SECTION 7

SANITARY SEWER, SOLID WASTE, STORMWATER DRAINAGE, POTABLE WATER AND AQUIFER RECHARGE

1. PURPOSE.

The purpose of this section is to provide for analysis and review of present facilities which provide services for sanitary sewer, solid waste, stormwater drainage and potable water in order to plan for projected growth. The existing sewer system is shown on Exhibit 6; and Exhibit 7 shows the existing water system.

2. UTILITIES SUB-ELEMENTS.

A. Sanitary Sewer Sub-Element

Current and Future Conditions

Panama City Beach sanitary sewer facilities are comprised of three components which perform the basic functions of collection, treatment and disposal of sewage. The collection system is composed of a network of collection lines, pumping stations and transmission mains which transport wastewater to the treatment facility. The collection network is shown on Exhibit 6.

The treatment plant is the component of the sanitary sewer facility (Wastewater Treatment Plant 1) whose function is to remove solid and organic materials from the wastewater prior to disposal. Treated wastewater or reclaimed water is reused in either of two means. One method is pumping into the City's reclaimed water system where it is used for irrigation of larger public properties, common landscaped areas along rights of way and commercial and residential lawns. The second means of reusing reclaimed water is rehydration of wetlands within the City's 2900 acre Conservation Park. Residuals or biosolids resulting from the treatment process are further treated and disposed of by land application on approved sites for soil enhancement. Although previously there were a few other private wastewater treatment facilities within the City's franchised service area, they have since been decommissioned and all of their tributary wastewater redirected to Wastewater Treatment Plant 1.

Wastewater Treatment Plant 1 (WWTP 1) has a rated capacity of 14 million gallons per day (MGD) maximum monthly average and 10 MGD on an annual average basis. Given the seasonal nature of the City's sanitary sewer customer base, the monthly maximum average daily flow criteria is the most critical capacity parameter.

Based on historic growth rates of wastewater generation, it is anticipated that there will be a 4%

yearly growth in wastewater generation within the City's service area (from the Hathaway Bridge to the West Bay Bridge to the Phillips Inlet Bridge). Accordingly, the City is in the planning phase for a second wastewater treatment plant and has acquired the site for this facility. Treatment capacity for this new facility will be developed in phases to coincide with growth. Both treatment facilities will be interconnected to allow for load sharing and system redundancy.

Septic tanks used to be a widely used method of wastewater disposal within the City limits. Six areas which used septic tanks as a means of wastewater disposal included: El Centro, Gulf Highlands I, Gulf Highlands II, Bid-A-Wee, Bahama Beach and Open Sands Subdivision. All of these subdivisions have been retrofitted by the City with sanitary sewer and reclaimed water. The improvements were funded by a grant from the State of Florida.

The City has the operational responsibility for the collection, treatment and disposal of wastewater generated in the CityThe geographic service area of the City wastewater treatment system serves areas predominantly populated with residential and commercial establishments. The predominant commercial uses are motels, restaurants, nightclubs and amusements. Light industrial use is small but growing at this time. There is no heavy industry use.

TABLE 1
HISTORICAL WASTEWATER TREATMENT SYSTEM
MAXIMUM MONTH AVERAGE DAILY USE

YEAR	MGD
2008	5.70
2009	6.20
2010	6.40
2011	6.90
2012	8.20
2013	11.57*
2014	8.63
2015	8.60
2016	8.89
2017	10.32
2018	9.13
2019	9.35

*Un-named heavy rainfall event July 2nd through 5th

SOURCE: Panama City Beach Utility Department

TABLE 2
PROJECTED MAXIMUM MONTH AVERAGE DAILY WASTEWATER PRODUCTION

	2020	2025
Permanent Residents:	14,711	15,524
Other Service Area Residents:	28,746	28,962
Tourist Population (daily avg):	54,233	69,217
Total Population:	97,690	113,703
Total Pop. Usage:	9.04 mgd	10.23 mgd
Non-Residential Usage:	8 1.58mgd	2.16 mgd
Total Usage:	4 10.95mgd	12.39 mgd
Remaining Capacity:	3.05mgd	1.61 mgd

Notes: Projections are from the Capacity Analysis Report.

Existing Facility Conditions

The general performance of the existing wastewater treatment system is good. Collection system maintenance remains relatively low given the age of the collection lines. The City continues to refurbish pump stations based upon age and condition in accordance with a prioritized capital improvement program. Impact on Natural Resources

Presently, the City's permit limits allow discharge of up to 14 MGD of reclaimed water to the receiving wetlands at the Conservation Park. In addition, the approved City reuse franchise area provides for up to 10 MGD of reclaimed water to be reused for irrigation. Application of reclaimed water to the Conservation Park wetlands provides for rehydration and reestablishment of the original hydroperiod of the wetlands prior to alteration for silviculture. Uplands within the Conservation Park are being managed through selective thinning, planting and prescribed burns programs to reestablish the original long leaf pine habitat. This 2900 acre Conservation Park is set aside for preservation, recreation and public education.

The City's reuse utility provides an alternate water supply for irrigation uses saving potable water resources and reducing demands on supply. Materials screened from the wastewater (i.e. rags, etc.) are dewatered and disposed of in a properly permitted landfill. Similarly, biosolids/residuals from the treatment process are further treated and applied to agricultural lands in accordance with the applicable regulations as a soil amendment.

Expansion or Replacement

The City is currently in the planning phase for a second wastewater treatment facility with a conceptual capacity up to 12 MGD. A site for this facility has been acquired in the northern portion of the City's industrial park. Effluent and residuals are to be disposed of in the same

fashion as currently practiced for WWTP 1.

Septic Tanks

Rule 64E-6, F.A.C., presently regulates the installation and use of septic tanks in the Panama City Beach area. This Rule outlines the suitability of soils and use of septic tanks. Using this criteria, the area contains soils which are suitable and unsuitable for septic tank systems. The General Soils Map Number 6 describes the soil types and characteristics. The Beach Service Area is composed of soil type 1 (Kureb, Resota, Mandarin), type 4 (Hurricane, Chipley, Albany), type 5 (Pottsburg, Leon, Rutlege), type 8 (Rutlege, Allanton, Pickney), and type 9 (Bayvi, Direго). All five soil types are identified as being primarily unsuitable for septic tank systems. Properties and features that affect the absorption of the effluent are permeability, depth to seasonal highwater table, susceptibility to flooding and depth to hardpan. Also, excessive slope or gravel may not adequately filter the effluent. Failure of some septic systems were formerly reported in the Gulf Highlands I and II subdivisions which are located on the eastern and western sides of State Road 79 and north of Panama City Beach Parkway. These subdivisions have since been retrofitted with sanitary sewer and reuse. There are other planned system expansions to eliminate septic tanks in the South Lagoon and Laguna Beach areas in the unincorporated portions of the utility service area.

In reviewing soil suitability standards, it is advisable that alternatives to septic tank installation and use should be investigated in all areas of the beach service area.

GOALS, OBJECTIVES AND POLICIES

GOAL: Provide adequate facilities required to meet wastewater needs in the Panama City Beach service area.

OBJECTIVE 1: City shall achieve and maintain the adopted level of service standards for sanitary sewer facilities.

POLICY 1.1: Panama City Beach hereby adopts 80 gallons per capita per day as a level of service standard that will be maintained for sanitary sewer facilities for permanent residents and 60 gallons per capita per day for seasonal visitors.

POLICY 1.2: When actual plus committed flow is 90% of the average annual daily flow permit and design capacity for the existing wastewater facility for Panama City Beach, the City will develop and implement an expansion program that will result in expansion of plant facilities or reconstruction to accommodate projected needs prior to the time the design capacity is reached.

POLICY 1.3: The City will track existing and committed capacities to ensure that capacity is available in the future at the level of service standard.

OBJECTIVE 2: The City will continue to address correcting any existing facility deficiencies.

POLICY 2.1: The City will address any existing facility deficiencies by investigating possible inflow and infiltration problems and refurbishing pump stations as needed in the existing wastewater collection lines.

OBJECTIVE 3: The City will address coordinating the extension of, or increase in, the capacity of facilities to meet future needs.

POLICY 3.1: The City will 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: Upon adoption of this Plan, consider developing additional procedures for providing sewage capacity as a means of discouraging urban sprawl and promoting "in-fill" of vacant urban areas.

POLICY 4.1: The City shall provide sewage capacity as applicable to promote the redevelopment objectives of the Housing section and shall consider provision of sewer in these areas to be a priority activity.

OBJECTIVE 5: Maintain and operate the sewage system in an efficient and cost-effective manner.

POLICY 5.1: Through Land Development Regulations, the City shall require that developers provide sewage collection lines constructed to City standards as a part of proposed new developments and that such lines be connected to the Panama City Beach wastewater treatment system.

POLICY 5.2: Priorities for replacement, correction, or expansion of the facilities 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 6: Upon adoption of this Plan, the City will coordinate the extension or increase in capacity of the facilities to meet future needs.

POLICY 6.1: All extensions of the sewer system shall be constructed in conformance with Chapter 17-6, F.A.C., as it may be revised and any applicable standards for facilities which are to be operated and maintained by the City.

POLICY 6.2: Average peak flow design capacity for the City collection system shall be as specified in Chapter 62 -6, FAC, as amended or any applicable standards for facilities which are to be operated and maintained by the City.

POLICY 6.3: Average flow design capacity for the wastewater treatment system shall be as specified in the operating permit issued by the Florida Department of Environmental Regulation.

POLICY 6.4: Improvements to the wastewater treatment facilities will be funded through a combination of user fees, impact fees, bonds, state revolving funds, and grants.

OBJECTIVE 7: The City will continue to reduce the number of septic tanks currently in the city limits and limit the number of future septic tanks.

POLICY 7.1: Use of a septic system must discontinue pursuant to S. 381.0065, F.S., once a sanitary sewer system becomes available.

POLICY 7.2: The term available• shall be that as defined in S. 381.0065, F.S.

POLICY 7.3: The extension of reuse lines and sanitary sewer lines into unsewered subdivisions will be funded by a combination of user fees, impact fees, bonds, state revolving loans, and grants.

POLICY 7.4: The City's reuse system will continue to be expanded as such projects become financially feasible in order to further the City's potable water conservation efforts.

B. Solid Waste Sub-Element

Current Conditions

This section addresses the handling and disposal of solid waste. Solid waste includes the

sludge from a wastewater treatment plant, garbage, rubbish, refuse, or other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations. This definition also includes hazardous waste defined as solid waste, or a combination of solid wastes, which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or may pose a substantial present or potential hazard to human health or the environment when improperly transported, disposed of, stored, treated or otherwise managed.

The majority of solid waste generated in Panama City Beach is normally incinerated at the Bay County Waste to Energy Facility (WTE), with all metals being recycled. The WTE facility processes about 63% of the waste generated in Bay County.

The Steelfield landfill operates primarily as a repository for ash residuals left over from the WTE combustion process, as a disposal method for non-burnable waste and acts as an overflow device when the WTE facility reaches maximum capacity. The landfill also recycles scrap metals, primarily appliances that are prohibited by law from being landfilled.

The 620 acre landfill, consisting of 155 acres permitted of which 47 acres are filled and 26.4 acres are in active use, has a life expectancy of 36 more years. On average Bay County processes 215,347 tons of material each year.

There are currently no plans to open a transfer station to replace the former Beach Transfer Station, which was closed. It is hoped that another solution will be found soon since the increased traffic to the landfill has caused State Road 79 to become littered with trash and debris and illegal dumping is expected to continue throughout the city

GOALS, OBJECTIVES AND POLICIES.

GOAL: Provide adequate facilities for the disposal of solid waste.

OBJECTIVE 1: The City shall maintain a level of service based on standards set by Bay County to project future needs for planning adequate facilities for disposal.

POLICY 1.1: Panama City Beach hereby adopts the level of service standard of 6.1 pounds of solid waste per capita per day.

OBJECTIVE 2: Panama City Beach shall coordinate with Bay County to

ensure the availability of solid waste disposal facilities based on the City's adopted level of service standard.

POLICY 2.1: Panama City Beach shall coordinate with Bay County, through an interlocal agreement, for the handling and disposal of solid waste through the Bay County Resource Recovery System.

POLICY 2.2: The City shall coordinate the extension of, or increase in the capacity of, facilities to meet future needs if, upon annual review, the available capacity of the County's current solid waste disposal allocation reaches 80% of its capacity.

POLICY 2.3: The City shall utilize the level of service standard to evaluate facility capacity 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 determine whether adequate facility capacity exists to serve the proposed development concurrent with the impacts of such proposed development.

POLICY 2.4: Properties for replacement, correcting existing facilities, and facility expansion shall be as follows in priority order:

A. Correctly identify deficiencies through repair or upgrades;

B. Replacement of obsolete or worn out equipment;

C. Expansion or extension of services and equipment.

OBJECTIVE 3: The City shall cooperate with Bay County to implement a program to reduce the generation of solid waste.

POLICY 3.1: The City shall continue to cooperate with Bay County, who has the exclusive franchise for Solid Waste by Special Act of the Florida Legislature, to establish programs intended to reduce overall solid waste in Bay County.

C. Drainage Sub-Element

Current Conditions

This section addresses stormwater drainage for purposes of reducing pollution caused by stormwater runoff. The predominant land uses in the area to be served by the drainage system are commercial (motels, restaurants, nightclubs and amusements) and residential. The City completed a stormwater master plan in September, 2007. The process involved identifying and correcting existing deficiencies, establishing priorities for drainage facilities and replacement

based on an adopted level of service standard. Currently the City regulates the review of drainage plans for new developments and redevelopments. The City adopted a stormwater ordinance in 1994 which regulates the quantity and quality of runoff. The level of service for stormwater quantity is: Peak post development runoff shall not exceed peak pre-development runoff rates based upon the 25-year critical duration storm if the development provides a positive direct discharge into a public stormwater system with sufficient capacity. It must be proven that the public stormwater system has sufficient capacity in excess of a 25 year critical storm event. Otherwise attenuation of the 100 year critical duration storm must be taken into account. The level of service standard for water quality is: The stormwater treatment systems must provide a level of treatment within 72 hours for the stormwater runoff from the first 1 inch of rainfall for projects and drainage basins of 100 acres or more, or as an option for projects with drainage basins less than 100 acres, the first ½ inch of runoff.

The National Pollutant Discharge Elimination System (NPDES) permitting authorities are required to issue general permits for Phase II-designated small MS4s and small construction activity. The City was approved for our initial MS4 permit in 2004 and we update these permits as required. The Phase II MS4 is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation, as well as, the environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activity. Stormwater discharges from MS4s in urbanized areas are a concern because of the high concentration of pollutants found in these discharges. Concentrated development in urbanized areas substantially increase impervious surfaces, such as city streets, driveways, parking lots, and sidewalks. The impervious area on which pollutants from concentrated human activities settles and remains until a storm event washes them into nearby storm drains. Another concern is the possible illicit connections of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system. Stormwater runoff picks up and transports these and other harmful pollutants then discharges them – untreated – to waterways via storm sewer systems. When left uncontrolled, these discharges can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.

GOALS, OBJECTIVES AND POLICIES.

GOAL: Provide a drainage program which will reduce stormwater pollution and provide reasonable protection from flood damage to public and private property.

OBJECTIVE 1: The Stormwater Management Master Plan is hereby incorporated and adopted as part of this Comprehensive Plan.

POLICY 1.1: The City will implement the strategies, objectives, and

recommendations of the Stormwater Management Master Plan.

POLICY 1.2: Funding for implementing the strategies, objectives, and recommendations of the Stormwater Management Plan will come from the City's Stormwater Fund, grants, assessments, and tax increment financing through the Front Beach Road Community Redevelopment Plan.

OBJECTIVE 2: The City shall achieve and maintain the stormwater management level of service standard upon adoption of the Comprehensive Plan.

POLICY 2.1: Stormwater discharge facilities shall be designed to achieve the water quantity and quality standards outlined below. A stormwater discharge facility means the designed features of the property which collect, convey, channel, hold, inhibit or divert the movement of stormwater. Water quantity and quality standards may be achieved by utilization of stormwater discharge facilities which include approved swales, landscape buffers, detention basins, filtration systems, or retention basins to ensure that the following standards are achieved. Stormwater treatment facilities shall be evaluated by the Northwest Florida Water Management District prior to approval of development permits by the City.

A. Level of Service Standards

1. Water quantity.

All development not exempt from the requirements of Chapter 26, Stormwater Management of the City Code of Ordinances, shall provide for flood attenuation as follows:

(a) At a minimum, facilities shall be provided to attenuate a 25-year frequency storm event of critical duration so that the postdevelopment stormwater peak discharge rate shall not be greater than the predevelopment peak discharge rate. In addition, development which cannot demonstrate a positive, direct discharge into a receiving wetland or a public easement or right-of-way, each with sufficient capacity to accept stormwater runoff from a 100-year frequency storm event of critical duration without adversely affecting other development or property, shall attenuate a 100-year frequency storm event of critical duration. The critical duration shall be defined as the storm event that when routed through the proposed facility results in the greatest post-development discharge rate. The FDOT 1-hour, 2-hour, 4-hour, 8-hour and 24-hour rainfall distribution shall be used to determine the critical duration. Off-site contributions shall be exempt from the foregoing attenuation requirements, provided that they are conveyed through the site and discharged at the same location as prior to development. The analysis of pre-development run-off shall presume the site to be in a natural and undeveloped condition, except that the analysis of pre-development run-off for a public roadway redevelopment project shall use the current site conditions. A public roadway redevelopment project is a roadway project proposed by a governmental entity, or a non-governmental entity if the roadway project is required as an off-site improvement by a

development order or permit, that involves the redevelopment of an existing roadway classified as a principal or minor arterial or an urban or rural collector.

(b) For those developments located within the basin of a regional stormwater plan, the stormwater facility shall consider the critical duration for the regional stormwater plan basin. The post-development discharge for the stormwater facility shall not exceed the pre-development rate for the event equal in duration to the critical event for the regional stormwater plan basin.

(c) All stormwater discharge facilities shall have sediment controls and skimming devices.

(d) Off-site discharge flows shall be limited to non-erosion velocities.

2. Water quality.

All development not exempt from the requirements of Chapter 26, Stormwater Management of the City Code of Ordinances, shall provide for stormwater treatment as follows:

(a) At a minimum, the first one-half inch of stormwater runoff shall be retained within drainage areas less than one hundred (100) acres. For areas one hundred (100) acres or more, the runoff from one inch (1") of rainfall shall be retained with the runoff coefficient being no less than 0.5. The total volume retained must percolate within seventy-two (72) hours.

(b) The retention and detention of a greater amount of stormwater may be acquired in areas of special concern as designated by the City.

(c) Except as described in paragraph b, all drainage and stormwater management systems shall comply with requirements of the Northwest Florida Water Management District as set forth in Chapter 62-346, FAC.

(d) All stormwater discharge facilities shall have sediment controls and skimming devices.

(e) Off-site discharge flows shall be limited to non-erosion velocities.

(f) Drainage and stormwater management systems which directly discharge to surface waters within Ecosystem Management Areas or Outstanding Florida Waters (OFW) shall include an additional fifty percent (50%) of treatment criteria specified in Section 62-25.035(1)(b) or Section 62-25.040 or Section 62-25.042, FAC (OFW standards).

POLICY 2.2: The City shall use the level of service standard for evaluating facility capacity and for issuance of Development Permits. The level of service standards shall be applied to each application for development approval as outlined above to make certain that

adequate facility capacity exists to serve proposed development concurrent with the impacts of each development.

Joining the National Flood Insurance Program (NFIP) in 1977 was an important step toward reducing a community's risk of flooding and making a speedier, more sustained recovery should flooding occur. It also allows property owners within a participating community to purchase NFIP flood insurance and receive disaster assistance for flood-related damage. Identifying our community's flood hazards and then acting to reduce those risks along with managing to a higher standard will result in a stronger, more resilient community by following best practices:

- Adopting and enforcing higher floodplain management standards than NFIP minimum requirements (e.g., higher freeboard, lower substantial damage ratios)
- Maintaining rigorous enforcement
- Promoting open space through property buyouts and community planning
- Encouraging responsible building practices (ASCE or IBC)
- Promoting the purchase of flood insurance

The City currently has a stormwater masterplan modeled by consultants which is updated to include new developments in flood zones and sensitive areas prone to flooding. The flood map adoption process near the end of a new Flood Insurance Rate Map (FIRM) study process is a good opportunity to improve those standards. By following best practices and adopting higher standards than the federal minimum the City can expect faster recovery from flooding events, lower impact to other properties and communities, and reduced financial and physical effects on property owners. In addition, flood insurance premiums for residents and business owners in high-risk areas can be reduced substantially if communities build higher and actively participate in the Community Rating System (CRS). By conducting mitigation and outreach activities that increase safety and resilience, including CRS credits for regulating to higher standards, the City has earned credits and discounts on flood insurance premiums for property owners.

D. Potable Water Sub-Element

Current Conditions

This section is to address the potable water needs of the Panama City Beach service area with water originating from Deerpoint Lake. The potable water system within the City limits is shown on Exhibit 7.

The City provides potable water service for virtually all land uses from Phillips Inlet to Hathaway Bridge. This system consists of two water treatment facilities with storage and high service pumping stations.

In 1999, the City entered into an interlocal agreement with Bay County to construct a new potable water line from Deer Point Lake via County Road 388 to the City. The system became operational in March, 2002 . The interlocal agreement states that 26.39 million gallons a day (mgd) is available to the City in 2010 with increasing amounts each year up to 33.79 mgd in the year 2020. The current available pumping and transmission capacity is approximately 32.8 mgd and with planned capital improvements the capacity will be increased to 38.5 mgd. The contract with the County has been designed to increase each year by approximately 4% per year in order to continue to have capacity available for growth. Additionally, the City has completed construction of two 7 million gallon tanks at the West Bay Water Treatment Facility and 5, 4 and 2 MG storage tanks at the McElvey Water Treatment Facility providing the City an additional 25 million gallons of working reserve for peak season and fire flow demand.

The daily average water demand from January 1, 2019, through December 31, 2019 was 13.95 MGD on a monthly average with a daily peak usage of 19.99 MGD. The County's available capacity to supply potable water to the City in 2020 is 32.96 mgd, which leaves an excess capacity of 19.01 mgd on a daily average and an excess capacity of 12.97 mgd on daily peak usage. Table 6 shows the historical potable water usage and capacity while Table 7 shows the projected usage and capacity from 2020 to 2030.

The City has also implemented a water reclaimed system that will make highly treated effluent from the wastewater system available for irrigation to new subdivisions and commercial developments. With the implementation of this reclaim system, it is estimated that the 20% of potable water usually used for irrigation in these new subdivisions will be replaced by reclaimed water. The following tables show the historical and expected demands and remaining capacity of the potable water system.

TABLE 6

Historical Potable Water Usage (in mgd)

	2008	2009	2014	2019
Daily Average	11.47	11.25	11.15	13.95
Daily Peak	19.93	18.33	18.65	19.99
Capacity	25.00	25.69	26.40	32.96
Remaining Capacity (Daily Avg.)	13.53	14.44	15.25	19.01
Remaining Cap. (Daily Peak)	5.07	7.36	7.75	12.97

Source: Panama City Beach Water Consumption History and Projections, City of Panama City Beach Utilities Department.

(Ordinance 1341)

TABLE 7

Projected Daily Potable Water Usage (in mgd)

	2020	2025	2030
Total Average Daily Usage:	14.30	16.18	18.30
Total Peak Daily Usage:	20.49	23.18	26.23
Capacity:	33.79	33.79	33.79
Remaining Capacity (Daily Avg)	19.49	17.61	15.49
Remaining Capacity (Peak Daily)	13.30	10.61	7.56

Source: Panama City Beach Water Consumption History and Projections, 2015, City of Panama City Beach Utilities Department.

GOALS, OBJECTIVES AND POLICIES.

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

OBJECTIVE 1: Establish a level of service for potable water within the service area.

POLICY 1.1: Panama City Beach adopts the following as its level of Service for the provision of potable water:

A. Level of service of 125 gallons per capita per day average.

B. Pressure: 30 psi at point of delivery.

POLICY 1.2: Priorities for replacement, correction of deficiencies, and facility expansion shall be as follows in priority order:

A. Correction of deficiency;

B. Replacement of facilities to allow for continued operation or design efficiency;

C. Expansion or extension of facilities.

POLICY 1.3: Continue to work with Bay County to wholesale water to the City for distribution.

OBJECTIVE 2: Maximize the use of existing water distribution facilities to reduce urban sprawl.

POLICY 2.1: The City shall encourage and allow development of land within the City which has access to potable water, thereby reducing the potential for urban sprawl in the unincorporated areas.

OBJECTIVE 3: Upon adoption of this Plan, require use of water conservation measures and techniques.

POLICY 3.1: The City shall enforce the use of water conservation plumbing fixtures and equipment, as required in 553.963 Fla.Stat.

POLICY 3.2: The City shall undertake emergency measures specified in the Northwest Florida Water Management District Water Shortage Plan in the event of a potable water emergency.

POLICY 3.3: The City shall pursue additional revenue sources to fund water supply and facility projects.

POLICY 3.4: The City shall regularly review the potable water impact fees to ensure they are adequate to fund system improvements for new development, redevelopment, and to maintain and repair the existing system.

POLICY 3.5: The City will continue to examine the extent to which interconnectivity is possible with water facilities of other local jurisdictions.

POLICY 3.6: The City will coordinate with the Northwest Florida Water Management District and Bay County to protect the water quality of Deer Point Lake and any new alternative water supply source.

POLICY 3.7: The City will continue to encourage water conservation through land development regulations by requiring the preservation and use of native vegetation, when possible, as well as encouraging xeriscaping.

E. Groundwater Aquifer Recharge Sub-Element

According to the Northwest Florida Water Management District, the land surface activities on Panama City Beach are not prone to impact the Floridian Aquifer which is protected by a thick, confining unit of competent clays and other low permeability sediments.

<u>OBJECTIVE 1:</u> The City will protect against salt-water intrusion of the Floridan Aquifer.

<u>POLICY 1.1:</u> The City will coordinate with the Northwest Florida Water Management District and Bay County to protect the water quality of Deer Point Lake and any new alternative water supply source.