

# Infrastructure Outline

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## GOAL

INF-1 To ensure the public health, welfare, and safety by providing and coordinating with providers to deliver high-quality water, sewer, drainage, and solid waste services and facilities throughout the Village of Estero, and to ensure that the costs of providing services and facilities are borne by those who benefit from them..... 1

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# Infrastructure

## Goals, Objectives and Policies

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### GOAL

**INF-1** To ensure the public health, welfare, and safety by providing and coordinating with providers to deliver high-quality water, sewer, drainage, and solid waste services and facilities throughout the Village of Estero, and to ensure that the costs of providing services and facilities are borne by those who benefit from them.

### OBJECTIVE

**INF-1.1 POTABLE WATER.** The Village of Estero County shall **coordinate with** Lee County Utilities and Bonita Springs Utilities to **ensure the provision of acceptable levels of potable water service.** (Note: Lee Plan Objective 53.1)

### POLICIES

**INF-1.1.1** The minimum acceptable level of service standard for potable water connections to Lee County Utilities will be: (Note: Lee Plan Policy 53.1.2)

**An available supply and treatment capacity of 250 gallons per day per equivalent residential connection (ERC) for the peak month, except that facilities serving only mobile home residential structures must have a capacity of 187.5 gallons per day and facilities serving only travel trailer residential structures must have a capacity of 150 gallons per day.**

**INF-1.1.2** The minimum acceptable level of service standard for potable water connections to Bonita Springs Utilities will be:

**An available supply and treatment capacity of 235 gallons per day per equivalent residential connection (ERC) and delivery of potable water at a minimum pressure of 20 pounds per square inch (psi) at the meter anywhere in the system.**

**INF-1.1.3** The Village urges **all utilities to construct and install sufficient treatment facilities and distribution systems that will meet or exceed the minimum acceptable service standards and with the capacity to deliver water at a pressure of 20 pounds per square inch (wp PSI static) at the meter anywhere on the individual system (excluding fire flow conditions).** In addition, all utilities are urged to deliver water pressure of 40 pounds per square inch (static pressure, excluding fire flow conditions). Each utility is encouraged to advise planning and engineering staff of the Village regarding system expansions or modifications to ensure coordination with other utilities and with all other issues of public interest and to prevent duplication of facilities and services. (Note: Lee Plan Policy 53.1.4)

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- INF-1.1.4** No development order for new development will be issued unless potable water service, at the minimum acceptable level of service, is available at the property line, or surety is given that it will be installed prior to occupancy. (Note: Lee Plan Policy 53.1.5)
- INF-1.1.5** No permit will be issued allowing any utility to use a public right-of-way or to cut a pavement in a public right-of-way to extend service outside of its certificated or franchised area or to extend service into an area allocated to another utility, unless the other utility concurs in writing. This will be enforced along municipal and state rights-of-way by interlocal agreement and memoranda of agreement as required. (Note: Lee Plan Policy 53.1.6)
- INF-1.1.6** The costs of new or augmented potable water infrastructure that is developed by Lee County Utilities or Bonita Springs Utilities will be borne by those who benefit from the improved supply. (Note: Lee Plan Policy 53.1.8)
- INF-1.1.7** New development will pay through appropriate financial mechanisms its fair share of the costs of providing standard potable water for that development. (Note: Lee Plan Policy 53.1.9)

## OBJECTIVE

**INF-1.2** WATER SUPPLY PLANNING & COORDINATION. Coordinate with the South Florida Water Management District to ensure that the Village Comprehensive Plan remains consistent with the District's regional water supply plans.

## POLICIES

- INF-1.2.1** No building permit will be issued unless potable water supply will be available to meet current and projected growth demands, or surety is given that it will be available prior to occupancy. (Note: Lee Plan Policy 53.2.1)
- INF-1.2.2** The Village shall develop a Water Supply Facilities Work Plan within 18 months after the South Florida Water Management District approves an update to the regional water supply plan.
- INF-1.2.3** The Village shall continue to evaluate the latest water supply plans issued by the South Florida Water Management District to ensure consistency in the Village Comprehensive Plan and the Village's Water Supply Facilities Work Plan.
- INF-1.2.4** The Village shall coordinate with other government agencies and private suppliers of potable water during the water supply planning process to include the review of land use changes, addressing population projections, and acceptable level of service standards.

## OBJECTIVE

**INF-1.3** SANITARY SEWER. Coordinate with Lee County Utilities and Bonita Springs Utilities to ensure the provision of acceptable levels of sanitary sewer service. (Note: Lee Plan Objective 56.1)

## POLICIES

**INF-1.3.1** The minimum acceptable level of service standard for sanitary sewer connections to Lee County Utilities is established for the basic facility capacity, which is the principal productive capital of a water or sewer system, i.e., a wellfield and water treatment plant, as distinguished from the distribution system. The minimum acceptable level of service for Lee County Utilities sanitary sewer will be: **Note: Lee Plan Policy 56.1.2)**

Available basic facility capacity to treat and dispose of a volume of wastewater equal to 200 gallons per day per equivalent residential connection (ERC) for the peak month, except that facilities serving only mobile home residential structures shall have a capacity of 150 gallons per day and facilities serving only travel trailer residential structures must have a capacity of 120 gallons per day.

**INF-1.3.2** The minimum acceptable level-of-service standards for sanitary sewer connections to Bonita Springs Utilities will be:

Available capacity to treat and dispose of a volume of wastewater equal to 200 gallons per day per equivalent residential connection (ERC), except that facilities serving only mobile home residential structures shall have a capacity of 150 gallons per day and facilities serving only travel trailer residential structures shall have a capacity of 120 gallons per day.

**INF-1.3.3** Encourage all private utilities to set a minimum acceptable level of service to be adopted herein for use in the concurrency management system within their respective franchised or certificated areas. **Note: Lee Plan Policy 56.1.3)**

**INF-1.3.4** All utilities should construct and install sufficient treatment facilities and collection systems that will meet or exceed the minimum acceptable service standards and with the capacity to service the demand so generated and will meet or exceed the minimum requirements of the Department of Environmental Protection, the Department of Health and Rehabilitative Services, U.S. Environmental Protection Agency, or any local ordinances which exceeds the foregoing. Each utility is encouraged to advise the planning and utility engineering staff of the Village regarding system expansions or modification to ensure coordination with other utilities and with all other issues of public interest and to prevent duplication of facilities and services. **Note: Lee Plan Policy 56.1.4)**

**INF-1.3.5** No development order for new development, or change in use or intensity in an approved development order, will be issued unless sanitary sewer service is available at the minimum acceptable level of service within 1/4 mile of the development, or surety is given that it will be installed prior to occupancy. **Note: Lee Plan Policy 56.1.5)**

**INF-1.3.6** No permit will be issued allowing any utility to use a public right-of-way or to cut a pavement in a public right-of-way to extend service outside of its certificated or franchised area or to extend service into an area allocated to another utility, unless the other utility concurs in writing. This will be enforced along municipal and state rights-of-way by

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**interlocal agreement and memoranda of agreement as required. (Note: Lee Plan Policy 56.1.6)**

**INF-1.3.7** The costs of new or augmented sanitary sewer infrastructure that is developed by Lee County Utilities or Bonita Springs Utilities will be borne by those who benefit from the improved supply.

**INF-1.3.8** New development will pay through appropriate financial mechanisms its fair share of the costs of providing standard sanitary sewer for that development.

**INF-1.3.9** **It is hereby declared that in the interests of preserving public health and of preserving and enhancing environmental quality, it is in the public interest to abate and cease use of septic tanks and wastewater treatment package plants where and when central sewer is available.** The Village will identify the existing inventory of septic tanks in the Village, evaluate water quality issues associated with them, and coordinate with property owners, local utility providers and Florida Department of Environmental Protection to develop a program, schedule and funding to convert from septic tank use to central sewer facilities. (Note: Lee Plan Policy 56.2.1)

**INF-1.3.10** **With the cooperation of the respective utility firms or agencies, the Village will coordinate as needed on programs for the abatement of septic tanks and package plants in areas in which sewer is presently available and in areas encompassed by assessment districts established for upgrading sewer availability.** (Note: Lee Plan Policy 56.2.2)

## OBJECTIVE

**INF-1.4** GROUNDWATER RECHARGE. Protect groundwater supplies from those activities having the potential for depleting or degrading those supplies.

## POLICIES

**INF-1.4.1** The Village shall implement Lee County's wellfield protection ordinance through the land development code to protect the quality of water flowing into potable water wellfields.

**INF-1.4.2** The Village shall coordinate with the Lee County staff hydrogeologist for review and comment on all development applications near public utility potable water wellfields, with particular attention to proposed land uses within a 10-year travel time from the wellheads.

**INF-1.4.3** The Village shall base all future development and use of groundwater resources on determinations of the safe yield of the aquifer system(s) in order not to impair the native groundwater quality or create other environmental damage. Criteria for safe-yield determinations will be determined by the SFWMD, the agency charged with permitting these activities.

**INF-1.4.4** For maximum protection of groundwater resources, coordinate with applicable utility providers to identify future wellfields and/or relocation site(s) for existing wellfields well in

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advance of need. Coordinate with SFWMD, water suppliers, and Florida Department of Environmental Protection to avoid duplication and to assist in data collection.

**INF-1.4.5** Coordinate with Lee County and utility providers to identify water needs consistent with projections of human population and the needs of natural systems in order to determine the future demands for groundwater.

## **OBJECTIVE**

**INF-1.5 SURFACE WATER MANAGEMENT.** To reduce the hazards to life, health, and property created by flooding due to rainfall in a manner consistent with the community's criteria for the preservation of environmental values and the conservation of natural resources. (Note: Lee Plan Goal 59)

## **POLICIES**

**INF-1.5.1** The following surface water management standards are adopted as minimum acceptable levels of service: (Note: Lee Plan Policy 60.3.1)

### **A. Existing Infrastructure/Interim Standard**

The existing surface water management system will be sufficient to prevent the flooding of designated evacuation routes (U.S. 41, Corkscrew Road, Three Oaks Parkway, Interstate 75, and Ben Hill Griffin Parkway) from the 25-year, 3-day storm event (rainfall) for more than 24 hours.

### **B. Regulation of Private and Public Development**

Surface water management systems in new private and public developments (excluding widening of existing roads) must be designed to SFWMD standards (to detain or retain excess stormwater to match the predevelopment discharge rate for the 25-year, 3-day storm event [rainfall]).

Stormwater discharges from development must meet relevant water quality and surface water management standards as set forth in Chapters 17-3, 17-40, and 17-302, and rule 40E-4, F.A.C.

New developments must be designed to avoid increased flooding of surrounding areas. Development must be designed to minimize increases of discharge to public water management infrastructure (or to evapotranspiration) that exceed historic rates, to approximate the natural surface water systems in terms of rate, hydroperiod, basin and quality, and to eliminate the disruption of wetlands and flow-ways, whose preservation is deemed in the public interest.

**C.** Other standards may be added by amendment to this comprehensive plan for development impacting water bodies that have water quality impairments identified by Florida Department of Environmental Protection, including but not limited to the following water bodies: 3258C4 - Mullock Creek (Marine Segment); 3258C - Mullock Creek; 3258D1 - Estero River (Marine Segment); 3258D2 - Estero River; 3258H2 - Spring Creek (Marine Segment).

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- INF-1.5.2** Prepare a Surface Water Management Master Plan that is geographically based on watersheds using best available data related to rainfall, soils, topography, drainage patterns and water quality.
- INF-1.5.3** The Village shall implement its Surface Water Management Master Plan through the land development code and through **facilities and improvements intended to protect present and future uses of real property from stormwater flooding and to address water quality issues.** (Note: Adapted from Lee Plan Objective 59.1)
- INF-1.5.4** Protect and restore **principal flow-way systems, if feasible, to assure the continued environmental function, value, and use of natural surface water flow-ways and associated wetland systems.** (Note: Lee Plan Policy 60.1.3)
- INF-1.5.5** The Village shall maintain requirements in its land development code that proper stormwater management systems be installed when land is being redeveloped. Appropriate exemptions will be provided to this requirement for individual residential structures and for historic designated properties. However, this policy will not be interpreted so as to waive any concurrency level-of-service standards. (Note: Lee Plan Policy 60.1.5)
- INF-1.5.6** Water management projects will be evaluated and ranked according to the priorities adopted into this plan. Major emphasis will be given to improving existing drainage facilities and to enhancing or restoring environmental quality. (Note: Lee Plan Policy 60.3.4)
- INF-1.5.7** Provide sufficient performance and/or design standards for development protective of the function of natural drainage systems, including the following provisions to be addressed in the land development code: (Note: Lee Plan Objective 61.3)
- A. Provide sufficient performance and design standards to require post-development runoff to approximate the total characteristics of the natural flow prior to development.** (Note: Lee Plan Policy 61.3.1)
  - B. Floodplains must be managed to minimize the potential loss of life and damage to property by flooding.** (Note: Lee Plan Policy 61.3.2)
  - C. Floodways should be kept as unobstructed as possible.** (Note: Lee Plan Policy 61.3.3)
  - D. Natural flow patterns will be restored by public investment where such action is of significant public or environmental benefit, and feasible.** (Note: Lee Plan Policy 61.3.4)
  - E. To maintain flowways, the Village may coordinate with landowners at time of new development or redevelopment to establish flowage easements while allowing concentration or clustering of development on the remainder of the property.**
  - F. The Village will maintain regulations which provide for the management and protection of floodplains, consistent with state and federal regulations.** (Note: Lee Plan Policy 61.3.5)

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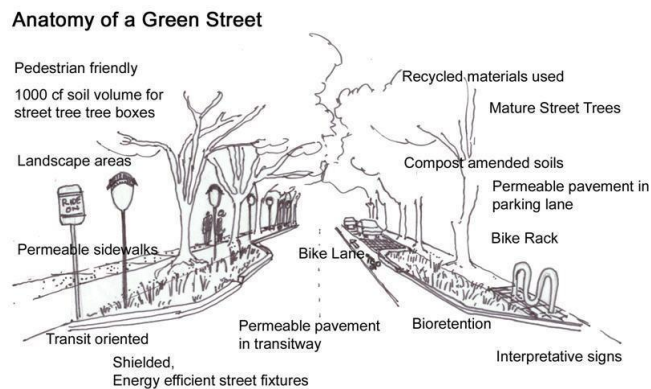
- G. Through the land development code, the Village will require developments to have and maintain an adequate surface water management system, provide for acceptable programs for operation and maintenance, and post-development runoff conditions which reflect the natural surface water flow in terms of rate, direction, quality, hydroperiod, and drainage basin. (Note: Lee Plan Policy 61.3.6)**
  
- H. Channelization of natural streams and rivers is prohibited; channelization of other natural watercourses is discouraged. (Note: Lee Plan Policy 61.3.7)**
  
- I. Through the Land Development Code, the Village will adopt appropriate regulations to protect the natural functions of riparian systems from incompatible development practices along their banks. (Note: Lee Plan Policy 61.3.9)**

## OBJECTIVE

**INF-1.6 GREEN INFRASTRUCTURE.** The Village seeks to foster and maintain and ensure compliance with requirements associated with its green infrastructure, which is comprised of natural areas, low impact drainage systems, open spaces, and green energy resources, in support of public health, safety, welfare and resource sustainability.

## POLICIES

**INF-1.6.1** Encourage when possible the following techniques: green roofs, permeable pavement, bioswales, rainwater harvesting, green streets, stormwater parks, and conservation areas.



Source: [www.epa.gov](http://www.epa.gov)

**INF-1.6.2** When the Village evaluates a proposed capital improvement to the stormwater system, consideration will be given to green infrastructure alternatives and retrofits according to: cost estimates, life cycle costs including capital and operation and maintenance, potential disproportionate burdens on portions of the community, projected pollutant reductions, benefits of receiving waters and other environmental and public health benefits associated with each option.



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**INF-1.6.3** The Village shall seek to ensure that private developments perform maintenance and protect landscaping, drainage systems and preservation areas in accordance with applicable standards in the land development code and applicable permit conditions.

- A. General trees, buffer trees and plantings that are required as part of development orders should be maintained in a healthy condition. Any change to established general trees, buffer trees and plantings that are required as part of development orders shall be governed by standards and procedures outlined in the land development code that relate to vegetation removal permit requirements and a replacement plans subject to Village approval.
- B. Preserves or conservation lands that are required as part of development orders should be maintained in a healthy and exotic free condition. Any vegetation removal or impacts associated with an area designated as a preserve or conservation is limited per the applicable standards in the land development code and applicable permit conditions.
- C. Any vegetation removal proposed on wooded or otherwise undeveloped sites is discouraged. Where necessary, vegetation removal shall be governed by standards and procedures outlined in the land development code.

## OBJECTIVE

**INF-1.7 SOLID WASTE.** To support the health, safety, and general welfare of the Estero’s residents by protecting the quality of the environment through the proper management and disposal of solid waste. (Note: Lee Plan Goal 62)

## POLICIES

- INF-1.7.1** Solid waste facilities serving Estero are operated by Lee County. The Village adopts the County’s **minimum acceptable level-of-service standard for availability of solid waste disposal facilities: 7 pounds per capita per day.** (Note: Lee Plan Policy 62.2.5)
- INF-1.7.2** The Village shall work cooperatively with the County’s efforts to identify and monitor the disposal activities of hazardous wastes generators and with the County’s local program to collect (and properly dispose of) small quantities of hazardous materials such as pesticides, paint, used motor oil, etc. (Note: Lee Plan Policy 62.2.3 and 62.2.4)
- INF-1.7.3** The Village shall work cooperatively with other agencies to promote community clean up events to promote a clean and litter free community.