

## **4. UTILITIES ELEMENT**

### **A. Sanitary Sewer, B. Solid Waste, C. Drainage, D. Potable Water, E. Groundwater**

The purpose of this element is to provide for necessary public facilities and services correlated to future land use projections and population demand.

#### Utilities Sub-Elements

#### **(A) Sanitary Sewer Sub-Element**

#### **GOAL 4A: PROVIDE ADEQUATE SEWAGE CAPACITY AND COLLECTION FACILITIES TO ACCOMMODATE ANTICIPATED POPULATION DEMAND.**

**Objective 4.A.1:** Identify deficiencies in sewer system facilities,

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

Policy 4.A.1.2: The St. Andrews Sewer Treatment Plant Service Area and the Millville Sewer Treatment Plant Service Area shall each have a threshold of 4.5 million gallons per day for determining capacity against proposed development. Such determination shall be made as a concurrency evaluation prior to the issuance of any development order.

Policy 4.A.1.3: The level of service standard for concurrency purposes for residential uses shall be 110 gallons of wastewater per capita per day. Such standard shall be used for determining concurrency for sanitary sewer.

Policy 4.A.1.4: The level of service standard for non-residential uses shall be 166 gallons per 1,000 square feet, or 90% of the potable water concurrency standard, whichever is greater. Such standard shall be used for determining concurrency for sanitary sewer.

**Objective 4.A.2:** Maintain and operate the sewage system so as to provide the adopted level of service.

Policy 4.A.2.1: The City shall require in its Land Development Regulations that developers 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 evaluate the capacity, maintenance, and operation of its sewage system on an annual basis.

Policy 4.A.2.3: The City shall utilize its sewage facilities to 90% of available capacity before making commitments for new or expanded facilities.

Policy 4.A.2.4: Priorities for replacement, correction, and expansion of facilities shall be as follows:

- (a) Correction of identified existing deficiencies;
- (b) Replacement of facilities to allow for continued operation or design efficiency;  
and
- (c) Expansion of facilities.

Policy 4.A.43.3: The City shall coordinate 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.43.4: The City shall not permit development which causes the level of service to fall below the standards established in this Element.

Policy 4.A.43.5: Average and peak flow design capacity for the City collection system shall be as specified in the Florida Building Code.

Policy 4.A.43.6: Average peak flow design capacity for City treatment systems shall be as specified in the operating permit issued by DEP.

**Objective 4.A.4:** 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.54.1: The City shall provide sewage capacity as applicable to promoting the redevelopment objectives of the Housing Element and shall consider provision of sewer in these areas to be a priority activity.

Policy 4.A.4.2: The City shall not provide sewer service to areas outside the City limits unless specifically provided for in a development agreement, interlocal agreement, contract, or other similar legal instrument.

## **(B) Solid Waste Sub-Element**

**GOAL 4B: ENSURE THAT ADEQUATE AND EFFICIENT SOLID WASTE COLLECTION IS AVAILABLE FOR THE CITY.**

**Objective 4.B.1:** On an annual basis, evaluate the need for extension of solid waste collection service relative to future needs.

Policy 4.B.1.1: The City shall provide solid waste collection consistent with the adopted level of service standard.

Policy 4.B.1.2: The City shall provide solid waste collection service to accommodate new customers.

Policy 4.B.1.3: The City shall use the level of service standard to evaluate facility capacity and for issuance of development permits. The level of service shall be applied as part of the development review and approval process to each application for development approval to make certain that adequate facility capacity exists to serve the proposed development concurrent with the impacts of such development.

Policy 4.B.1.4: Priorities for replacement, correction, and expansion of facilities shall be as follows:

- (a) Correction of identified existing deficiencies;
- (b) Replacement of obsolete or worn-out equipment; and
- (c) Expansion or extension of services and equipment.

Policy 4.B.1.5: The City shall use recycling grant funds available from Bay County to establish programs intended to reduce overall solid waste by thirty (30)% in Bay County.

Policy 4.B.1.6: The level of service standard for residential uses shall be 4.5 pounds of solid waste per person per day. Such standard shall be used for determining concurrency for solid waste.

Policy 4.B.1.7: The level of service standard for non-residential uses shall be 6.89 pounds of solid waste per 1,000 square feet. Such standard shall be used for determining concurrency for solid waste.

**Objective 4.B.2:** On an ongoing basis, locate equipment and facilities so as to avoid damage to drainageways or surface waters.

Policy 4.B.2.1: The City shall avoid or prevent possible effects on drainageways or surface waters as part of the construction and operation of solid waste facilities.

### **(C) Drainage Sub-Element**

**GOAL 4C: PROVIDE A DRAINAGE PROGRAM WHICH WILL REDUCE STORMWATER POLLUTION AND PROVIDE REASONABLE PROTECTION FROM FLOOD DAMAGE TO PUBLIC AND PRIVATE PROPERTY.**

**Objective 4.C.1:** Continue to evaluate needed improvements in drainage basins in the City

Policy 4.C.1.1: For flood attenuation and drainage control, the City ~~will~~ shall use the 25-year critical storm with facilities designed so the post-development stormwater off-site discharge rate shall not be greater than the pre-development discharge rate for storm durations of 1-, 2-, 4-, 8-, and 24-hours

Policy 4.C.1.2: Stormwater facilities shall provide retention, or detention with filtration, of runoff from the first one inch of rainfall. Alternatively, for development with drainage areas of less than 100 acres, stormwater facilities shall provide for the retention, or detention with filtration, of the first one-half inch of runoff, or provide for the treatment of stormwater runoff which will not degrade surface waters below pre-development levels of quality, whichever is greater.

(1) The requirements of paragraphs a. and b. above shall not apply to the development of single-family through quadraplex residential dwellings when all of the following conditions are met:

- i. Such residential dwellings are not part of a larger, common plan of development approved after the effective date of this Plan;
- ii. Such residential dwellings are to be developed in an existing, established residential area or a subdivision duly recorded prior to the effective date of this Plan;
- iii. The proposed development will not contribute pollutants that will cause runoff from the immediate drainage area to degrade the water quality of receiving waters below existing conditions; and
- iv. The proposed development will not increase the potential for flooding of existing structures.

Policy 4.C.1.3: The City shall use general funds to complete the evaluation of drainage basins by 2016.

Policy 4.C.1.4: The City shall amend this Plan as needed based on updated and reliable data resulting from the drainage basin studies

Policy 4.C.1.5: The City shall use the level of service standard as established in Objective 4.C.1.1 for evaluating facility capacity and for issuance of development permits. The level of service standard shall be applied to each application for development approval to make certain that adequate facility capacity exists to serve the proposed development concurrent with the impacts of each development.

Policy 4.C.1.6: Storm water conveyance systems shall be designed to provide the following protections from flooding:

- a) Street drainage systems shall be designed to accommodate runoff from a 10-year critical storm event.
- b) All other systems shall be designed to accommodate runoff from a 25-year critical storm event.
- c) The exception shall be for any system where there is a history of flooding of structures. Where there is such history, the system shall be designed to accommodate the runoff for a 100-year critical storm event.

Policy 4.C.1.7: Priorities for replacement, correction, and facility expansion shall be as follows in priority order:

- (a) Correction of drainage problems which cause flood damage to public and private property;
- (b) Correction of problems or improvement of facilities which are intended to reduce sedimentation in bays, bayous, and lakes;
- (c) Replacement of damaged or obsolete facilities;
- (d) Maintenance of facilities which are not operating at design efficiency; and
- (e) Regulation of new development to avoid future drainage and stormwater problems.

**Objective 4.C.2:** The City shall maintain provisions for stormwater management in its Land Development Regulations.

Policy 4.C.2.1: The City shall regulate new development and redevelopment in a manner which reduces stormwater impacts on drainage facilities and natural resources. Detailed and specific regulations shall be included in the Land Development Regulations which provide for: buffer zones for drainageways, design standards for stormwater facilities, on-site retention standards, compliance with state stormwater rules, and other similar provisions.

**Objective 4.C.3:** Provide stormwater management and drainage control through a combination of regulatory measures and capital improvements.

Policy 4.C.43.1: The City shall undertake a balanced program of regulation and capital improvements to reduce drainage problems within the City.

Policy 4.C.43.2: The City shall coordinate with adjacent municipalities, Bay County, and state/federal agencies to promote efficiency on drainage projects of mutual interest.

**Objective 4.C.4:** Reduce the potential for damage to public and private property caused by flooding.

Policy 4.C.4.1: The City shall use its Preservation land use category and its Flood Damage Prevention Ordinance to reasonably reduce the potential for flood damage to public and private property.

**Objective 4.C.5:** In conjunction with updates of the drainage basin studies, the City shall identify and inventory stormwater facility deficiencies that contribute to water quality problems.

Policy 4.C.5.1: On an annual basis, the City shall allocate funds to correct existing drainage deficiencies based on the criteria specified in Policy 4.C.1.5.

#### **(D) Potable Water Sub-Element**

##### **GOAL 4D: PROVIDE ADEQUATE, SAFE, AND SANITARY WATER DISTRIBUTION CAPABILITY TO ACCOMMODATE EXISTING AND FUTURE DEMAND.**

**Objective 4.D.1:** Operate the water distribution system so as to maintain the adopted level of service standard.

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

Policy 4.D.1.2: Developers shall provide water distribution lines constructed to City standards as part of any new developments.

Policy 4.D.1.3: The level of service standard for one (1) residential dwelling unit shall be 125 gallons per capita per day. Such standard shall be used for determining concurrency for potable water.

Policy 4.D.1.4: The level of service standard for non-residential uses shall be 166 gallons per day per 1,000 square feet. Such standard shall be used for determining concurrency for potable water.

Policy 4.D.1.5: The City shall use the level of service standard identified in ~~D-4~~ this Element to evaluate facility capacity and for issuance of development permits.

Policy 4.D.1.6: The level of service standard for determination of capacity shall be 90% of the permitted capacity of the County's water treatment plant(s), which is 54 MGD, or 90% of 60 MGD.

Policy 4.D.1.7: Water supplies and facilities shall be available to serve new development no later than the time of issuance of a certificate of occupancy, or its functional equivalent.

Policy 4.D.1.8: Prior to the issuance of a development order, the review of the request shall include consultation with the Utilities Department to insure there is adequate water supply to serve the demand of the new development.

**Objective 4.D.2:** Identify and correct existing facility deficiencies for potable water distribution.

Policy 4.D.2.1: The City shall use its water analysis model to identify facility deficiencies.

Policy 4.D.2.2: To ensure that adequate water supplies and public facilities are available to serve the water supply demands of City residents, the City shall use the adopted Water Supply Facilities Work Plan to identify and plan for the water supply sources and facilities needed to serve existing and new development.

Policy 4.D.2.3: The Panama City Water Supply Facilities Work Plan, dated March 2010, is hereby incorporated into this Plan by reference.

Policy 4.D.2.4: The City shall support the Northwest Florida Water Management District through locally adopted regulations or programs to increase the volume of reclaimed water used.

Policy 4.D.2.4: Priorities for replacement, correction, and expansion of facilities shall be as follows in priority order:

- (a) Correction of identified existing deficiencies;
- (b) Replacement of facilities to allow for continued operation or design efficiency;  
and
- (c) Expansion or extension of facilities.

**Objective 4.D.3:** Coordinate extension, or increase in capacity, water distribution facilities to meet future needs.

Policy 4.D.3.1: The City shall coordinate availability of potable water with the types and densities of land use shown on the Future Land Use Map.

Policy 4.D.3.2: All habitable residential and non-residential structures within the City limits shall be connected to the City water system, when such lines are within 300 feet of the subject parcel boundary.

**Objective 4.D.4:** Maximize the use of existing water distribution facilities to reduce urban sprawl.

Policy 4.D.4.1: The City shall use existing facilities to 90% of existing capacity before making commitments for new or expanded facilities, and shall not provide water service

to areas outside the City limits unless specifically provided for in a development agreement, interlocal agreement, or contract, or other similar legal instrument.

Policy 4.D.4.2: The City shall encourage and allow development of land within the City which has access to potable water

**Objective 4.D.5:** Require use of water conservation measures and techniques.

Policy 4.D.5.1: The City shall inform developers about water conservation measures and techniques as part of the development review process.

Policy 4.D.5.2: The City shall undertake emergency measures specified in the NFWFMD Water Shortage Plan in the event of a potable water emergency.

Policy 4.D.5.3: The City shall adopt a Florida-Friendly landscape irrigation and xeriscape ordinance, and shall use the design standards as presented in the December 2006 Landscape Irrigation & Florida-Friendly Design Standards.

Policy 4.D.5.4: Development within the Panama City North Planning Area (PCNPA) and the Goose Bayou Overlay District shall install reuse lines as a condition of any development approval.

## **E. Natural Groundwater Aquifer Recharge Sub-Element**

### **GOAL 4E: PROTECT AND CONSERVE THE FLORIDAN AQUIFER.**

**Objective 4.E.1:** Restrict land use and development in areas of high recharge potential in order to preserve the quality of water which may recharge the Floridan Aquifer.

Policy 4.E.1.1: The City shall prohibit land uses that may discharge substances which could infiltrate and degrade groundwater in areas of high recharge potential.

Policy 4.E.1.2: Areas of high recharge potential shall be as defined and delineated by the Northwest Florida Water Management District.

Policy 4.E.1.3: The City shall prohibit development activities that are constructed or located in a manner which will cause leakage, discharge, or otherwise have the potential to release hazardous substances into the Floridan Aquifer.

Policy 4.E.1.4: In order to provide maximum recharge of the Floridan Aquifer, the clustering of units shall be encouraged within any high aquifer recharge area. Additional criteria shall be provided in the Land Development Regulations no later than December 31, 2015.