

CHAPTER 6
INFRASTRUCTURE ELEMENT
GOALS, OBJECTIVES, AND POLICIES

4.4 — GOALS, OBJECTIVES AND POLICIES

STORMWATER MANAGEMENT SUB-ELEMENT

4.4.2. Drainage

~~4.4.2.0. Goal 6: Provide a stormwater management system which protects real and personal properties and promotes and protects surface and groundwater water quality.~~

GOAL

A storm drainage system will be provided and maintained in a manner that reduces the risk of property damage, inconvenience from long term flooding, and stormwater pollutants entering the Indian River Lagoon and receiving waters.

Objective 15: 1. Flood Protection

The City shall ensure ensure that existing and future development is protected from undue flooding with a level-of-service design standard for drainage systems that accommodates at a minimum a ten-year/24-hour design.

Policies:

~~15.1 1.1 Maintain the~~ The City shall maintain and enforce the requirements of Chapter 73 its of the City Code Land Development Regulations which addresses flood prevention and drainage.

~~15.2 Maintain the drainage improvements program based on the 1982 Engineering Drainage Study as incorporated into Section 73.20 of the City Code to meet existing and future needs.~~

~~15.3 By 1993, the City shall develop an interlocal agreement with the Indian River Farms Water control District to coordinate improvements within Vero Beach that are also within the jurisdiction of the IRFWCD.~~

1.2 The City shall coordinate its storm drainage system improvements with the Indian River Farms Water Control District (IRFWCD), Florida Department of Transportation, and Indian River County, that have storm drainage systems within the City of Vero Beach.

~~15.4 1.3 The City shall maintain level of service standards for drainage facilities consistent with the Comprehensive Plan through the concurrency management system of its land development regulations. The level of service standard for drainage facilities shall require~~

these facilities meet at a minimum a ten year/24 hour design rainfall event. At a minimum, storm drainage facilities shall meet a ten year /24 hour design rainfall event to reduce undue flooding. This standard shall be maintained through the concurrency requirements of the Capital Improvements Element and the City's Land Development Regulations.

1.4 Post-development runoff shall not exceed the predevelopment runoff in terms of discharge rate or volume.

1.5 The City shall protect property from undue risk to flood damage through administration and enforcement of its floodplain management regulations and pursuant to policies under Objective 4 of the Coastal Management Element.

1.6 The City shall investigate strategies and measures to address stormwater management needs of infill and redevelopment projects, where traditional on-site stormwater management options are cost-prohibitive or impracticable.

[Note: Where on-site open is unavailable or undesirable for traditional stormwater retention, the staff is looking at other options to address stormwater needs including off-site alternatives.]

Objective 16 2. Improvements or Modifications to Existing Drainage Systems

The City ~~will~~ shall improve or modify existing drainage systems to reduce flooding, maximize the use of existing drainage facilities, and to protect and enhance water quality.

Policies:

~~16.12.1.~~ The City shall ~~continue to~~ require development to utilize existing City or City approved drainage facilities and to meet the stormwater management design standards requirements of the City in its land development regulations. in its Land Development Regulations.

~~16.2~~ The City shall ~~maintain its existing improvements program for drainage facilities as outlined in the Capital Improvements Element and the annual Capital Improvements Schedule for replacing or modifying different facilities including the retrofitting of existing stormwater outfalls to improve and protect the water quality of the Indian River Lagoon as called for in Policy 20.3.~~

[Note: This policy has been revised and located under new Objective 4 as Policy 4.1]

~~16.32.2~~ The City shall operate and maintain its municipal separate storm sewer drainage system (MS4) pursuant to the requirements of its National Pollution Discharge Elimination System (NPDES) permit.

2.3 The City Public Works Department shall administer a program for inspecting, cleaning, and rehabilitating or improving existing drainage facilities to maintain and improve the

capacity of the system to reduce flooding in low lying areas and neighborhoods and to reduce pollutants entering the Indian River Lagoon and connecting surface waters.

Objective 18:

By 1995, the City shall reduce the discharge of stormwater to the Indian River Lagoon.

Policies:

~~18.1 The City will develop a plan to use stormwater from the drainage canals for irrigation supply to reduce the amount discharged into the Lagoon.~~

~~18.2 The Land Development Regulations to be adopted by the City by September 1, 1990, will include criteria to require best management practices for on site detention/retention facilities.~~

~~18.3 The City shall develop a plan which determines how much stormwater can be removed from the canals.~~

[Note: The city is already implementing Policy 18.1. The LDRs have been revised to include best management practices. Policy 18.1 and 18.3 are addressed under Objective 2, Policy 2.3 under the Sanitary Sewer Sub-Element.]

Objective 20: 3. Surface and Groundwater Protection

The City shall ~~Protect~~ protect and improve surface and groundwater water quality from the impacts of stormwater runoff with enhancements to the existing public drainage system and the application of level of service design standards for on-site stormwater detention and/or-retention.

Policies:

3.1 The City adopts the following level of service standard for new development or substantial improvements to existing development:

(a) A minimum on-site retention/detention of the first one inch of rainfall with no direct discharge into the Indian River Lagoon or connected surface waters for single family and duplex dwellings.

(b) A minimum on-site retention/detention of the first one and one half inches of rainfall with no direct discharge to the Indian River Lagoon or connected surface waters for multi-family and nonresidential development.

3.2. The City shall establish specific development thresholds for meeting the above level of service standards and other design criteria in the stormwater regulations of the its Land

Development Regulations to facilitate the cost-effective reduction in the amount of stormwater and nutrients entering the City's drainage system and Indian River Lagoon.

[Note: This policy addresses the need for flexibility in application of the City's stormwater regulations.]

3.3 The City shall implement the designated policies under Objectives 2 and 3 of the Conservation Element and Objective 1 of the Coastal Management Element to protect and improve water quality of the Indian River Lagoon and to coordinate its efforts with other dischargers to implement the Central Indian River Lagoon Best Management Action Plan.

3.4. The City shall maintain the level of service standards for this sub-element through the concurrency management policies of the Capital Improvements Element and its Land Development Regulations.

~~20.1 Where wet retention must be a part of the stormwater management plan, incorporate stormwater retention ponds into on-site irrigation systems and fire fighting systems whenever practical, as a means of conserving potable water supplies.~~

3.5 Where wet retention is used, the stormwater retention ponds shall be incorporated into the on-site irrigation and fire fighting systems, whenever practical, as a means to conserve potable water supplies.

~~20.23.6 Continue to promote~~ The City shall promote stormwater nonstructural detention and structural retention best management practices through infrastructure projects, land use planning, public education on stormwater quality and uses, and through the development review and approval process.

~~20.33.7~~ The City shall continue to implement its stormwater capital improvements plan to retrofit its existing stormwater drainage system outfalls, catch basins, and inlets to incorporate sediment boxes and other appropriate mechanisms to improve quality of stormwater discharges to the Indian River Lagoon by increasing the treated portion of the urban watershed from 1,600 acres in 2015 to 3,000 acres by 2035. A specific improvements plan and schedule for these improvements shall be incorporated in any updates to the Infrastructure and Capital Improvements Elements and the annual Capital Improvements Schedule.

[Note: This target level for the treated portion of the urban watershed is based on what the Public Works Department is feasible. To expand the treated portion of the urban watershed beyond 3000 acres would cost prohibitive due to the isolated nature of many of the drainage systems. The Florida Department of Environmental Protection estimates that approximately the urban watershed within the City of Vero Beach is over 5,100 acres.]

3.8 The City shall investigate incorporating in its stormwater regulations cost-effective best management practices to reduce nutrients and particulate matter from non-point sources directly discharging into the Indian River Lagoon and connected surface waters.

~~20.43.9~~ All stormwater projects shall be so designed that any stormwater run-off does not degrade the receiving waters and meets State Water Quality Standards as set forth in Chapter 17-302, F.A.C. ~~incorporated herein by reference~~

~~20.5~~ The City establishes a stormwater design level of service for water quality protection that all new development and substantial redevelopment projects shall be required to retain/detain, as a minimum, the first one inch of rainfall prior to off site discharge, except that in the case of stormwater run off with direct discharges to the Indian River Lagoon and any of its connecting water bodies, the retention/detention requirement shall be the first 1.5 inches.

~~20.6~~ The City shall amend its land development regulations by July 2008 to incorporate Policy 20.5 for single family and other development exempt from SJRWMD regulations.

~~20.73.10~~ No site plan or other development approval shall be issued for construction of a project prior to the City receiving a copy of the Florida Department of Environmental Protection (FDEP) Notice of Intent for a generic permit for stormwater discharge and/or St. John's River Water Management District (SJRWMD) stormwater management permit if applicable.

~~20.83.11~~ Any site plan or other development approval shall be compliant with applicable FDEP and SJRWMD permits and subject to any conditions of these permits.

Objective 4. Capital Improvements

The City shall complete the stormwater management improvements listed in the annual five-year Capital Improvements Schedule of this Comprehensive Plan to maintain and maximize use of existing facilities to reduce flood potential and improve the water quality of the Indian River Lagoon.

Policies:

4.1 The City's Public Works Department shall maintain its existing an improvements program for drainage facilities as outlined in the Capital Improvements Element and the annual five year Capital Improvements Schedule for replacing or modifying different drainage facilities including the retrofitting of existing stormwater outfalls, catch basins, and inlets to improve and protect the water quality of the Indian River Lagoon as called for in pursuant to Policies 3.2 and 3.3 of this sub-element.

4.2 The Public Works Department shall develop a priority system for ranking and programming of stormwater improvement projects to be included in the annual five Year Capital Improvements Schedule that shall supplement or modify the policies for ranking and evaluating projects in the Capital Improvements Element.

4.3 The City shall seek federal, state, Indian River Lagoon National Estuary Program and other governmental and non-governmental grants or low interest loans as appropriate to help fund stormwater system improvements.

4.4 The City shall explore the use of development bonus incentives pursuant to pertinent policies in the Land Use Element to be awarded to developers in return for providing stormwater improvements that supersede the minimum standards of the City's stormwater regulations or where the developer provides financial support for needed City off-site stormwater improvement projects.

[Note: This policy emphasizes the use of development bonus incentives to attract investment in needed public improvements and amenities.]

4.5 The City shall consider the establishment of a stormwater utility to finance capital improvements needed for the City's stormwater drainage system.

[Note: A stormwater utility does use as valorem taxes for its revenues but user fees linked to the amount of stormwater runoff created by a property. A detailed discussion of this approach is contained in the Stormwater Management Sub-Element of the Technical Document.]

Objective 19:

~~Ensure that at the time a building permit is issued adequate stormwater management facilities are or shall be available at the adopted level of service standards concurrent with development.~~

Policies:

~~19.1 Drainage plans will continue to include a hydrological survey of the site showing natural and manmade drainage systems, a survey of drainage systems on adjacent properties and the calculations used to estimate stormwater runoff.~~

~~19.2 Drainage plans shall incorporate stormwater detention and/or retention pursuant to Policy 20.5.~~

~~19.3 Post development runoff shall not exceed the predevelopment runoff in terms of discharge rate or volume.~~

~~19.4 No stormwater runoff should be discharged into common waters unless it has been detained on the site and conveyed to the receiving water in an approved manner consistent with the level of service design standards of Policy 20.5.~~

~~19.5 The City shall maintain level of service standards for stormwater design consistent with the Comprehensive Plan and Capital Improvements Element through the concurrency management system of its land development regulations.~~

SOLID WASTE SUB-ELEMENT

~~4.4.1. Solid Waste~~

~~4.4.1.0. Goal 4: Provide a safe and sanitary method of solid waste collection and disposal, consistent with maintaining public health.~~

GOAL

Solid and hazardous waste will be collected, managed, and disposed of in an efficient and environmentally sound manner to prevent disease and to meet existing and projected demands for the management and disposal of waste.

Objective ~~11~~ 1. Adequate Solid Waste Collection Services

~~Continue to provide timely and efficient solid waste collection service.~~

The City shall provide timely and efficient solid waste collection service and disposal through 2035.

Policies:

~~11.1 Maintain sufficient equipment to provide collection a minimum of two times each week for residential areas and as needed for commercial areas.~~

1.1 The City shall maintain sufficient equipment to provide for a minimum residential collection of twice-a-week and as needed for commercial uses.

~~11.2 Implement an equipment replacement and expansion plan based on equipment usage and service records and plan for future expansions.~~

~~11.3 Regulate the responsibilities and procedures for disposal of industrial wastes in accordance with state and federal regulations.~~

~~11.4 The City hereby establishes an LOS of 6.3 pped for solid waste.~~

1.2 The City hereby establishes the following levels of service standard for solid waste (Class I and Construction and Demolition Waste) that shall be used as a basis for determining the availability of facility capacity and the demand generated by new development:

- 1.43 tons per capita for permanent and seasonal population per year, or
- 1.54 cubic yards per capita for permanent and seasonal population per year.

[Note: The existing standard does not take into account the entire waste stream. It only provides a density standard (pounds), but not a volume or space standard (cubic yards) that is more

appropriate for determining landfill needs. The standards are based on using data collected by the Vero Beach Solid Waste Division expanded with information in the Solid Waste Disposal District's 2014 Solid Waste Master Plan. This standard closely mirrors the County standard, but has been modified based on the updated data in the Solid Waste Master Plan.]

1.3 The City shall maintain its concurrency management system pursuant to the pertinent policies in the Capital Improvements Element and through Land Development Regulations. Significant landfill improvement projects from Solid Waste Disposal District's (SWDD's) five-year capital improvements plan shall be included in the City's annual five-year Capital Improvements Schedule of this Comprehensive Plan.

[Note: Service capacity constraints for solid waste are predominately tied to landfill or disposal capacity of facilities, not the capacity of the City's collection vehicles to haul the waste to the disposal location.]

1.4 The City Planning and Development Department shall review the annual reports provided by the SWDD on waste demand, waste composition, and landfill capacity information and, as needed garbage and yard waste data provided by the Public Works.

1.5 No development order or permit shall be issued for development if insufficient capacity exists at the Indian River County SWDD's landfill pursuant to Policy 1.2 of the Solid Waste Sub-Element of the 2030 Indian River County Comprehensive Plan, as may be amended from time to time.

[Note: This policy reflects the County's policy on capacity of the landfill.]

1.6 The City shall structure solid waste fees, rates, and assessments to support the solid waste services as a financially self-supporting enterprise system that provides a return on investment to the General Fund.

1.7 The City shall continue its non-ad valorem assessment programs to fund its solid waste services as well as apply for state and federal grants where appropriate to improve and expand services.

1.8 The City shall include major capital improvements to maintain its solid waste services in the annual five-year Capital Improvements Schedule of this Comprehensive Plan.

Objective 12 2. Special Waste and Hazardous Waste

~~Continue to prohibit the improper storage and disposal of solid waste.~~

The City shall prohibit the improper storage, management and disposal of solid and hazardous waste.

Policies:

~~12.1 Continue to regulate the proper storage of solid waste and storage standards for collection. Specify the containers required, access for collection and other details.~~

2.1 The City shall establish standards and regulate the temporary storage of solid waste for collection through its Land Development Regulations and the solid waste regulations of the City Code.

2.2 The City shall regulate the collection, transportation, and disposal of solid waste through the solid waste regulations of the City Code.

~~12.2 Continue to prohibit all burying and/or burning of solid waste except where special approval has been granted by the City.~~

2.3 The City shall prohibit the outdoor burning of trash, yard refuse, or other refuse without governmental approval pursuant to the solid waste regulations of the City Code.

2.4 The City shall through its solid waste regulations prohibit specific acts related to the improper management and disposal of refuse and waste of all kinds that may cause a public health, safety, or environmental problem or place an undue financial burden on city taxpayers.

~~12.3 Continue to prohibit the collection, transportation, and/or disposal of solid waste by any agent not so designated by the City.~~

2.5 The City shall dispose of stabilized sludge from its wastewater treatment plant at the SWDD's landfill, but shall continue to explore alternatives to land fill disposal pursuant to Policy 3.4 of this sub-element.

2.6 The City shall cooperate with Indian River County and SWDD regarding residential programs for collection and disposal of household hazardous waste.

2.7 The City shall coordinate with Indian River County regarding the use of licensed hazardous waste transporters for providing disposal services to the small quantity generators of household hazardous waste.

~~4.4.1.1. Goal 5: Cooperate with the County to promote recycling and resource recovery to reduce solid waste volumes.~~

Objective 13:

~~By 1995, determine how recycling, resource recovery and conservation programs in the City can be used to decrease the amount of solid waste, conserve resources and provide additional revenue.~~

Policies:

~~13.1 By 1994, establish the feasibility of recycling programs which require household refuse to be segregated into recyclable refuse and non-recyclable refuse.~~

~~13.2 Require recycling programs in school, civic and business organization programs by 2000.~~

~~13.3 Meet the County time frame for coordinating with the Quad-County Council of Governments to study the formation of a Quad-County Recovery Unit/Electrical Generator Facility.~~

~~4.4.1.1. Goal 5: Cooperate with the County to promote recycling and resource recovery to reduce solid waste volumes.~~

Objective 14:

By 1994, reduce the City's solid waste volume buried in the landfill by 30 percent.

Policies:

~~14.1 Prepare a solid waste reduction plan based on regional, County and local solid waste objectives to be implemented by 1995.~~

Objective 3. Recycling and Waste Volume Reduction

The City shall strive in cooperation with the SWDD and Indian River County to increase the portion of solid waste recycled to 75 percent of its waste stream by 2020.

[Note: This recycling rate was established by the Florida Legislature. The current recycling rate is 37% according to County records.]

3.1 The City shall participate in the county-wide single-stream recycling program to reduce the amount of solid waste entering the SWDD's landfill. The City shall work with the County in educating the public on the types of waste that can't be recycled through the single-stream program and the need to direct the public to appropriate drop-off centers for these wastes.

3.2 The City shall cooperate with SWDD and Indian River County in exploring feasible methods and new technologies to further waste reduction, including recovery of recyclables from the garbage stream and their conversion into useful products.

3.3 The City shall explore the feasibility with the SWDD in expanding recycling efforts to more commercial and industrial uses.

3.4 The City shall actively explore cost-effective and environmentally friendly alternatives to land fill disposal of stabilized sludge to reduce waste entering the SWDD landfill.

SANITARY SEWER SUB-ELEMENT

4.4.0 — Sanitary Sewer and Potable Water

~~4.4.0.0. Goal 1: Provide efficient wastewater and potable water service compatible with conservation of natural resources.~~

GOAL

An efficient system of sanitary sewer disposal will be provided that prevents degradation of existing resources, promotes orderly growth and development, and meeting existing and projected demand.

Objective 1. Wastewater Service Concurrent with Development

~~Develop and implement a comprehensive utilities facilities plan to meet future growth needs. The plan will include projections of the capacity needed for future population growth within the service area and when expansion will need to take place.~~

The City shall provide sufficient capacity in its sanitary sewer system to accommodate all development within its service area and promote orderly growth and development within the existing city limits and future annexation areas.

Policies:

1.1 The City adopts the a sanitary sewer level of service standard of 250 gallons per day per equivalent residential unit. This standard shall be utilized for determining the availability of wastewater treatment facility capacity and demand generated by a development. The level of service standard shall be maintained through the concurrency management system of the Capital Improvements Element and the City's Land Development Regulations.

[Note: This new standard is based on the optimization study prepared for the Water and Sewer Department. It is consistent with industry standards and that of Indian River County.]

1.2 New or expanded development within the City limits of Vero Beach shall be approved only when capacity is available in the City's wastewater treatment plant, or, if central sewer service is unavailable, an on-site in a system approved by the Health Department pursuant to pertinent provisions of the Florida Administrative Code.

1.3 The City Water and Sewer Department shall approve connections to its sanitary sewer system for new development within its service area in unincorporated Indian River County and the Town of Indian River Shores only if capacity is available in the City's wastewater treatment plant.

1.4 The City Water and Sewer Department shall provide, on as needed basis, updated information on wastewater facility capacity and demand to the Planning and Development Department.

- 1.5 The City shall continue to provide sanitary sewer within its service area through 2035.
- 1.6 The City shall prohibit the use of new package treatment plants within the City of Vero Beach.
- 1.7 The City shall coordinate the provision of its sanitary sewer services to areas outside the city limits within unincorporated Indian River County and Town of Indian River Shores through its intergovernmental service agreements.
- 1.8 The City shall continue to expand the sanitary sewer services with existing city limits of Vero Beach and future annexation areas in accordance with the pertinent policies of the Land Use Element to promote orderly growth and development.
- 1.9 The City shall provide for wastewater treatment that meets federal and state laws and regulatory requirements of the FDEP.
- 1.10 The City shall continue to dispose through deep well injection treated effluent from its wastewater treatment plant that is unsuitable for the reuse system or when storage capacity is unavailable in the reuse system.
- ~~1.1 The City will maintain and update annually an inventory of existing facilities and their capacities. A life expectancy schedule of each facility will be maintained to help schedule maintenance, repairs and replacement. For each facility, the schedule will identify the demands upon it and will update this list continually as development occurs. The plan will include projections of the capacity needed for future population growth within the service area and project when expansion will need to take place.~~
- ~~1.2 The facilities plan will be updated annually to be in coordination with the future land use plan so that development will occur where facilities exist or are planned for in the future. Future facility sites and rights of way will be identified in the future land use plan. These sites will be acquired and preserved by means of new developments, donations, or easements.~~
- ~~1.3 The facilities plan will continue to be coordinated with the capital improvements plan. The facility plan should be updated at least annually so that plans for expansion or new facilities can be accounted for in the annual update of the capital improvements plan. Additions to the capital improvements plan will be ranked in order of importance with public health considerations given the most importance and improvements to existing service areas second.~~
- ~~1.4 The City shall establish and maintain the following level of service standards for sanitary sewer and potable water:~~

Sanitary Sewer:	Average Flow	_____	99 gped
_____	Maximum Flow	_____	259 gped

Potable Water:	Average Pressure	60 psi
	Minimum Pressure	40 psi
	Average Flow	181 gped
	Maximum Flow	223 gped
	Storage Capacity	5.75 MG

~~1.5 The level of service standards for sanitary sewer and potable water shall be reconsidered during the preparation of the Evaluation and Appraisal Report due by September 1, 2010, to replace the “gallons per capita per day” with an “equivalent residential/dwelling unit” gallons per day or similar standard to more appropriately address non-residential demand for services.~~

~~1.6 The City shall maintain level of service standards for sanitary sewer and potable water consistent with the Comprehensive Plan through the concurrency management system of its land development regulations.~~

Objective 2. Wastewater Reuse System

~~On an ongoing basis, required the use of new technology and management practices, to increase water use efficiency and promote conservation of natural resources.~~

~~Through 2035, the City shall endeavor to utilize 100 percent of the wastewater effluent produced by its wastewater treatment for reuse to reduce consumption of potable water and conserve groundwater resources.~~

Policies:

~~2.1 The City shall continue to reuse treated wastewater effluent by spray/drip irrigation and provide reuse services within its wastewater service area.~~

~~2.2 The City shall continue to plan and work to expand and improve its reuse irrigation system, where appropriate and feasible, within its wastewater service area using as a guide the recommendations of the *Water and Reuse System Operational and Financial Optimization Study (2011)*.~~

~~2.3 The City shall withdraw stormwater from the Main Drainage Canal to supplement its reuse water system as feasible during periods of low rainfall when the supply of reclaimed (reuse) water is insufficient to meet increased customer demands.~~

~~2.1 Continue to explore, in conjunction with other local governments and agencies, new technologies and management practices which lower costs and/or better protect natural resources.~~

~~2.2 Promote effluent reuse in conjunction with the development of the reuse system. The City shall create public service announcements and work with the local paper to provide informative articles. The Engineering Department shall develop an information brochure~~

~~to be included in the utility bills of customers in the proposed effluent reuse service area at the time the system is operational.~~

- ~~2.3 — By 1991, require conservation programs for potable water. These programs should promote water conservation through public education and public involvement.~~
- ~~2.4 — By 1991, implement the effluent reuse program master plan and use all effluent generated in for irrigation, thereby, eliminating all discharge into the Indian River Lagoon and reducing potable water demands.~~
- ~~2.5 — By 1995, implement the recommendations listed in the "Evaluation of Existing and Future Water Supply Facilities."~~
- ~~2.6 — In an effort to further lower levels of service, continue to promote water conservation through the City Resource Conservation Program which provides educational materials relative to reduced water consumption and installation of low flow shower heads free of charge. It is anticipated that the program will reduce the level of service by up to five percent by the year 2000.~~
- ~~2.7 — Continue to require drought tolerant vegetation and mulch in landscape installations in order to reduce water consumption for irrigation purposes.~~

Objective 3. Septic Tanks

~~Continue to allow septic tanks for single family residences and for small retail establishments in areas where centralized service is not available. By 1992, the City in coordination with the County Public Health Unit, Division of Environmental Health as part of the permitting process, will have a set of adopted requirements governing the use of septic tanks to protect surface water and groundwater quality.~~

~~The City shall endeavor to eliminate all septic tanks systems within the City of Vero Beach by 2035.~~

~~[Note: It is estimated that approximately 1,500 septic tank systems exist in the City of Vero Beach.]~~

Policies:

- ~~3.1 — Existing septic tank systems may remain in service until such time as centralized service is made available; at such time the City shall enforce City Code Section 33 23(e) *Connection with City System*. At such times as a public sewer becomes available to a property served by a private sewage disposal system, a direct connection shall be made to the public sewer in compliance with this article, and any septic tanks, cesspools and similar and private sewage disposal facilities shall be abandoned and sealed off by approved method.~~

~~3.2 The use of septic tank systems for new development shall be permitted by the County Public Health Unit, Division of Environmental Health.~~

~~3.3 By 1991, designate a representative of the City to coordinate and assist Indian River County Public Health Unit, Division of Environmental Health in the development and adoption of regulations governing the use of septic tanks. The County Public Health Unit will also establish a program for continual monitoring of septic tanks reported to have problems.~~

3.1 Existing private septic tank systems may remain in service subject to the following conditions:

(a) The sewer line to the building shall be connected to the available central sanitary sewer system, if the Department of Health determines that such system has failed. The septic tank shall be abandoned and sealed pursuant to the Department of Health regulations and the City Code.

(b) The septic tank system shall be pumped out on a regular frequency not to exceed every five years and shall have a licensed septic tank contractor to perform an inspection of the septic tank disposal system. The licensed septic tank contractor shall complete a septic tank pumping inspection report that shall be provided the Water and Sewer Department.

(c) Where gravity sewer service is available, but the property owner does not wish to connect to the central sanitary sewer system, the property owner shall still be charged for sewer service.

[Note: This policies mirrors regulations recently adopted by the City of Vero Beach in implementing the STEP system program.]

3.2 The City shall require new development to connect to the public central sanitary sewer system unless service is unavailable.

3.3 The City shall pursue implementation of its Septic Tank Effluent Pump (STEP) system in those areas identified in Figure 18 of the Technical Document to this Comprehensive Plan through programming of capital improvements in the annual five-year Capital Improvements Schedule of this Comprehensive Plan and in coordination with septic tank contractors to provide information to property owners on the benefits of the STEP system.

3.4 The City shall provide specific financial incentives to property owners to encourage and facilitate their participation in the STEP system.

3.5 The City shall continue to monitor and evaluate the number and location of properties that remain on existing septic systems to determine the desirability and need to consider requiring mandatory connections to the central sanitary sewer system for such properties

if deemed desirable and in the public interest, Policy 3.1 of this objective shall be amended and regulations prepared to implement this requirement.

[Note: Unless a property's septic system fails, properties with existing septic systems are not required to be connected to central sewer. This policy anticipates that it may be necessary to require mandatory connections if a significant number of properties remain on septic systems.]

Objective 4. Capital Improvements

The City shall complete the sanitary sewer improvements listed in the annual five-year Capital Improvements Schedule of this Comprehensive Plan to maintain and maximize use of existing facilities and to connect properties on existing septic systems to the central sanitary sewer system.

Policies:

- 4.1 The City shall maintain a schedule of capital improvements for the sanitary sewer system in the annual five-year Capital Improvements Schedule of this Comprehensive Plan.
- 4.2 The proposed capital improvement projects for consideration in the Capital Improvements Schedule shall be evaluated and ranked pursuant to the policies and guidelines in the Capital Improvements Element.
- 4.3 The County shall treat sanitary and reuse service provision as an enterprise system that is financially self-supporting and provides a return on investment to the General Fund.
- 4.4 New development connecting to the central sanitary sewer system shall pay impact and connections fees. Where extension of sewer lines are necessary to serve a new development, the developer shall pay the development's fair share of the costs to construct the line extension, if such extension is approved by the City.
- 4.5 All improvements, replacement, expansion, or increase in capacity of City wastewater treatment plan and system shall be consistent with the adopted level of service standard.
- 4.6 The County shall seek federal and state grants and low-interest loans as appropriate to fund the sanitary sewer system improvements.

POTABLE WATER SUB-ELEMENT

GOAL

An efficient potable water system will be provided that prevents degradation of existing resources, promotes orderly growth and development, and meets existing and projected demand.

Objective 1. Potable Water Service Concurrent with Development

The City shall provide sufficient capacity in its sanitary sewer system to accommodate all development within its service area and promote orderly growth and development with the existing city limits and future annexed areas.

Policies:

1.1 The City adopts potable water level of service standards of 275 gallons per day per equivalent residential unit (ERU), a minimum design pressure of 40 psi (pounds per square inch), and a minimum storage capacity 5.75 million gallons. The ERU standard shall be utilized for determining the availability of water treatment facility capacity and demand generated by a development. The level of service standard shall be maintained through the concurrency management system of the Capital Improvements Element and the City's Land Development Regulations.

[Note: The additional new standard for potable water comes directly from the optimization study prepared for the Water and Sewer Department. It is consistent with industry standards and the standard for Indian River County.]

1.2 New or expanded development within the City limits of Vero Beach shall be approved only when capacity is available in its water treatment plants.

1.3 All development within the city limits of Vero Beach shall be connected to the City's potable water system.

1.4 The Water and Sewer Department shall approve connections to its potable water system for new development within its service area in unincorporated Indian River County and the Town of Indian River Shores only if capacity is available in the City's water treatment plants.

1.4 The Water and Sewer Department shall provide, on as needed basis, updated information on water treatment facility capacity and demand to the Planning and Development Department.

1.5 The City shall continue to provide potable water within its service area through 2035.

1.6 The City shall coordinate the provision of its potable water services to areas outside the city limits within unincorporated Indian River County and the Town of Indian River Shores through its intergovernmental service agreements.

1.7 The City shall expand potable water services within the existing Vero Beach city limits and future annexation areas in accordance with the pertinent policies of the Land Use Element to promote orderly growth and development.

1.8 The City shall continue to provide a potable water system that meets the standards of applicable federal and state laws and the rules and regulations of the FDEP.

1.9 The City shall withdraw ground water from the Floridan and surficial aquifer in compliance with terms and conditions of its consumptive use permit issued by the SJRWMD.

Objective 2. Groundwater Quality and Water Conservation

The City shall reduce reliance on the surficial aquifer as a potable water source and reduce its per capita water usage to less than the 2015 level of 146 gallons per capita.

Policies:

2.1 The City shall continue to reduce withdrawals from the surficial aquifer and increase withdrawals from the Floridan aquifer to account for over 60 percent of the total groundwater withdrawn for potable water distribution by 2035.

2.2 The City shall continue its water conservation efforts pursuant to Policy 3.11 of the Conservation Element to protect the quality and quantity of groundwater.

2.3 Through its Land Development Regulations, the City shall require that a minimum of 50 percent of plant materials required for landscaping in multi-family and nonresidential development shall be native, drought tolerant plant materials to reduce water consumption for irrigation.

2.4 The City shall maintain and expand its wastewater effluent reuse water system for irrigation of public and private properties pursuant to policies under Objective 2 of the Sanitary Sewer Sub-Element.

2.6 The City shall cooperate with SJRWMD in locating and plugging any flowing artesian wells.

2.7 The City shall continue through deep well injection to dispose of brine from its reverse osmosis water treatment plant.

Objective 17:

~~By 1995, the City shall reduce its potable water consumption by reducing irrigation demands on potable water.~~

Policies:

~~17.1 The City will develop a plan to use stormwater from the drainage canals for irrigation supply. This program will be developed to address the following at a minimum:~~

- ~~o Evaluate the possibility of using the wastewater effluent reuse distribution system.~~

- ~~Prioritize the system availability so that the areas of greatest demand are served first.~~

Objective 4:

~~Continue to promote potable water conservation and decrease per capita potable water consumption through the use of inverted rate structure and effluent reuse program.~~

Policies:

- ~~4.1 Require the use of water conserving plumbing fixtures in the Land Development Regulations to be adopted by September 1, 1990.~~
- ~~4.2 Through the implementation of the Effluent Reuse Master Plan by 1991, encourage the use of shallow wells and/or treated effluent for irrigation.~~
- ~~4.3 Discourage wasteful potable water consumption by imposing penalties on excessively high water use as defined by the Water Management District. These penalties could include fines, mandatory water restrictions, and inverted rate structures.~~
- ~~4.4 Reduce the potable water level of service by implementing the Effluent Reuse Master Plan by 1991 to reduce per capita potable water consumption.~~

Objective 3. Capital Improvements

The City shall complete all potable water improvements listed in the annual five-year Capital Improvements Schedule of this Comprehensive Plan to maintain and maximize use of existing facilities and to increase the capacity of the City's reverse osmosis water treatment plant to reduce reliance on the surficial aquifer as a source for potable water.

Policies:

- 4.1 The City shall maintain a schedule of capital improvements for the potable water system in the annual five-year Capital Improvements Schedule of this Comprehensive Plan.
- 4.2 The proposed capital improvement projects for consideration in the Capital Improvements Schedule shall be evaluated and ranked pursuant to the policies and guidelines in the Capital Improvements Element.
- 4.3 The County shall treat the provision of potable water service as an enterprise system that is financially self-supporting and provides a return on investment to the General Fund.
- 4.4 New development connecting to the central sanitary sewer system shall pay impact and connections fees. Where extension of water lines are necessary to serve a new

development, the developer shall pay the development's fair share of the costs to construct the line extension, if such extension is approved by the City.

4.5 All improvements, replacement, expansion, or increase in capacity of City potable water system and water treatment plants shall be consistent with the adopted level of service standard.

4.6 The County shall seek federal and state grants and low-interest loans as appropriate to fund the potable water system improvements.

NATURAL GROUNDWATER/AQUIFER RECHARGE SUB-ELEMENT

4.4.3. Aquifer Recharge

~~4.4.3.0. Goal 7: Protect surficial aquifer recharge areas from degradation and depletion.~~

GOAL

The function of the natural groundwater aquifer recharge areas will be protected to prevent contamination of groundwater and to extend the life span of the surficial aquifer through water conservation.

Objective 21-1. Protection of Water Quality

The City shall ensure that there will be no instances of contamination of the Floridan and surficial aquifers.

~~Establish specific policies and regulations by December 2008 to protect surficial aquifer recharge areas.~~

Policies:

1.1 The City shall protect its Floridan and surficial production wells from contamination through its Land Development Regulations, development review process, the designation of wellhead protection areas pursuant to Chapter 62-521, F.A.C and Policies 3.1 through 3.3 of the Conservation Element.

1.2 The City shall protect and conserve groundwater resources pursuant to policies under Objective 3 of the Conservation Element.

1.3 The City shall continue to protect areas with significant recharge area potential as delineated in Figure 3 of the Technical Document to this Comprehensive Plan through public ownership and its Land Development Regulations and development review process.

1.4 The City shall prohibit new development or changes of uses that produce hazardous materials from locating in the areas delineated with significant recharge potential.

1.5 The City shall implement the following policies to be applied through the development review process of the City's Land Development Regulations for any development on public lands within areas with a significant recharge potential:

(a) Stormwater management facilities shall not be allowed to penetrate the water table.

(b) Septic tanks shall be prohibited.

(c) Any non-residential land use or activity that may pollute the groundwater used as a potable water supply source for a public water production well shall comply with the provisions of Chapter 62-521, F.A.C.

(d) The amount of impervious surface in any development shall be minimized to the maximum extent practicable with any development clustered onto less vulnerable areas.

(e) No filling of wetlands shall be allowed and a 25 foot vegetated buffer shall be required between the wetlands and any disturbed lands and development on the site to prevent direct stormwater runoff to wetlands.

(f) Excavation that results in an average elevation of less than 25 feet above mean sea level.

~~21.1 The City shall in cooperation with the SJRWMD and Indian River County delineate and map appropriate surficial aquifer recharge areas using a geographic information systems format that warrant special development standards and regulations to protect the quantity and quality of the groundwater resources by no later than September 2008. This map shall be incorporated into the Comprehensive Plan as part of the Evaluation and Appraisal Report update due by September 1, 2010.~~

~~21.2 The City shall continue to protect any areas with significant recharge potential whenever feasible through purchases, donations, and easements.~~

~~21.3 The City shall adopt amendments by no later than December 2008 to the land development regulations to protect and enhance the quantity and quality of natural groundwater prime aquifer recharge areas. Such regulations may include the establishment of an overlay zoning district, and site design requirements that minimize impervious coverage, clusters development onto less vulnerable areas and, at a minimum, maintains the groundwater flow rates and volumes at predevelopment rates and regulates substances that may adversely impact the water quality.~~

~~21.4 The City designates an Area of Special Concern for Groundwater Protection all areas~~

~~with moderately well drained to excessively well drained soils as depicted on Addendum Figure A-4.02 to this Comprehensive Plan until the surficial recharge area map is prepared pursuant to Policy 21.1.~~

~~21.5 As an interim measure until such time as regulations are enacted pursuant to Policy 21.3, the City institutes the following policies for development on public lands designated within the Area of Special Concern for Groundwater Protection:~~

- ~~• Stormwater management facilities shall not be allowed to penetrate the water table.~~
- ~~• Septic tanks shall be prohibited.~~
- ~~• Any non-residential land use or activity that may pollute the groundwater used as a potable water supply source for a public water production well shall comply with the provisions of Chapter 62-521, FAC.~~
- ~~• The amount of impervious surface in any development shall be minimized to the maximum extent practicable with any development clustered onto less vulnerable areas.~~
- ~~• No filling of wetlands shall be allowed and a 25 foot vegetated buffer shall be required between the wetlands and any disturbed lands and development on the site to prevent direct stormwater runoff to wetlands.~~
- ~~• Excavation that results in an average elevation of less than 25 feet above mean sea level.~~

Objective 2. Preserving the Quantity of the Surficial Aquifer

The quantity of available water from the surficial aquifer will not be reduced through 2035 based on information from the SJRWMD's most recent regional groundwater model.

Policies:

- 2.1 The City shall implement water conservation measures pursuant to policies under Objective 2 of the Sanitary Sewer Sub-Element, Objective 2 of the Potable Water Sub-Element, and Objective 3 of the Conservation Element.
- 2.2 The City shall encourage the use of wet detention/retention ponds to be designed to utilize stormwater runoff for irrigation.
- 2.3 Where appropriate outside the areas with significant aquifer recharge potential, the City shall utilize ex-filtration stormwater drainage structures and encourage the use of such stormwater drainage structures.
- 2.4 The City shall continue to reduce withdrawals from the surficial aquifer pursuant to policies under Objective 2 of the Potable Water Sub-Element.

Objective 5:

~~Continue to prevent urban sprawl through the maximization of use of existing potable water and wastewater facilities~~

Policies:

~~5.1 — By 1995, develop and implement the comprehensive utilities facilities plan to ensure adequate facilities exist to serve the service population.~~

~~5.2 — Maintain and update interlocal agreements which set specific service standards and service boundaries to ensure that urban sprawl is not created.~~

~~4.4.0.1. Goal 2: Promote coordination with other local governments and agencies to develop efficient regional plans for wastewater and water resource management.~~

Objective 6:

~~Participate in and coordinate through interlocal agreements with other governments on studies of new technologies which may be too expensive for one local government to consider on its own by 1995.~~

Policies:

~~6.1 — The Water quality Board discussed in Policy 1.2 (p. 5-107) of the Coastal Element shall also coordinate with regional resource groups to investigate, evaluate and promote resource conservation through new technologies, local policies and public awareness campaigns. These regional resource groups should include representatives from the local planning agencies in the area, the Public Works Department and citizens from various areas in the region.~~

Objective 7:

~~Develop with the County, a regional wastewater treatment strategy and a water resource management policy.~~

Policies:

~~7.1 — Establish an interlocal agreement with Indian River County to develop a regional wastewater treatment strategy and a water resource management plan. The water resource management plan should include protection of regional groundwater recharge areas and improvement of the water quality of common waters.~~

Objective 8:

Identify the agencies regulating natural resources in the area and support and implement regulations regarding effluent and sludge disposal and stormwater management.

Policies:

- 8.1 — Comply with the Water Management District, the Regional Planning Council, the Department of Environmental Regulation and the Environmental Protection Agency regulations and policies during all phases of wastewater and potable water management planning.
- 8.2 — Amend local ordinances as necessary to support future DER and SJRWMD regulations affecting wastewater and potable water management. These include policies on water quality and effluent and sludge disposal.
- 8.3 — Coordinate with regional agencies in establishing regional goals for water quality improvement.
- 8.4 — Identify in the Utilities Facilities Plan areas which may have groundwater recharge potential and where feasible protect such areas. Continue to monitor effluent discharge systems to ensure the quality of the groundwater is not degraded.

4.4.0.2. Goal 3: Continue to identify and develop stable sources of funding for wastewater and potable water facility improvements and expansions.

Objective 9:

Continue to require developers to cover costs incurred in expanding facilities to meet their needs.

Policies:

- 9.1 — Continue to require developers to mitigate their impact on facilities by providing land or fees as specified in local impact ordinances. Impact fees are to be reviewed on a regular basis to ensure that the fees adequately cover the costs of expanding the system for new development.

Objective 10:

Identify and seek new and innovative methods of financing public facilities.

Policies:

- 10.1 — Initiate development of innovative funding programs including intergovernmental coordination at the local, regional and state levels and coordination between the public and private sectors at the local level.