurrency management approvals as required by the Land Development Code (LDC).
- D.4.1.13 St. Johns County shall monitor total capacity and facility demand for each utility system in the County to assure that the adopted level of service (LOS) standards are maintained and the data is current within the Concurrency Management System.
- D.4.1.14 The County shall utilize information from the County's consumptive use permits, St. Johns County Water Supply Facilities Work Plan, Integrated Water Resources Plan, and North Florida Regional Water Supply Plan to update and maintain the Concurrency Management System to meet water supply demand.
- D.4.1.15 The County shall maintain a St. Johns County Water Supply Facilities Work Plan (Work Plan) that is coordinated with SJRWMD's North Florida Regional Water Supply Plan (NFRWSP). The Work Plan and appropriate Comprehensive Plan policies will be updated every 5 years, and within 18 months of any update to the NFRWSP.
- D.4.1.16 The St. Johns County Water Supply Facilities Work Plan, covering a minimum ten year planning period, shall identify the water conservation and reuse practices, along with the traditional and alternative water supply projects, necessary to meet existing and future water demands.
- D.4.1.17 The County adopts by reference into its Comprehensive Plan the St. Johns County Water Supply Facilities Work Plan (2019-2030) in its entirety, as amended.
- D.4.1.18 The County shall select projects from the North Florida Regional Water Supply Plan and incorporate the projects into the Water Supply Facilities Work Plan for implementation.

Objective D.4.2
Level of Service Standards

The County shall adopt Level of Service (LOS) standards to measure the adequacy of potable water services and facilities.

Policies

- D.4.2.1 The minimum level of service (LOS) standards for existing potable water treatment facilities shall be established as 130 gallons per capita per day (gpcd) for residential uses which do not utilize reclaimed water, and 104 gpcd for residential uses which utilize reclaimed water service. Non-Residential land uses potable water will be evaluated in accordance with Schedule A: Water and Sewer Flow and ERC Factors by Use Type, as amended. Within the Utility Service Area for the City of St. Augustine or JEA utilities then the minimum LOS as adopted by that utility shall be required.
- D.4.2.2 The County shall establish and implement procedures that monitor the LOS for potable water facilities, pursuant to the procedures of the County's Concurrency Management System.
- D.4.2.3 The County shall protect and conserve potable water resources and shall ensure that development orders or development permits are issued based upon the level of service established in Objective H.1.2 of the Capital Improvements Element.
- D.4.2.4 The potable water supply systems shall operate with a rated capacity which is no less than five percent above the historical maximum daily flow.
- D.4.2.5 The minimum operating pressures of each water supply system shall be as follows:

Condition	Pressure
Minimum	20 psi
Maximum Daily Demand with Fire Protection Demand	20 psi
Peak Hour Demand (average daily flow)	40 psi

Normal operating conditions 40-80 psi

D.4.2.6 The County shall maintain minimum fire protection flows based on land uses as follows:

Land Use	Gallons Per Minute (gpm)
Single family	500
2 family homes & mobile homes	750
Multi-family, residential commercial and institutional	1,500

D.4.2.7 The County shall adopt Land Development Regulations (LDRs) to ensure potable water facilities serving new developments meet or exceed the minimum level of service (LOS).

Objective D.4.3
Potable Water Systems

St. Johns County shall continue to discourage the use of potable water systems that are package treatment facilities. However, when necessary the County shall require potable water systems be constructed to run efficiently and effectively and prevent groundwater degradation.

Policies

- D.4.3.1 Potable Water Systems that are package treatment facilities shall be allowed within the Development Areas only as a temporary measure and shall be built according to FDEP's construction standards. Once centralized potable water is available, the County shall require private water systems, through a potable water disposal agreement, to be decommissioned and connected to the County's centralized utility system.
- D.4.3.2 St. Johns County shall require potable water agreements whereby potable water systems that are package treatment facilities shall be interconnected and replaced with regional treatment facilities better economics of scale in order to achieve improved operating efficiencies. Such potable water agreements shall state that at the time deemed appropriate by the County, the potable water systems shall be acquired by the County for operation and maintenance.
- D.4.3.3 The County shall ensure that, prior to the issuance of a development order or permit, the applicant has demonstrated that the project complies with federal, state, and local permit requirements for potable water systems.

Objective D.4.4
Surface Water and Groundwater Quality

The County's potable water system shall continue to meet the standards of Federal, State, and Regional drinking water regulations. These standards shall help ensure drinking water quality.

Policies

D.4.4.1 The County shall establish a mechanism to protect the SJRWMD designated Surficial and Floridan Aquifer Recharge Areas. The County will work with the SJRWMD to educate the public on major ground water issues of concern in the county.

D.4.4.2 Future public water supply well fields shall be located in areas where development and potential future contamination impacts are minimized.

D.4.4.4 The County shall utilize water quality data and appropriate biological indicators to design water management practices that facilitate the maintenance or improvement of the existing water quality of the available resources to meet state water quality standards.

D.4.4.5 The County shall maximize the use of conservation measures before considering the use of alternative water supplies or interbasin transfer of water.

D.4.4.6 The County shall continue to implement the wellhead protection regulations in the Land Development Code, which include primary and secondary zones restrictions as specified below:

A. Prohibited Activities, Primary Zone, Surficial and Floridan Aquifer

The following activities are prohibited in the Primary Zones of Wellhead Resource Protection Areas:

1. The Primary Zone shall be a zone of exclusion for all Uses except existing residential Uses, Uses functionally related to the water supply system, open space, parks, and playgrounds. For the Surficial Aquifer only, no parking areas, Structures, or other impervious surfaces, other than those surfaces that are accessory to existing residential Uses, will be permitted in this zone except for playing courts, open-air shelters, and other similar recreation facilities. An

exemption shall be allowed for one single family dwelling unit per Parcel or Lot that may be within this zone of exclusion, provided that Parcel or Lot was created on or before the adoption of the St. Johns County Comprehensive Plan.

2. New sanitary landfills, including new phosphogypsum piles, and any other disposal of a solid waste, or solid waste transfer facility, as permitted under Rule 17-701.020, F.A.C.
 3. New Industrial Land Use designations.
 4. New Interim wastewater treatment plants, unless Advanced Wastewater Treatment (AWT) standards and other regulatory requirements for Community Wastewater Treatment Plants are met.
 5. New concentrated animal feeding operations as defined in Rule 17-670.200, F.A.C.
 6. New dairy farm storage and treatment facilities, high intensity areas, and land application areas as defined in Rule 17-670.200, F.A.C.
 7. Discharge of stormwater into depressions with direct or demonstrated hydrologic connection to the Surficial Aquifer.
 8. Any new land applications of sludge and septage.
 9. New underground storage facilities.
 10. Stormwater management ponds.
- B. Prohibited Activities, Secondary Zone, Surficial Aquifer (see Surficial Aquifer Recharge Objective D.5.4).
- C. Restricted Activities, Secondary Zone, Floridan Aquifer

The following activities are restricted in the Wellhead Resource Protection Areas (RPA), for the Secondary Zone, Floridan Aquifer: These activities may be allowed subject to review and approval of a Special Use Permit. These activities may also require a

Development Permit from the County in accordance with Part 9.01.00 of the Land Development Code.

1. Sludges

Existing sludge spreading activities in an RPA must be permitted by and meet the requirements of state and local environmental permitting agencies and this Part.

2. Septages

Existing septage spreading activities in an RPA must be permitted by and meet the requirements of state and local environmental permitting agencies and this Part.

3. Hazardous Wastes

Any new facility that uses, handles, stores, or generates hazardous wastes in an RPA above thirty (30) gallons in a liquid form, or six (6) pounds of solid, must be permitted by and meet the requirements of the Florida Department of Environmental Protection and this Part.

4. New sanitary landfills, including new phosphogypsum piles, and any other disposal of a solid waste, or solid waste transfer facility, as permitted under Rule 17-701.020, F.A.C.

5. New concentrated animal feeding operations as defined in Rule 17-670.200, F.A.C.

6. New dairy farm storage and treatment facilities, high intensity areas, and land application areas as defined in Rule 17-670.200, F.A.C.

7. New underground storage facilities.

Objective D.4.5
Water Conservation

The County will continue to encourage reduction of per capita water use through the use of water conservation measures, Florida Friendly landscaping, and other means.

Policies

- D.4.5.1 The County shall continue to implement its Land Development Regulations to encourage all new development to be designed in accordance with the limitations of the natural environment, and require the conservation of water resources and the use of innovative land development techniques to decrease water use, consistent with Policy E.2.1.6.
- D.4.5.2 The County shall enforce the Building Construction Standards of the Florida Statutes Chapter 553, along with all other relevant building criteria (i.e. plumbing fixtures, retrofitting, and ultra-low water use fixtures) to require the use of water saving devices in new construction and specified reconstruction.
- D.4.5.3 The County shall take steps to promote and educate both the public and private sectors concerning the use of native and drought resistant vegetation for landscaping in an effort to reduce outside irrigation, consistent with Policy E.2.1.6.
- D.4.5.4 The County shall continue to promote water supply and water conservation through coordination with the St. Johns River Water Management District and other entities.
- D.4.5.7 The County, in cooperation with the St. Johns County Agriculture Extension Services, the Florida Department of Agriculture and Consumer Services, Division of Forestry, and the SJRWMD shall provide technical assistance to agriculture operations and other irrigation water users in the design of low-volume irrigation systems.

Objective D.4.6
System Expansion/Improvements

The County shall implement procedures which will coordinate the extension of potable water facilities or the increase in capacity of potable water facilities in order to meet future needs, to correct existing potable water facility deficiencies, and to promote compact urban growth. All system improvements for replacement, expansion, or increase in capacity of potable water facilities shall comply with the existing or newly adopted level of service standards for the facilities.

Policies

- D.4.6.1 Annual summaries of facility capacity and demand information prepared by the Utility Department shall be used to evaluate the need for, the timing and location of projects to extend or increase the capacity of existing facilities.
- D.4.6.2 The St. Johns County Utility Department Integrated Water Resources Plan (IWRP) shall be updated every five years at a minimum. In addition, the St. Johns County Water Supply Facilities Work Plan shall be consistent with the IWRP.
- D.4.6.3 Proposed Capital Improvements projects shall be evaluated and ranked according to the following three priority level guidelines:
- (a) Level One - whether the project is needed to protect public health, safety, and welfare to fulfill the county's legal commitment to provide facilities and services, or to preserve or achieve full use of existing facilities.
 - (b) Level Two - whether the project increases efficiency of use of existing facilities, prevents or reduces future improvement costs, provides service to developed areas lacking full service, or promotes in-fill development.
 - (c) Level Three - whether the project represents a logical extension of facilities and services within the Development Area Boundaries.
- D.4.6.4 The County shall provide potable water service to areas where the lack of service is determined to be a public health threat. The cost for providing such a service shall be recovered through those connecting to the system and directly benefiting from the improvement.

- D.4.6.5 Major capital expenditures to finance the construction of centralized potable water facilities for St. Johns County Utilities shall be indicated in the Capital Improvements Element of the Comprehensive Plan and shall be updated annually if necessary, or at a minimum every five years.
- D.4.6.6 The level of service standards for potable water are hereby adopted as set forth in Policy H.1.2.1 and shall be used as the basis for determining the availability of facility capacity for the purpose of issuing development orders and development permits.
- D.4.6.7 All improvements for replacement, expansion of potable water, or increase in capacity of potable water facilities shall be compatible with the existing, or newly adopted, level of service standards for such facilities.
- D.4.6.8 In order to manage the future growth within St. Johns County, steps to guarantee that the minimum level of service standards are met shall be as follows:
- (a) begin planning for expansion when a plant's average daily demand is projected to equal or exceed 50% capacity.
 - (b) prepare plans and specifications for expansion when a plant's average daily demand is projected to equal or exceed 85% capacity.
 - (c) submit a complete construction permit application to the Department of Environmental Protection for expansion when a plant's average daily demand is projected to equal or exceed 90% capacity.
- D.4.6.9 The County potable water system shall continue to operate as an enterprise system which is financially self-supporting.
- D.4.6.10 The County Utility Department shall fund potable water capital improvements and extensions through impact fees, developer's agreements, assessments, and other appropriate fees and funding mechanisms.
- D.4.6.11 The County shall pursue federal, state, and local funding sources available for the improvement and expansion of utilities.

D. INFRASTRUCTURE ELEMENT

NATURAL GROUNDWATER AQUIFER RECHARGE SUB-ELEMENT

Goal D.5

It is the goal of St. Johns County to protect the function of natural groundwater Floridan and Surficial Aquifer Recharge Areas, to prevent the contamination of groundwater, and to extend the life span of the County's aquifers through water conservation.

Objective D.5.1

Protection of Water Quality

The water quality standards in St. Johns County shall be based upon the primary and secondary maximum contaminant levels as defined in the Department of Environmental Protection (DEP) regulations.

Policies

- D.5.1.1 The County shall, through stormwater permitting procedures, ensure that stormwater management structures are designed to provide maximum protection as is feasible to aquifer recharge areas in appropriate locations.
- D.5.1.2 The County shall continue to protect existing and future public water supply wells from contamination through the implementation of the Land Development Code (LDC).
- D.5.1.3 The County shall continue to prohibit the use of injection wells for the disposal of wastewater.
- D.5.1.4 The County shall continue to prohibit the location of septic systems within 200 feet of a public water supply well unless otherwise permitted by FDEP or the St. Johns County Health Department (SJCHD).
- D.5.1.5 Future wellfields shall be located in areas where development and potential future contamination impacts are minimized.
- D.5.1.6 The County shall monitor and coordinate with the SJRWMD's water quality and groundwater monitoring programs to be aware of surface water and groundwater quality changes, the changes in water table elevation, and the potential areas for saltwater intrusion.

- D.5.1.7 The County shall continue to protect and conserve future potable water supplies and quality to meet the existing and future demand.
- D.5.1.8 The County shall continue to coordinate with regional agencies to improve water quality in the region to meet existing and future population needs.

Objective D.5.2
Protect Floridan and Surficial Aquifer Recharge Areas

The County shall coordinate with the St. Johns River Water Management District to ensure the Floridan and Surficial Aquifers Recharge Areas are protected and managed to preserve the quantity and quality of groundwater. Such groundwater sources shall support the present and future County population, proposed economic development opportunities while protecting the County's natural systems' needs.

Policies

- D.5.2.1 The County through its Land Development Regulations shall preserve and protect the Surficial and Floridan Aquifer Recharge Areas.
- D.5.2.2 The County shall adopt Land Development Regulations that limit the loss of recharge resulting from an increased amount of impervious surfaces in areas designated as recharge areas by the SJRWMD.
- D.5.2.3 The County shall develop and implement Land Development Regulations which incorporate stormwater protection standards for all new development within aquifer recharge areas.
- D.5.2.4 The County shall, in cooperation with the SJRWMD, continue to educate and distribute information on groundwater resources within the County.
- D.5.2.5 The County shall protect open space which has been identified as a natural groundwater recharge area for the Floridan Aquifer.

Objective D.5.3
Preserve Surficial Aquifer's Water Quantity

The County shall coordinate with the SJRWMD to ensure availability of groundwater from the surficial aquifer. For the purpose of this Objective, water quantity will be based on data that is reflected in the St. Johns River Water Management District Water Supply Assessment and Water Supply Plan.

Policies

- D.5.3.1 The County shall implement water conservation measures, as designated under Objective D.1.6, of the Sanitary Sewer Sub-element and Objective D.4.5 of the Potable Water Sub-element to protect the surficial aquifer from depletion.

- D.5.3.5 The County shall encourage the reuse of wastewater effluent for irrigation to prevent over pumping of the Floridan Aquifer. The County shall continue to require all new golf course developments to install reuse facilities.

Objective D.5.4
Wellhead Protection

The County shall continue to protect the wellhead areas by continuing the application and enforcement of its existing Land Development Regulations. The County shall also coordinate with the St. Johns River Water Management District to ensure adequate recharge rates and water quality to support the present and future population, economic development opportunities, and natural system needs.

Policies

D.5.4.1 The County shall continue to implement the wellhead protection regulations in the Land Development Code, which include primary and secondary zones restrictions as specified below:

- (a) preservation of native vegetation
- (b) use of native drought tolerant plants
- (c) construction limitations within the 100 year floodplain, environmentally sensitive lands, and SJRWMD designated surficial and Floridian aquifer recharge areas
- (d) implementation of water loss prevention

D.5.4.2 The County shall protect wellfield protection areas of public potable water by:

- (a) prohibiting the generation or manufacture of contaminants, solvents, pesticides, fertilizers, or other hazardous waste within wellfield areas
- (b) prohibiting the installation or establishment of petroleum pipelines, underground storage tanks, or hazardous industrial uses within wellfield protection areas
- (c) prohibiting or restricting the storage or use of contaminants, solvents, pesticides, fertilizers, hazardous waste, industrial uses within wellfield areas

Objective D.5.5
Water Conservation

The County shall continue to implement its water conservation program and consider new techniques that decrease demand placed on groundwater resources.

Policies

- D.5.5.1 The County's land development regulations shall encourage all new development to be designed in accordance with the limitations of the natural environment and require the conservation of water resources and the use of innovative land development techniques to decrease water use consistent with Policy E.2.1.6
- D.5.5.2 The County shall continue to implement a conservation rate structure which benefits users that conserve water.
- D.5.5.3 The County shall encourage and provide improved water management to accommodate present and future population and ecosystem needs.
- D.5.5.4 The County shall encourage low water use landscape for both domestic and commercial development.
- D.5.5.5 The St. Johns County Utility Department shall, in coordination with the SJRWMD, develop a water conservation public education program.
- D.5.5.6 The County shall require all large volume irrigation users, such as golf course developments, to reuse wastewater effluent for spray irrigation.
- D.5.5.7 The County shall continue to require that all developments which use treated wastewater effluent for irrigation construct and dedicate to the County, or the appropriate utility provider, all effluent lines needed.
- D.5.5.8 The County shall implement reuse regulations which requires all new developments within reuse zones to include a reclaimed water irrigation system constructed to applicable standards. The reuse regulations shall define types and sizes of developments which are appropriate to be served by a reclaimed water irrigation system.