

SECTION 4. INFRASTRUCTURE ELEMENT

A. SANITARY SEWER SUB-ELEMENT

GOAL: Provide adequate sewage capacity and collection facilities to accommodate anticipated population demand.

Objective 4.A.1: Address existing facilities deficiencies by completion of minor upgrades to collection lines and pump stations.

Policy 4.A.1.1: The City shall continue to evaluate the sewer system on an annual basis and shall upgrade, expand or replace its sewage facilities as determined by such evaluation to accommodate population demand and ensure operational efficiency.

Objective 4.A.2: Maintain and operate the sewage system in an efficient and cost-effective manner.

Policy 4.A.2.1: The City shall continue to require developers to provide sewage collection lines constructed to City standards as part of proposed new developments and that such lines be connected into the City sewer system.

Policy 4.A.2.2: The City shall continue to evaluate the capacity, maintenance and operation of its sewage system on an annual basis.

Policy 4.A.2.3: The City shall maximize its sewage facilities to eighty percent (80%) of available capacity before making commitments for new or expanded facilities.

Policy 4.A.2.4: Priorities for replacement, correcting existing facilities and facility expansion shall be as follows:

- a. Correction of identified existing deficiencies;

- b. Replacement of facilities to allow for continued operation or design efficiency;
- c. Expansion of facilities.

Objective 4.A.3: The City of Marianna will continue its efforts to implement a procedure to determine impacts on level of service and available capacity for proposed development.

Policy 4.A.3.1: The City shall continue to use the impact measuring system described in Policy 1.5.2 of the Future Land Use Element to evaluate impacts caused by proposed development.

Policy 4.A.3.2: The City shall continue to use the following levels of service to evaluate facility capacity and for issuance of development orders or permits.

- a. The City shall use sewage flows specified in Table II, "Estimated Domestic Sewage Flows", found in Rule 64E-6, Florida Administrative Code, for purposes of estimating sewage generated by development activities. These estimates shall be used to make certain that available facility capacity exists to serve the proposed development concurrent with the impacts of such development, and to maintain a cumulative allocation of facility capacity dedicated for approved developments.
- b. The City shall use eighty percent (80%) of permitted sewage treatment capacity, or 2.4 mgd, as the threshold for concurrency requirements.
- c. For areas which are not served by central sewer, the level of service shall be presumed adequate when the developer receives an on-site sewage treatment permit pursuant to Rule 64E-6, Florida Administrative Code.

Objective 4.A.4: The City shall use the following policies to coordinate extension, or increase in capacity of, facilities to meet future needs based upon adopted level of service standards, population projections, and concurrency capacity thresholds.

- Policy 4.A.4.1: All extensions of the sewer system shall be constructed in conformance with Chapter 62-600, Florida Administrative Code.
- Policy 4.A.4.2: All connections to the sewer system shall be in conformance with the *Standard Plumbing Code - 2009 Edition*.
- Policy 4.A.4.3: The City shall continue to coordinate the availability of sewer facilities and capabilities to accommodate the types and densities of land use shown on the Future Land Use Map, or shall adjust the types and densities of land use so as to be compatible with the City's capability to provide sewer service.
- Policy 4.A.4.4: The City shall not permit development which causes the level of service to fall below the standards established in Sanitary Sewer Sub-Element Policy 4.A.3.2, unless provision of additional capacity is guaranteed in an enforceable development agreement.
- Policy 4.A.4.5: Average and peak flow design capacity for the City collection system shall be as specified in Chapter 62-600, Florida Administrative Code and/or the *Standard Plumbing Code - 2009 Edition*.
- Policy 4.A.4.6: Average peak flow design capacity for City treatment systems shall be as specified in the operating permit issued by FDEP.
- Policy 4.A.4.7: The City shall continue to research and investigate methods of reducing the volume of sludge produced from wastewater facilities and on re-use of wastewater effluent.
- Objective 4.A.5:** Develop a procedure for providing sewage capacity as a means of discouraging urban sprawl and promoting "in-fill" of vacant urban areas.
- Policy 4.A.5.1: The City shall provide sewage capacity as applicable to promoting the redevelopment objectives of this Plan and shall consider provision of sewer in these areas to be a priority activity.
- Policy 4.A.5.2: Reserved.

Policy 4.A.5.3: Unless a threat to public health and safety exists, the City shall not extend sewer service to unplanned and unserved areas unless it can be demonstrated by the developer that vacant areas with access to sewer or targeted redevelopment areas are unsuited for the proposed development.

Objective 4.A.6: Locate damaged and dilapidated sewer lines and determine the course of action to correct deficiency.

Policy 4.A.6.1: The City shall locate sewer facilities that are in need of repair so as to avoid or prevent damage to drainageways or surface waters.

B. Solid Waste Sub-Element

GOAL: Ensure that adequate and efficient solid waste collection is available for the City.

Objective 4.B.1: Ensure that solid waste collection is undertaken in an efficient, cost-effective manner.

Policy 4.B.1.1: Since the City does not own or operate solid waste collection or disposal facilities, the effectiveness of private collection and disposal shall be evaluated on an annual basis. Factors to be considered include charges to customers and performance.

Policy 4.B.1.2: The City shall use 5.06 pounds of solid waste per person per day as the level of service standard.

Policy 4.B.1.3: The City shall require that all new development is served by public or private solid waste collection services.

Objective 4.B.2: Coordinate with Jackson County on meeting State recycling and solid waste reduction goals.

Policy 4.B.2.1: The City shall continue to coordinate with Jackson County on establishing a recycling program using State Solid Waste Recycling and Education grant funds when applicable.

Policy 4.B.2.2: The City will continue to reduce the volume of solid waste being disposed of in the City through recycling and education programs.

Objective 4.B.3: Continue to coordinate with Jackson County to increase the capacity at the Spring Hill Regional Landfill.

Policy 4.B.3.1: The City shall continue to monitor the available capacity at the Spring Hill Landfill and shall coordinate with Jackson County toward any needed expansions.

C. DRAINAGE SUB-ELEMENT

GOAL: Provide a drainage system which will reduce pollution, as well as flooding, and provide protection from damage to public and private property.

Objective 4.C.1: The City shall continue to implement the engineering study which delineates drainage patterns, existing facilities, level of service, and potential improvements that are needed to ensure the effectiveness of the stormwater management system.

Policy 4.C.1.1: The City shall undertake an ongoing program of drainage control and stormwater management.

Policy 4.C.1.2: The City shall use the study as a guide to and determine whether more stringent water quality and quantity standards are necessary for a 25-year storm event.

Policy 4.C.1.3: The level of service standards for water quantity and water quality for the 25- year, 24-hour storm event are as follows:

- a. *Water Quantity* - Post-development runoff from the site shall not exceed peak pre-development runoff rates.

- b. *Water Quality* - Stormwater treatment shall be provided for a volume equivalent to 2-inches of depth over the entire site or the runoff from the first 1-inch of rainfall on the entire site in accordance with Chapter 62-346, Florida Administrative Code, in order to meet receiving water quality standards in Chapter 62-302, Florida Administrative Code.

These water quality and quantity standards shall apply to all new development and redevelopment, regardless of project size.

Objective 4.C.2: The City shall continue to prepare the master drainage plan which specifies drainage improvements, costs, priority projects, funding and regulations associated with a drainage control system.

Policy 4.C.2.1: The City shall prepare a feasibility study to determine the cost/benefit associated with a stormwater utility system.

Policy 4.C.2.2: The City shall use the results of the drainage engineering study to determine the need for and establish priorities for, drainage facilities replacement, correcting existing deficiencies, and providing for future drainage needs to implement the level of service standards determined to be appropriate for the City.

Policy 4.C.2.3: Stormwater treatment shall be provided for a volume equivalent to 2-inches of depth over the entire site or the runoff from the first 1-inch of rainfall on the entire site in accordance with Chapter 62-346, Florida Administrative Code, in order to meet receiving water quality standards of Chapter 62-302, Florida Administrative Code. Stormwater discharge facilities shall be designed so as to not lower receiving water quality or degrade the receiving water body below the minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 62-302, Florida Administrative Code. These standards shall apply to all new development or redevelopment, regardless of size.

Policy 4.C.2.4: Reserved.

Policy 4.C.2.5: The level of service standards specified in Drainage Sub-Element Policy 4.C.2.3 shall apply to all new development and redevelopment,

regardless of size, and be binding for the purposes of issuing development orders and permits.

Objective 4.C.3: Provide for drainage control in an efficient and cost-effective manner.

Policy 4.C.3.1: The City shall continue to require that developers provide adequate drainage facilities constructed to City standards as part of any new developments.

Policy 4.C.3.2: The City shall continue to coordinate with FDOT on proposed drainage projects to ensure efficiency.

Policy 4.C.3.3: The City shall enact restrictions and development standards to ensure protection of the natural drainage features of its community by including buffer zones for drainageways, improving design standards, and providing erosion control measures.

Policy 4.C.3.4: All new development shall retain or detain stormwater on-site consistent with level of service standards.

D. POTABLE WATER SUB-ELEMENT

GOAL: Provide adequate water distribution capability to accommodate existing and future demand.

Objective 4.D.1: Operate the water distribution system in an efficient and cost-effective manner.

Policy 4.D.1.1: The City shall continue to evaluate the capacity, operation, and maintenance of its water distribution system on an annual basis.

Policy 4.D.1.2.: The City shall continue to require that developers provide water distribution lines constructed to City standards as part of any new developments.

Objective 4.D.2: Provide that adequate water mains and pressure area available to serve both existing and future population demand.

Policy 4.D.2.1: The City shall utilize existing facilities to the maximum extent practicable before making commitments for new or expanded facilities.

Policy 4.D.2.2: The City shall provide water system improvements as necessary to maintain the established level of service and adequate water pressure.

Objective 4.D.3: Use level of service standards as the basis for determining facility capacity and for issuance of development orders or permits.

Policy 4.D.3.1: The City shall use one hundred seventy-five (175) gallons per person per day delivered at forty (40) pounds per square inch as the level of service standard for the central water distribution system.

Policy 4.D.3.2: For areas using private wells, the level of service shall be presumed adequate when the provisions of Chapter 40A-3, Florida Administrative Code, or 17-532, Florida Administrative Code, as applicable, are met.

Objective 4.D.4: The City shall continue to coordinate the extension of, or increase the capacity of, facilities to meet future needs.

Policy 4.D.4.1: The City shall use the level of service standards to evaluate the need for extension or increase in capacity of the water distribution system and for purposes of issuing development permits.

Policy 4.D.4.2: All extensions of the water distribution system shall be constructed in conformance with Chapter 62-555, Florida Administrative Code.

Policy 4.D.4.3: All connections to the water distribution system shall be in conformance with the *Standard Plumbing Code - 2009 Edition*.

Policy 4.D.4.4: The City shall use level of service standards as the basis to determine concurrency for potable water. No development permit shall be issued if it causes a decrease in the adopted level of service.

Policy 4.D.4.5: The City shall continue to require that developers provide water lines constructed to City-authorized standards as part of any new development.

Policy 4.D.4.6: All residential and non-residential structures shall be connected to the City water system if they are within five hundred (500) feet of the distribution lines to allow connection.

Objective 4.D.5: The City shall utilize existing water distribution facilities encourage the use of water conservation measures for all new development or redevelopment in order to promote the conservation of water and discourage urban sprawl.

Policy 4.D.5.1: The City shall use existing facilities to the maximum extent practicable before making commitments for new or expanded facilities.

Policy 4.D.5.2: The City shall encourage and allow development of land within the City which has access to potable water, thereby reducing the potential for sprawl in other areas of Jackson County.

Policy 4.D.5.3: The City shall require use of water conservation fixtures and techniques for all new development or redevelopment as specified in Section 553.14, Florida Statutes.

Policy 4.D.5.4: Priorities for replacement, correcting existing deficiencies, and facility expansion shall be as follows:

- a. Correction of identified deficiencies;
- b. Replacement of facilities to allow for continued operation or increased efficiency;

c. Expansion of facilities.

Policy 4.D.5.5: The City will address alternative water supply projects within the Five-Year Schedule of Capital Improvements, if and when they are needed.

Policy 4.D.5.6: The City shall coordinate with Jackson County and the Northwest Florida Water Management District on reuse projects and programs. If and when a plan to extend reclaimed water facilities in the City is created, the City will require developers to install dry lines for reclaimed water when the availability of such facilities is imminent.

Policy 4.D.5.7: The City shall coordinate with Jackson County to provide education regarding water conservation.

Policy 4.D.5.8: The City shall encourage the use of water efficient irrigation and xeriscape landscaping techniques for all new development and shall amend the landscape provisions of the Land Development Regulations to provide standards for xeriscape landscaping techniques.

Policy 4.D.5.9: The City shall encourage the use of Low Impact Development techniques, such as rain gardens and ecologically enhanced stormwater basins.

Objective 4.D.6: Prevent contamination of potable water wells consistent with applicable state law.

Policy 4.D.6.1: Surface areas in which groundwater contamination is known to exist shall be identified on maps prepared by FDEP pursuant to Section 17-524.430, Florida Administrative Code.

Policy 4.D.6.2: New wells intended to provide water for human consumption shall conform to the location and construction requirements specified in Sections 17-524.500 and 17-24.550, Florida Administrative Code.

Policy 4.D.6.3: No new potable water well shall be located within five hundred (500) feet of any known source of groundwater contamination.

Policy 4.D.6.4: The City shall place priority status on extension of central water distribution to those areas identified as having groundwater contamination.

E. GROUNDWATER AQUIFER RECHARGE SUB-ELEMENT

GOAL: Protect and conserve surface areas identified as having high recharge potential to the Floridan Aquifer.

Objective 4.E.1: The City shall identify those surface areas within the City which exhibit high aquifer recharge potential.

Policy 4.E.1.1: The City shall coordinate with the Northwest Florida Water Management District (NFWFMD) toward the specific identification and delineation of aquifer recharge areas.

Policy 4.E.1.2: Until such time as areas of high recharge potential are identified, the City shall apply the restrictions found in Groundwater Aquifer Recharge Sub-Element Policies 4.E.2.1 - 5 to areas listed in hydrologic group A as shown in Table 16 of the *Soil Survey of Jackson County, 1979*.

Objective 4.E.2: The City shall include in its Land Development Regulations specific and detailed requirements for protection and conservation of identified aquifer recharge areas based upon the following policies.

Policy 4.E.2.1: All groundwater shall at all places and at all times be free from domestic, industrial, agricultural, or other man-induced non-thermal components of discharges in concentrations which, alone or in combination with other substances, or components of discharges (whether thermal or non-thermal):

- a. Are harmful to plants, animals or organisms that are native to the soil and responsible for treatment or stabilization of the discharge relied upon by FDEP permits; or
- b. Are carcinogenic, mutagenic, teratogenic, or toxic to human beings, unless specific criteria are established for such components in Rule 62-520, Florida Administrative Code; or

- c. Are acutely toxic to indigenous species of significance to the aquatic community within surface waters affected by the groundwater at the point of contact with surface waters; or
- d. Pose a serious danger to the public health, safety, or welfare; or
- e. Create or constitute a nuisance; or
- f. Impair the reasonable and beneficial use of adjacent waters.

Policy 4.E.2.2: The City shall continue to restrict lot coverage to thirty percent (30%) of the lot or parcel to be developed in identified aquifer recharge areas.

Policy 4.E.2.3: All stormwater detention or retention structures located in aquifer recharge areas shall be constructed so as to comply with minimum groundwater criteria specified in Chapter 62-302, Florida Administrative Code.

Policy 4.E.2.4: A minimum ten (10) foot vegetated buffer shall be required between habitable structures and identified aquifer recharge areas.

Policy 4.E.2.5: The development of public and private facilities which have the potential to discharge pollutants or otherwise contaminate the surface or deep aquifer shall be prohibited in identified aquifer recharge areas, unless the developer can provide assurances that reasonable measures will be undertaken to prevent aquifer contamination.