

2045 COMPREHENSIVE PLAN

INFRASTRUCTURE ELEMENT



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2045 COMPREHENSIVE PLAN

INFRASTRUCTURE ELEMENT

**GOALS, OBJECTIVES
AND POLICIES**

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2045 COMPREHENSIVE PLAN

**INFRASTRUCTURE
ELEMENT**

**NATURAL GROUNDWATER AQUIFER
RECHARGE SUB-ELEMENT**

**GOALS, OBJECTIVES
AND POLICIES**

GOALS, OBJECTIVES AND POLICIES

GOAL 1

Manage the fresh groundwater resources in the City to assure an adequate quantity and quality of water for potable, commercial, industrial, utility and agricultural uses. Such City management shall be in compliance with all State, regional and federal rules, regulations, laws and mandates as applicable.

Objective 1.1 The City shall quantify at least once every five years the existing uses and project the future uses of fresh groundwater resources.

Policies

1.1.1

The City's Environmental Quality Division (EQD) shall request from the St. Johns River Water Management District (SJRWMD) existing permitted users of water with approved future increases in fresh groundwater allocations for the duration of existing consumptive use permits, and the identification of the area location and producing zone of the hydrogeologic regime from which the withdrawals are made.

1.1.2

JEA shall utilize the projected land uses, population, and other industry forecasts as applied to accepted unit water consumption rates to identify by area the projected demand within the City and to quantify potential future water requirements.

1.1.3

The Environmental Quality Division (EQD), and JEA shall annually review processes to coordinate City regulations regarding water use to ensure consistency with all applicable laws and regulations including Chapter 366 of the City of Jacksonville Municipal Code.

1.1.4

JEA shall maintain and update as needed, as a component of the City's water master plan, a Total Water Management Plan and an Annual Water Resource Master Plan, which ensures adequate available City-wide resources and that water withdrawals comply with City standards.

Objective 1.2 The City will rely on the St. Johns River Water Management District's (SJRWMD) most current water supply management and GIS coverages for hydrologic and geologic data.

Policies

1.2.1

The City shall utilize SJRWMD water supply management and GIS coverages for hydrologic and geologic data for groundwater resource management and planning purposes.

1.2.2

The EQD and the JEA shall follow the SJRWMD and the Total Water Management Plan delineation of site-specific areas in the groundwater basin deemed prone to contamination or overdraft resulting from current or projected development and establish the best management practices for implementation to mitigate or avoid resource degradation within two years of the SJRWMD determination.

1.2.3

The City shall continue to coordinate with the SJRWMD and utilize the best available resources and information including the latest update of the Floridian Aquifer Recharge GIS grid coverage to protect the functions of the natural groundwater aquifer recharge areas and to discourage urban sprawl.

1.2.4

In accordance with the Regional Water Supply Plan and related policies under CCME Goal 6, EQD and JEA should select and implement water resource project options from the Regional Water Supply Plan.

1.2.5

JEA shall continue to study existing sources of wastewater discharge suitable for reuse, sources of potable water, conservation, and other integrated water management strategies to meet future demand, conserve water, and reduce nitrogen loading to the Lower St. Johns River.

1.2.6

JEA shall continue to comply with the SJRWMD issued consumptive use permit to assure that adequate resources are developed. The City shall utilize water conservation and water reuse practices to supplement and increase the effective life of its groundwater resources.

1.2.7

Within two years of establishment by the SJRWMD and the Water Resources Management Plan of prime recharge areas for the Floridian Aquifer, the Planning and Development Department shall prepare maps of such designated areas showing the special zoning and land use consideration the City has established for such areas as designated by the latest update of the Floridian Aquifer Recharge GIS grid coverage.

1.2.8

The City, in coordination with JEA, shall support the development of reuse water and other alternative supplies. EQD will give careful consideration of available reclaimed reuse water prior to issuance of irrigation well permits. Pursuant to requirements imposed by JEA's water supply consumptive use permits, the City shall require the use of reclaimed water where economically feasible pursuant to the City of Jacksonville's

Chapter 752. In addition, the City shall require the following reuse practices, where economically feasible:

- A. Installation of reuse supply lines;
- B. Connection of new development or substantial redevelopment to a reuse system to supply uses that do not require potable water, unless the use of a lower quality source is otherwise authorized by SJRWMD;
- C. Installation of dual water distribution lines that will initially use the existing water source or stormwater until the reclaimed water source is available;
- D. Installation of meters for individual connections to the reclaimed water system; or
- E. Reuse water to be used for irrigation and other non-potable needs in public areas owned by the City.

1.2.9

The Environmental Quality Division (EQD) shall utilize the North Florida Regional Water Supply Plan (NFRWSP) to establish a guideline water use budget for the City in light of existing and future needs in comparison with resource condition assessments.

1.2.10

Upon identification by the SJRWMD, the City shall give high priority status to prime aquifer recharge areas identified by SJRWMD as of importance, by giving extra matrix ranking points to sites located in such areas in comparison with other sites being considered in local land acquisition programs and request the SJRWMD to do this or mandate this for areas outside the City.

Objective 1.3 Maintain a City well head protection and regulation program.

Policies

1.3.1

The City has adopted and implemented a wellhead protection program in accordance with Subsection 1428(a) of the Safe Drinking Water Act and in conjunction with the FDEP, SJRWMD, USGS and related agencies.

1.3.2

JEA shall comply with applicable federal regulations for wellhead protection as amended or revised by Public Law 93-523 and assist the City by further developing guidelines for the delineation of wellhead protection areas.

1.3.3

The EQD shall develop and maintain a groundwater resource management program which is designed to protect the Floridian Aquifer such that the freshwater quality is not

degraded beyond acceptable raw water characteristics for associated treatment facilities required to meet Chapter 366 City of Jacksonville Municipal Code, Chapter 17-550, F.A.C. as amended, Chapter 62, F.A.C. as amended, and/or the Federal Safe Drinking Water Act requirements.

1.3.4

The EQD shall continue the City well permitting program which requires permits for drilling and operation; and for capping, filling and plugging of abandoned well; and which requires valves on all free flowing wells which are required to be closed when not in use pursuant to Chapter 366 City of Jacksonville Municipal Code and EPB Rule-8.

1.3.5

The EQD and the JEA shall jointly protect the areas within the existing public supply wellhead protection areas pursuant to Chapter 366 City of Jacksonville Municipal Code and EPB Rule-8 by implementing:

- a) a program to inventory contaminated sites; and
- b) best management practices for contamination control; and best management practices to remove or limit existing pollution sources in the areas delineated.

1.3.6

The City of Jacksonville, EQD and the JEA shall continue to work with the SJRWMD, Northeast Florida Regional Council, and JPDD (including PUD and DRI processes) to ensure that water for non-potable uses be obtained from the lowest quality water source, in proximity to the demand, consistent with the intended use in compliance with the State Water Policy, F.A.C. Chapter 373, F.S. and Chapter 62-40, F.A.C.

1.3.7

The City shall incorporate freshwater demand reduction practices as appropriate within the City Building Code. New freshwater conservation methods or technologies shall be distributed to City water users through the water conservation education program of JEA.

1.3.8

JEA shall, continue to maintain, develop pricing, rates and/or charges to equitably recover costs and not provide volume discounts for customer class utilization in excess of the water need.

1.3.9

The City shall ensure that its Ordinance Code implements the landscape irrigation provisions in SJRWMD Rule 40C-2.042(2), F.A.C. and does, in any other manner, regulate the consumptive use of water.

1.3.10

The City shall cooperate with SJRWMD, in accordance with the SJRWMD Water Shortage Plan, during declared water shortage emergencies by conserving water resources and by assisting with enforcement of water shortage emergency declaration, orders, and plans.

1.3.11

The EQD shall develop a Groundwater Recharge Area Protection Program to achieve protection of the City's groundwater aquifer recharge areas as identified by the SJRWMD.

1.3.12

The EQD shall establish legal descriptions and mapping for SJRWMD delineated prime aquifer recharge areas within two (2) years of SJRWMD determination of such areas in the City.

1.3.13

The City shall continue to monitor the SJRWMD identified areas of critical concern considering regional groundwater flow for areas containing:

- a) aquifer recharge;
- b) aquifer contamination; and
- c) aquifer saltwater encroachment.

1.3.14

The Planning and Development Department in conjunction with the EQD and the JEA, and the Public Works Department, shall develop land use, drainage, development criteria and other revisions to the Land Development Regulations in compliance with Section 163.3202(1), F.S., to protect the prime aquifer recharge areas and to a lesser extent the areas of critical concern which buffer the prime aquifer recharge areas within one (1) year of such designation.

1.3.15

The EQD shall develop and implement an aquifer recharge plan for principal aquifers which protects and/or enhances the contributory water quality and maintains or increases the volume of freshwater available for recharge.

1.3.16

Within 2 years after the determination by the SJRWMD of Floridian Aquifer Prime Recharge Areas the EQD shall submit revisions to City's Ordinance Code which protect and conserve the recharge areas of the Floridian Aquifer deemed to be sensitive within the City's jurisdiction as the City's primary source of potable water.

1.3.17

The City will prohibit, in areas determined to be prime Floridian Aquifer Recharge Lands, industrial activities, and commercial activities utilizing or producing hazardous materials as identified by the Florida Department of Environmental Protection and pursuant to Chapters 470 & 366 (Septic Ordinance/Fertilizer Ordinance) City of Jacksonville Municipal Code.

1.3.18

The EQD shall develop and implement regulations for irrigational practices, fertilization practices, and pesticide/biocide application practices within sensitive prime aquifer recharge areas and areas of critical concern to minimize leaching of contaminants into the fresh groundwater regime pursuant to Chapter 366 City of Jacksonville Municipal Code.

1.3.19

The City shall request the SJRWMD to investigate the feasibility and/or desirability of such practices as recharge enhancement through water detention, retention ponds, flow diversion, swale systems, effluent reuse and other techniques.

1.3.20

The EQD shall implement a system of incentives and deterrents for the development of potential prime recharge areas, buffer areas, well head protection areas and non-protected areas.

1.3.21

The EQD shall request the SJRWMD to study the potential of the development of salinity barriers with storm water and/or reclaimed water to effect a repressurization of the aquifers and increase the thickness of the freshwater lens.

GOAL 2

Manage and conserve potable water resources in the City through conservation and water reuse programs.

Objective 2.1 JEA shall, implement the water reuse ordinance (Chapter 752 733, City of Jacksonville Ordinance Code) in compliance with the JEA's consumptive use permit requirements issued by the SJRWMD.

Policies

2.1.1

The reuse ordinance includes the following:

1. Designated reuse zones as identified by the SJRWMD.
2. A requirement that all new development within reuse zones shall include a reclaimed water irrigation system constructed to applicable standards. The reuse

ordinance defines the types and sizes of development which are appropriate to be served by a reclaimed water irrigation system.

3. A definition of the users required to accept and utilize reclaimed water when made available by the City.
4. The registration and permitting of wells of all sizes located within the SJRWMD identified reuse zones.
5. The requirement of return flow wells for heat pump discharges.

2.1.2

The City shall request that SJRWMD require all non-potable consumptive use permits holders in the City to accept and utilize reuse water when made available by the City.

Objective 2.2 JEA shall continue and expand the City's water conservation and demand reduction program in order to reduce per capita consumption of potable water.

Policies

2.2.1

JEA shall continue to utilize potable water conservation strategies and techniques in the operation of the City's water facilities.

2.2.2

The City shall require demand reduction fixtures and low water use building techniques.

2.2.3

The approval of new water system connections shall be conditioned upon compliance with City Code to assure the use of water conservation practices and techniques.

2.2.4

The City's landscape and tree protection regulations require low water use features and vegetation and water conserving irrigation practices.

2.2.5

The City shall enact a water conservation ordinance.

2.2.6

JEA in cooperation with other departments shall implement a water conservation public education program.

2.2.7

The City shall enforce Chapter 752 City of Jacksonville Municipal Code relating to the reuse of reclaimed water program.

2045 COMPREHENSIVE PLAN

INFRASTRUCTURE ELEMENT

DRAINAGE SUB-ELEMENT

**GOALS, OBJECTIVES
AND POLICIES**

GOALS, OBJECTIVES AND POLICIES

GOAL 1

The Public Works Department shall provide a stormwater management system which will increase the efficiency of the existing systems, create regional facilities where appropriate and improve water quality by reducing non-point sources of pollution.

Objective 1.1 The City shall develop a Geographic Information System (GIS) with the capability to include data regarding the existing drainage system, land use, soil types, and topographic information.

Policies

1.1.1

The City shall maintain an inventory of all drainage systems in conjunction with the National Pollutant Discharge Elimination System (NPDES).

1.1.2

The Public Works Department shall prepare base maps showing the existing infrastructure and natural drainage system in conjunction with the National Pollutant Discharge Elimination System (NPDES).

1.1.3

Upon implementation of the GIS, the Public Works Department shall require the submittal of "as-built" data in a format compatible with the GIS to facilitate the up-date of the system.

Objective 1.2 The City has completed a Master Stormwater Management Plan (MSMP). The information in the plan will be utilized in the development of operational criteria for the drainage system. Through this process, the Public Works Department will analyze its existing stormwater management system and correct existing deficiencies by coordinating the increase in the capacity of the system, thereby encouraging infill development in the Urban Area. With completion of each phase of the MSMP, the City shall amend the Comprehensive Plan to include changes recommended in design standards and revise the Capital Improvements Element as necessary.

Policies

1.2.1

The City shall revise the Comprehensive Plan to implement the results of the MSMP.

1.2.2

Based on the recommendations in the MSMP, the City shall reassess projects for stormwater improvements in the Capital Improvements Element and annually revise the Five-Year Capital Improvement Program accordingly.

1.2.3

The Subdivision Standards and Policy Advisory Committee shall revise the Land Development Procedures Manual to incorporate special basin criteria, recommended as part of the MSMP.

1.2.4

The City shall establish and continue to utilize Levels of Service (LOS) standards for drainage facilities which are provided in Goal 1 of the Capital Improvements Element.

1.2.5

The Public Works Department shall ensure that developments will not affect the existing drainage facilities by requiring pre/post development discharge restrictions or providing an analysis on the existing drainage facility to prove no adverse impacts.

Objective 1.3 Stormwater runoff from new development shall be treated in accordance with all applicable federal, State, regional and local standards. Stormwater from existing systems, which are retrofitted, shall be treated to the best available technology.

Policies

1.3.1

The City shall require stormwater treatment on all new developments. Treatment volume shall be based on Chapter 17.40.420, Florida Administrative Code (F.A.C) or current St. Johns River Water Management District (SJRWMD) rules. The City reserves its right to participate in all SJRWMD permitting, administrative and judicial appellate procedures; however, a SJRWMD issued permit, which is administratively and judicially final, will be accepted as demonstrating compliance with SJRWMD rules.

1.3.2

In existing areas stormwater retrofitting, is proposed in the MSMP, and in which traditional treatment methods are impractical, other "best management practices" shall continue to be utilized.

1.3.3

The City shall utilize construction standards for stormwater treatment facilities contained in the Land Development Procedures Manual.

1.3.4

The City shall continue to require annual reports from the maintenance entities of all stormwater treatment facilities to ensure their proper operation.

Objective 1.4 The City shall maximize the efficiency of operations of its stormwater facilities through scheduled and proper maintenance.

Policies 1.4.1

The City shall maintain a method for financing the operation and management of stormwater facilities. The funding shall be used to reduce existing flooding, improve water quality, and preserve or restore the values of the natural systems.

1.4.2

The funding established pursuant to Policy 1.4.1 shall be used in part to ensure continued proper operation, maintenance, and functioning of stormwater facilities.

Objective 1.5 The City shall continue to protect existing streams, rivers, and floodways through its development review process to ensure that no harm is done to the natural drainage system.

Policies

1.5.1

The Development Services Division of the Planning and Development Department shall continue to review each proposed new development and determine if it may do harm to the natural drainage system.

1.5.2

The Development Services Division of the Planning and Development Department shall continue to deny permits to any new development that fills a flood plain without compensation for the fill by excavating an equal volume or improvement to the drainage system or a combination of both.

Objective 1.6 The City shall coordinate extension of its drainage facilities through new developments as part of its current permitting process.

Policies

1.6.1

The Development Services Division of the Planning and Development Department shall require that proposed development drainage facilities are adequate in capacity to serve the proposed development along with any contributing off-site drainage.

1.6.2

The Development Services Division of the Planning and Development Department shall continue to require that the drainage systems downstream of a proposed development have the capacity or hydraulic gradient to accept the proposed development's discharge, or that the proposed development improves the downstream drainage system.

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INFRASTRUCTURE ELEMENT

SANITARY SEWER SUB-ELEMENT

**GOALS, OBJECTIVES
AND POLICIES**

GOALS, OBJECTIVES AND POLICIES

GOAL 1

JEA shall provide for economically and environmentally sound regional wastewater collection and treatment systems which protect the public health and investment in existing facilities, and that support the City's growth management policies.

Objective 1.1 In order to discourage urban sprawl, and correct existing deficiencies, JEA shall provide regional wastewater facilities in concert and conformance with the Development Areas Map.

Policies

1.1.1

JEA shall provide for regional wastewater facilities associated with development within the Central Business District, Urban Priority, Urban and Suburban Development Areas as defined in the Future Land Use and Capital Improvements Elements, excluding improvements within the service area of an investor-owned public utility company of regional status.

1.1.2

The JEA shall not invest in sanitary sewer facilities in the Rural Area as defined in the Future Land Use and Capital Improvements Element, except where necessary to protect the public health or safety or encourage mixed use or regional economic development. On an annual basis and as substantial updates to related policies are adopted, the Planning and Development Department shall provide JEA with a copy of the most current Development Areas Map and Comprehensive Plan policies relating to the provision of water and sewer facilities in relation to the Development Areas.

1.1.3

The City shall, through its Land Development Regulations, preserve utility corridors so that future development can be served in a cost-effective manner.

1.1.4

All City owned wastewater facilities shall be constructed in accordance with the City's Utility Standards and Specifications, Land Development Procedures Manual, Florida Department of Environmental (FDEP) regulations and other applicable requirements.

1.1.5

The City shall incorporate incentives in its Land Development Regulations which encourage development, and redevelopment in areas where the public wastewater system has or will have adequate capacity. Developments which qualify for mixed use and/or regional economic development must also undergo land use amendments to expand the suburban boundaries to incorporate these areas.

1.1.6

JEA and the Public Works Department shall coordinate infrastructure projects and improvement program projects that involve public water and wastewater systems to promote efficiency and to reduce the impact of public expenditures.

Objective 1.2 In order to discourage urban sprawl and prevent adverse impacts to groundwater, surface water, and quality of life, the City will continue efforts to phase out all non-regional wastewater treatment facilities identified pursuant to Environmental Protection Board (EPB) Rule 3. Additionally, the City shall continue coordination efforts with JEA to discourage the use of on-site disposal facilities and to install regional facilities in accordance with the Capital Improvements Element in order to reduce the number of septic tanks in new developments.

Policies

1.2.1

JEA shall continue its efforts toward the acquisition of nonregional investor or community owned public utility companies where analysis of the acquisition indicates that the costs of acquiring, integrating, and upgrading the facilities to City standards will be offset by the existing and projected rate base of the utility.

1.2.2

No new wastewater treatment facility discharges shall be permitted to the tributaries, mainstream, and mouth of the St. Johns River within the City unless otherwise physically or financially unfeasible.

1.2.3

The City shall direct industrial development that produces toxic, hazardous, or industrial wastewater or toxic or hazardous chemicals to areas that are served by a centralized wastewater collection system.

1.2.4

Existing septic tanks for estimated wastewater flows of 600 or less gallons per day (gpd) shall connect to the collection system of a regional utility company provided that gravity service is available via a facility within a right-of-way or easement, which abuts the property.

1.2.5

Existing septic tanks for estimated wastewater flows exceeding 600 gallons per day (gpd) shall connect to the collection system of a regional utility company provided that a facility abuts or is within 50 feet of the property.

1.2.6

Require new development and redevelopment within the Central Business District (CBD), Urban Priority Area (UPA), Urban Area (UA), and Suburban Area (SA) to connect to

centralized wastewater collection and potable water distribution systems when centralized service is available to the site as set forth in the Future Land Use Element.

1.2.7

Residential and non-residential subdivisions permitted with new septic tanks in the Central Business District, Urban Priority, Urban and Suburban Development Areas shall be required to install dryline sewer systems when programmed improvements are identified in the Capital Improvements Element which will make connection to the JEA Collection System available within a five (5) year period.

1.2.8

The City shall continue the effort to phase out septic tanks in defined failure areas in conformance with Chapter 751, Ordinance Code (Wastewater System Improvement Program).

1.2.9

The Future Land Use Element shall include density limitations and other criteria for sites not served by a centralized wastewater collection system of a regional utility company.

1.2.10

Nonregional wastewater facilities may be permitted as interim facilities, provided all of the following requirements are satisfied:

1. The facility meets all federal, state, regional, and local environmental regulations.
2. The developer shall operate and maintain the facilities.
3. The developer provides for phase out costs where appropriate.
4. The developer enters into an agreement with the City, specifying the date and manner of phase out.
5. The facility operator will reimburse the City for costs of enforcement of violations of water quality standards and effluent limitations.
6. Wastewater facilities must provide at least 1.0 MGD of capacity.

Objective 1.3 JEA shall provide adequate wastewater facility capacity to meet future needs.

Policies

1.3.1

To assure an adequate Level of Service, wastewater facilities within the City shall meet the LOS standards listed under Goal 1 of the Capital Improvements Element.

1.3.2

No development order authorizing new development or a significant expansion of an existing user shall be issued for any area of the City served by a wastewater facility which does not meet the standards in Section 163.3180, F.S. Specifically, the necessary facilities are in place, the necessary facilities will be in place when the development impacts occur, the necessary facilities are under construction, or the necessary facilities are guaranteed by an enforceable development agreement.

1.3.3

JEA shall monitor the Levels of Service of each facility and determine the impact of a proposed development or redevelopment on the adopted Level of Service (LOS) for use by agencies which issue development orders or permits.

Objective 1.4 JEA and the City shall coordinate, plan, and provide for regional facilities to accommodate the ultimate needs of the community through creation of a water supply plan covering at least a 10-year planning period for building water supply facilities necessary to serve existing and new development and through implementation of JEA related projects listed in the Capital Improvements Element.

Policies

1.4.1

Wastewater system improvements will be evaluated for funding in accordance with the following general criteria:

1. Improvements which are necessary to protect the health, safety, and environmental integrity of the community, consistent with the policies of this Comprehensive Plan and applicable federal, state, regional and local regulatory requirements.
2. Improvements which are necessary to meet existing deficiencies in capacity or in performance. These include the retrofit of deteriorating facilities which fail or threaten to fail to meet health, safety, or environmental standards.
3. Improvements which extend regional service to previously unserved developed areas within the Urban and Suburban Areas as identified in the Capital Improvements Element.
4. Improvements which have been identified in adopted functional plans and which address system details beyond the scope of this Sub-element, but which are consistent with the goals, objectives, and policies of this Comprehensive Plan.
5. Cost-effective improvements to expand capacity, maximize operational efficiency, and increase productivity.

1.4.2

Wastewater facility improvements shall be undertaken in conformance with the schedule included in the Capital Improvements Element.

Objective 1.5 JEA shall provide regional wastewater treatment facilities to accommodate the adopted Level of Service standards.

Policy

1.5.1

JEA, through its Industrial Pretreatment Group, shall protect existing treatment facilities from adverse impacts due to discharge of deleterious wastewater to the system, by vigorous enforcement of Chapter 750, Ordinance Code, as it pertains to "Use of Public Sewers".

Objective 1.6 The JEA shall maintain existing collection systems and inspect new construction in order to ensure compliance with the adopted Level of Service standards and maximize the use of existing facilities.

Policies

1.6.1

JEA shall maintain an inventory of all facilities which identify location, physical characteristics, age, service condition and structural condition.

1.6.2

JEA shall continue the rehabilitation and replacement program directed at the older portions of the existing system.

1.6.3

All required federal, State, regional and local permits shall be obtained before construction and/or operation of facilities.

1.6.4

The City shall inspect construction of all new facilities to be dedicated to the City to ensure the use of the best construction methods.

1.6.5

The City shall annually evaluate the JEA Standards and Specifications and the Land Development Procedures Manual.

1.6.6

JEA shall maintain wastewater design guidelines standards for system connection requirements.

1.6.7

JEA shall maintain an automated wastewater management information system for facility records, mapping, Geographical Information System, preventive maintenance, stock and inventory control and other related functions.

Objective 1.7 JEA shall provide adequate sludge utilization/disposal facilities capable of handling all sludge generated at JEA wastewater treatment facilities.

Policies

1.7.1

JEA shall monitor current sludge volumes and future population projections to predict future needs.

1.7.2

JEA shall ensure the provision of sludge management facilities to meet identified needs.

Objective 1.8 JEA shall provide waste treatment processes that protect public health, water quality, fish, wildlife, and the aesthetic appeal of the state's waterways.

Policies

1.8.1

Waste treatment facilities shall be designed and operated in accordance with all local, state, and federal permitting requirements, including Department of Environmental Protection (DEP) issued National Pollution Discharge Elimination System (NPDES) permitting requirements.

1.8.2

JEA shall coordinate the extension of, increase in capacity of, or upgrade in treatment of facilities to meet future needs while prioritizing advanced waste treatment.

Objective 1.9 The City shall assess and implement programs and studies regarding elimination of on-site septic systems to promote environmental health, safety and general welfare, and the water quality of the St. Johns River.

Policies

1.9.1

Pursuant to Section 163.3177(6)(c), Florida Statutes, the City hereby incorporates the Sanitary Sewer Service Feasibility Analysis, dated May 28, 2024, reference into the Infrastructure Element. Supporting data and analysis may be attached as appendices to the Sanitary Sewer Service Feasibility Analysis, and updated from time to time, without the necessity of an amendment to the Comprehensive Plan.

1.9.2

The Sanitary Sewer Service Feasibility Analysis shall incorporate projects and priorities identified pursuant to the Wastewater System Improvement Program.

1.9.3

The Sanitary Sewer Service Feasibility Analysis shall be updated as needed to account for future applicable developments.

2045 COMPREHENSIVE PLAN

INFRASTRUCTURE ELEMENT

SOLID WASTE SUB-ELEMENT

**GOALS, OBJECTIVES
AND POLICIES**

GOALS, OBJECTIVES AND POLICIES

GOAL 1

The City of Jacksonville shall provide for an integrated solid waste management system which protects the public health, sanitation, and environment and provides for operational efficiency and beneficial land use and growth patterns.

Objective 1.1 The Solid Waste Division shall plan and implement an integrated solid waste management system to reduce the volume of solid waste disposed in landfills in Jacksonville. An integrated solid waste management system consists of a combination of solid waste management and disposal options which work together to meet the community's needs for safe and effective solid waste disposal.

Policies

1.1.1

Landfills shall be designated to receive those items that cannot be reused, composted, recycled, or processed for volume reduction in a technologically reasonable and economically practical manner.

1.1.2

The integrated solid waste management program shall focus on the proper management of solid waste, conservation of resources and optimize landfill capacity.

Objective 1.2 The Solid Waste Division shall maintain a recycling, reuse and reduction programs for the residential, commercial, and industrial sectors.

Policies

1.2.1

The Solid Waste Division shall maintain the residential recycling program to include all residences within the City. The residential recycling program should focus on the following goals:

- a. Developing a strong partnership with a pro-active recycling center;
- b. Increasing waste to energy efforts;
- c. Identifying and determining target materials (what will be recycled) and provide educational materials;
- d. Designing a program to include collection, storage, and services;
- e. Monitoring the program for specific measurements; and
- f. Considering multifamily and commercial recycling.

1.2.2

Recycling programs designed to separate newspaper, glass, plastics, and metal products; office papers, paperboard, corrugated papers and organic materials from the solid waste generated by commercial and industrial businesses shall be implemented by the private sector. This City should consider opportunities to add similar requirements for multi-family development and to add a regulatory enforcement mechanism.

1.2.3

The Solid Waste Division shall continue to develop programs for the commercial/industrial sectors to examine their individual waste streams to determine those materials which may be reused, recycled or composted.

1.2.4

The Solid Waste Division shall continue to implement public education and awareness programs contingent upon the availability of State grant funding to inform both the residential and the commercial/industrial sectors of the City of the need to reduce, recycle, reuse, and compost solid waste.

1.2.5

The Solid Waste Division shall maintain a program for the mulching/composting of organic materials. The Solid Waste and Resource Management Department shall encourage backyard composting through public education and awareness programs contingent upon the availability of State grant funding.

1.2.6

The City of Jacksonville shall continue to follow procurement procedures that promote a greater use of recycled paper.

1.2.7

The Solid Waste Division shall apply for grant funds and such other revenue sources that may be available when needed for development of recycling, reuse, and reduction programs.

1.2.8

The Solid Waste Division shall continue to develop, improve, and expand the waste reduction, reuse, and recycling programs to include additional materials, methods, or technologies.

1.2.9

The City shall continue to implement the existing mandatory residential recycling program to separate newspaper, glass, plastics, and metal products, and subject to the availability of markets, a residential recycling program for paperboard, corrugated papers, and mixed papers. The residential recycling program shall permit the resident to market his or her own recyclable materials.

Objective 1.3 The Solid Waste Division shall continue to operate solid waste management facilities in compliance with applicable air, groundwater, and surface water pollution standards established by federal, State, and local laws, regulations, and guidelines.

Policies

1.3.1

The Solid Waste Division shall identify, plan, and implement improvements to solid waste management facilities which are necessary to meet environmental performance standards and other applicable regulations.

1.3.2

The Solid Waste Division shall close and monitor the City's completed landfills in compliance with standards established by federal, state, and local laws, regulations, and guidelines.

1.3.3

The Solid Waste Division shall continue to implement a public education program on the proper disposal of potentially hazardous wastes with the purpose of reducing the amount of these wastes entering the solid waste stream.

1.3.4

The Solid Waste Division shall continue to implement a permanent local "Amnesty Days" program to facilitate proper collection and disposal of household hazardous wastes.

1.3.5

The Solid Waste Division shall continue to operate a training program for landfill operations personnel to improve identification and proper handling of potentially hazardous materials.

1.3.6

The Solid Waste Division shall require a training program for landfill operations personnel to improve the operation and management of the City's landfills.

1.3.7

By 2002 the Solid Waste Division shall develop criteria for identifying and establishing the priority for cleanup of old dump sites within the City's jurisdiction.

1.3.8

The Solid Waste Division shall coordinate with the Environmental Quality Division (EQD) and other State and local agencies when implementing hazardous waste programs by regularly scheduled meetings and correspondence between the appropriate Departments.

1.3.9

The City shall adopt Land Development Regulations that prohibit new development in the vicinity of solid waste management facilities which is incompatible with the operation of such facilities. Section 656.401 Ordinance Code of the City of Jacksonville now contains performance standards, guidelines, and criteria for these regulations.

1.3.10

Peripheral buffers and landscaping shall be required at new or expanding solid waste facilities to minimize impacts to the surrounding area.

Objective 1.4 The Solid Waste Division shall plan solid waste management facility additions, expansions, and improvements to meet the present needs and support the anticipated future growth.

Policies

1.4.1

The Solid Waste Division shall establish a long-range planning program to address the available capacity of solid waste management facilities for a minimum 20-year planning period.

1.4.2

The Solid Waste Division shall conduct an annual review of solid waste generation, disposal rates, and facility capacity to evaluate future needs.

1.4.3

The Solid Waste Division shall identify and evaluate funding alternatives for the continued development and operation of the integrated solid waste management system.

1.4.4

The City shall operate all of its solid waste management facilities in a manner that will protect the public health, welfare and safety, and control costs and performance. The City shall establish regulations to require all private solid waste management facilities to be operated in a manner that will protect the public health, welfare and safety and control costs and performance.

1.4.5

The City shall identify solid wastes generated within and outside of Duval County and adopt controls using waste flow legislation to direct components of the waste stream to processing facilities prior to final disposal consistent with Policy 1.1.1 of this element. The City may opt not to accept for disposal at City owned landfills waste generated outside of the County. Waste that is dedicated to joint ventures with adjacent counties pursuant to an interlocal agreement, shall be accepted for disposal at a rate to be established.

1.4.6

The City's adopted Level of Service (LOS) standard for solid waste disposal is provided under Goal 1 of the Capital Improvements Element.

1.4.7

No development order shall be issued for any area of the City served by a solid waste disposal facility which does not meet the standards of Section 163.3180, Florida Statutes. Specifically, the necessary facility is in place at the time the development permit is issued; or a development permit is issued subject to the condition that the necessary facilities and services will be in place when the impacts of the development occur; or the necessary facilities and services are guaranteed in an enforceable development agreement which guarantees that the necessary facilities will be in place when the impacts of the development occur.

Objective 1.5 The City shall continue to implement programs to address the problems of illegal dumping of both hazardous and non-hazardous waste materials.

Policies

1.5.1

The City shall improve the enforcement of existing City ordinances, Florida Statutes, and federal laws concerned with illegal dumping by increasing the enforcement staff.

1.5.2

The City shall continue to operate a comprehensive program concerning illegal dumping which includes education, public awareness, and enforcement penalties.

2045 COMPREHENSIVE PLAN

INFRASTRUCTURE ELEMENT

POTABLE WATER SUB-ELEMENT

**GOALS, OBJECTIVES
AND POLICIES**

GOALS, OBJECTIVES AND POLICIES

GOAL 1

JEA shall regionalize water facilities in a manner which adequately corrects existing deficiencies, accommodates future growth, increases system capacity, and interconnects water systems where required while complying with all federal, State, regional and local regulations.

Objective 1.1 In order to discourage urban sprawl, to maximize the use of existing facilities, and to coordinate the increase in the capacity of facilities to meet future needs of the City, the JEA shall provide regional water facilities in concert and conformance with the Development Areas Map.

Policies

1.1.1

JEA shall provide for regional water facilities associated with development within the Central Business District, Urban Priority, Urban and Suburban Development Areas as defined in the Capital Improvements Element, excluding improvements within the service area of an investor-owned public utility. Typical development infrastructure investment centers around developers being solely responsible for the survey, engineering design, permitting and construction for both on-site and off-site water/wastewater/reclaim utility infrastructure to meet the needs of their specific development.

1.1.2

When requested by the Duval County Health Department and where the public water system is available to provide service, the JEA shall review and determine acceptance of private water systems whose water treatment facilities are not in compliance with federal, State, or local regulations.

1.1.3

Investor-owned public utilities, and all parties connecting to them, shall be required to install facilities in compliance with Chapters 654 and 750, Ordinance Code.

1.1.4

Non-regional utility water treatment facilities shall continue to be phased-out and systems intertied to regional water treatment facilities.

1.1.5

All public water supply systems shall be constructed and operated in accordance with all applicable federal, State, regional and local regulations which apply to potable water systems.

1.1.6

All community and/or investor-owned public utility systems involved in the purchase and sales transactions shall be inspected for compliance with existing federal, State, regional and local health, and regulatory standards. The acquiring entity shall be notified of all system deficiencies prior to acquisition.

1.1.7

JEA shall prepare an annual report which summarizes existing capacity and demand information for the water system and incorporates and identifies the alternative water supply projects selected or proposed.

1.1.8

JEA shall continue to allocate sufficient funding to support staffing, equipping, and monitoring of water quality standards in order to maintain compliance with all federal, State and regional requirements.

1.1.9

JEA shall continue to inventory, classify, and determine the useful life of its existing water system assets and renew and replace these assets when they become outdated, inefficient, or unusable.

1.1.10

All JEA water systems within the City shall be constructed in accordance with JEA Standards and Specifications, Land Development Procedures Manual, Florida Department of Environmental Protection (FDEP) regulations and other applicable requirements.

1.1.11

JEA shall implement the Five-Year Water System Capital Improvement Program which shall be updated annually and amended as appropriate.

1.1.12

New non-regional water facilities may be allowed as appropriate interim facilities, provided the following requirements are satisfied:

1. The facility meets all federal, State, regional and city environmental regulations;
2. The developer provides for all operation and maintenance costs;
3. The developer provides for phase out costs where appropriate;
4. The developer enters into an agreement with JEA specifying the date and manner of phase out;
5. The facility operator will reimburse JEA for costs of enforcement of violations of water quality standards; and
6. Minimum fire protection levels of service as specified in Policy 1.3.1 are provided for.

1.1.13

The City shall continue to amend the Comprehensive Plan as needed to implement the City's Water Supply Facilities Work Plan (WSFWP) 2024-2034 (Jacksonville Planning Department, April 2025), adopted by reference. The WSFWP shall identify those project options from the North Florida Regional Water Supply Plan selected by JEA for implementation. Supporting data and analysis may be attached as appendices to the Water Supply Facilities Work Plan, and updated from time to time, without the necessity of an amendment to the Comprehensive Plan. The City

and JEA shall continue to identify and implement traditional and alternative water supply projects and programs, including conservation and water reuse, that are consistent with the SJRWMD's Regional Water Supply Plan to meet the City's water needs.

Objective 1.2 JEA shall develop and maintain a water resources plan for the City's present and future service areas, with the primary objective being the provision of an adequate supply of high-quality water, carefully planned and properly managed with due regard for the environment.

Policies

1.2.1

JEA shall analyze the water quality of its existing water supply wells and implement improvements, modifications, and/or operational strategies to improve the developed raw water quality.

1.2.2

JEA shall investigate the water resources of the City and identify areas for new water supply development in order to meet the City's future water supply requirements. The program shall be coordinated with the St. Johns River Water Management District.

1.2.3

The City shall implement the Wellhead Protection Ordinance to protect its potable water supply source. Improperly constructed or maintained Hawthorne Group and Floridan Aquifer private wells in proximity to a Public Potable Water well within Duval County are potentially harmful to the drinking water supply of the City of Jacksonville. A Pathway Focused Approach to prevent migration of contamination from the shallow aquifer into the Floridan aquifer is reasonable and prudent to protect public water supplies. The intent of this policy is to protect and safeguard the health, safety and welfare of the residents of Duval County by establishing a Pathway Focused Approach to wellhead protection that safeguards the Floridan aquifer from intrusion of any contaminants that may jeopardize present and future public water supply wells.

Within Wellhead Protection Areas, the following shall apply:

1. Within a 500-foot radius around an existing Public Potable Water well, those actions and uses established by the Florida Department of Environmental Protection in Rule 62-521.400, Fla. Admin. Code shall be prohibited.
2. Pursuant to Chapter 366 City of Jacksonville Municipal Code, no existing private wells shall be deepened and no new wells shall be constructed within designated Wellhead Protection Areas that penetrate a portion of the Hawthorne Group or the Floridan Aquifer without first obtaining a well construction permit from the City of Jacksonville Environmental Quality Division (EQD) as provided in Environmental Protection Board Rule 8 and including a review of areas of known contamination at or near the proposed or existing well location. All new wells within such areas must be fully grouted.
3. Pursuant to Chapter 366 City of Jacksonville Municipal Code, abandonment of existing wells shall be in accordance with applicable SJRWMD requirements, and a copy of the plugging and abandonment report shall be submitted to the EQD.

1.2.4

JEA shall acquire land to obtain water and water rights for municipal uses and purposes. Such acquisition shall be conducted in areas that are selected to produce high quality and quantity of water, with minimal impact to the resource and with consideration given to reasonable cost of development. Such future supplies shall be developed in a manner as will give priority to reducing environmental effects of excessive withdrawals from concentrated areas. JEA shall request that the SJRWMD conduct investigations and develop data for use by the City in conducting this program.

1.2.5

JEA shall identify, evaluate, and select the most cost-effective means of ensuring an adequate water supply including groundwater supply, reuse of treated wastewater, surface water supply, demand reduction, conservation, and peak shaving through system integration. This evaluation shall be conducted as a part of their water supply plan.

1.2.6

Lands currently owned by the City and its various agencies shall be utilized to the maximum extent possible for water resource development prior to acquiring additional lands.

1.2.7

The transfer of water within the public utility system for purposes of water supply, water quality and/or water management shall be carried out in place of the construction of new treatment facilities which have higher capital or operating costs than the transfer facilities.

1.2.8

The water supply needs of areas from which water is withdrawn by JEA must be provided for in all future water resource development projects.

1.2.9

JEA may enter into agreements with public and private water resource and/or reclaimed water providers as needed to ensure an adequate, high-quality water supply. Agreements shall be identified in the City's Water Supply Facilities Work Plan.

Objective 1.3 JEA shall provide adequate capacity at water treatment plants to meet future needs.

Policies

1.3.1

To assure that an adequate Level of Service (LOS) is provided by water facilities within the Water Service Area, the LOS standards provided under Goal 1 of the Capital Improvements Element.

1.3.2

No development order authorizing new development, or a significant expansion of an existing user shall be issued for any area of the City served by a water facility which does not meet regulatory standards. Specifically, the necessary facilities, including adequate water supplies, will be in place and available to serve the new development when the development impacts occur, or the necessary facilities are guaranteed by an enforceable development agreement, issued

pursuant to Chapter 163.3220, F.S.; or Chapter 380, F.S. Prior to approval of a building permit or its functional equivalent, the City shall consult with the applicable water supplier to determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance of a certificate of occupancy or its functional equivalent.

1.3.3

The City shall establish procedures and programs to monitor Levels of Service (LOS) of each facility for use by agencies which issue development orders or permits within the time required by Section 163.3202, F.S.

1.3.4

All improvements for replacement, expansion or increase in capacity shall be compatible with the adopted Level of Service standards for water usage.

1.3.5

Through permit review and enforcement of State and local laws, JEA and the City shall ensure the continued distribution of potable water through both public and private water systems in compliance with the above specified Level of Service (LOS) standards.

Objective 1.4 JEA shall plan and provide regional facilities to accommodate the ultimate needs of the community through implementation of JEA related projects listed in the Capital Improvements Element.

Policies

1.4.1

JEA shall optimize the use of existing facilities through improvements, expansion and modification of process control systems and improvements to operational procedures before spending additional public funds for new facilities. After optimization efforts are considered, water system improvements will be evaluated for funding in accordance with the following general criteria:

1. Improvements which are necessary to protect the health, safety and environmental integrity of the community which are consistent with the policies of the Comprehensive Plan and the applicable federal, State, regional and local regulatory requirements.
2. Improvements which are necessary to meet existing deficiencies in capacity, or performance or reliability. These include the rehabilitation or replacement of deteriorating facilities which fail or threaten to fail to meet health, safety or environmental standards.
3. Improvements which extend regional service to previously unserved areas within the Central Business District, Urban Priority, Urban and Suburban Development Areas as defined in the Future Land Use Element.
4. Improvements which have been identified in adopted functional plans and address system details which are beyond the scope of the comprehensive plan for water facilities and are consistent with the goals, objectives and policies of the Comprehensive Plan.
5. Cost-effective improvements to expand capacity, maximize operational efficiency and increase productivity.

1.4.2

Water facility improvements will be undertaken in conformance with the schedule included in the Capital Improvements Element.

Objective 1.5 JEA shall provide regional water supply and treatment capacity to maintain the adopted Level of Service standards.

Policy

1.5.1

JEA's water treatment facilities shall supply water which meets all applicable federal, State, regional and local standards.

Objective 1.6 JEA shall maintain the existing transmission and distribution system and provide inspection on new construction so as to ensure the maintenance of the adopted Level of Service standards.

Policies

1.6.1

JEA shall maintain an inventory of all water treatment facilities which identifies location, physical characteristics, age, service condition and structural condition.

1.6.2

JEA shall continue a rehabilitation and replacement program directed at the older portions of the utility's existing system.

1.6.3

All required federal, State, regional and local permits shall be obtained before JEA undertakes, or authorizes contractors to undertake, construction and/or operation of new facilities for public infrastructure projects.

1.6.4

JEA shall provide for the inspection of new water facilities construction to ensure that the JEA and FDEP standards are enforced.

1.6.5

JEA shall install utility transmission mains of a size adequate for projected future needs.

1.6.6

The City shall, through modifications to Building and Zoning Codes and Land Development Procedures Manual, pursue redevelopment and renewal in areas already serviced by utilities to attain the optimum use of existing services and promote urban infill.

1.6.7

JEA shall continue and expand existing beneficial water system programs which may include but are not limited to:

1. Backflow prevention program

2. Leak detection program
3. Valve and hydrant operation, marking and testing program
4. Meter testing program
5. Instrumentation and control systems replacement program
6. Operator training program
7. Water conservation program

1.6.8

JEA shall continue to utilize a system-wide, computer-based hydraulic analysis program for the determination of facility and growth needs and shall recalibrate the model as needed or as part of the update of the water system master plan.

1.6.9

JEA shall conduct a water system audit periodically to minimize unaccounted for water and improve water records and accountability within its water system.

1.6.10

JEA shall on a continuing basis loop appropriate water mains to reduce dead ends, improve system water quality, increase reliability, and enhance pressure and fire protection capabilities.

1.6.11

JEA shall continue to evaluate its emergency power capability in order to ensure compliance with accepted engineering practices, utility standards and regulatory requirements.

1.6.12

JEA shall develop and maintain an automated water system management information system for its water facility records, mapping, preventive maintenance, stock and inventory control and other related functions.

Objective 1.7 JEA and the City shall continue to enforce the City's reuse ordinance in compliance with the JEA consumptive use permit requirements as issued by the SJRWMD.

Policies

1.7.1

JEA and the City shall periodically evaluate its reuse ordinance to ensure its effectiveness.

1.7.2

The City shall request that SJRWMD amend all non-potable consumptive use permits in Jacksonville issued by the SJRWMD to require that the permit holder accept and utilize reuse water when made available by the City.

Objective 1.8 JEA and the EQD shall continue and expand the Citywide water conservation and demand reduction programs in order to reduce per capita consumption of potable

water through implementation of effective water conservation measures and demand reduction program as reflected in Aquifer Recharge Sub-Element - Objective 2.1 and 2.2.

Policies

1.8.1

JEA shall continue to establish and utilize potable water conservation strategies and techniques in the operation of JEA potable water facilities.

1.8.2

The approval of new water system connections shall be conditioned upon compliance with the Building Code requirements to assure the use of water conservation practices and techniques.

1.8.3

The City shall continue to implement requirements for low water use features and vegetation and water conserving irrigation practices in its landscape and tree protection regulations.

1.8.4

The City shall continue to implement its water conservation ordinance.

1.8.5

JEA in cooperation with other departments shall establish and maintain a water conservation public education program.