

SPRINGS PROTECTION ELEMENT
GOALS, OBJECTIVES, AND POLICIES

Element Guide:

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Goal 1: Protect 1st and 2nd magnitude springs and springshed areas as fragile resources necessary for sustaining the community's quality of life.

Objective 1 **Springs Protection Zone (SPZ)**

Protect 1st and 2nd magnitude springs through the designation of the Fanning, Fanning/Manatee, and Manatee Springsheds as the Springs Protection Zone (SPZ) as depicted in the Levy County Springs Protection Element Map and the implementation of the following policies.

Policy 1.1 Evaluate the commercial and industrial zoning districts within the SPZ and limit those land use activities that pose a significant threat to the springs. Land Use activities that pose a threat to springs shall include, but not be limited to, the following activities:

- a. All industrial uses;
- b. Quarrying, mining and processing of raw materials;
- c. Gas stations;
- d. Spray fields, land spreading of bio-solids; and
- e. Concentration of onsite sewage treatment and disposal units of intensity greater than one dwelling unit per three acres.

Policy 1.2 Where avoidance of impacts through the limitation of land use activities is not feasible, implement strategies and design standards in the land development regulations that will minimize the impact of use and development within the SPZ.

Policy 1.3 Mitigation of development impacts may include design techniques, location requirements, additional buffering requirements or other site design standards.

Objective 2 **Future Land Use Map Amendments**

Proposed amendments to the Future Land Use Map (FLUM) within the SPZ shall meet the criteria in the following policies:

Policy 2.1 Demonstrate that the proposed land use category is the least intensive category that will meet a demonstrated need of the use; and

Policy 2.2 Demonstrate that the proposed land use category will be developed consistent with conservation or clustering design techniques.

Objective 3 **Development Design Standards**

Development within the SPZ shall meet the design standards as set forth below:

Policy 3.1 Residential development within the SPZ, resulting in 25 dwelling units or more, shall be clustered, based on conservation subdivision design standards, with the exception of development within the Agricultural / Rural Residential or Forestry / Rural Residential. Conservation subdivision designs shall include:

- a. clustering of units on small lots;
- b. establishment of open space, which shall be connected whenever possible;
- c. central water and sewer treatment facilities that can be connected to the regional system within a Municipal Service Districts as soon as available; and
- d. Minimal site disturbance,;
- e. consideration of conflicts with abutting land containing active agricultural uses.

Policy 3.2 Development shall be setback from springs, spring runs, and karst features as shown below:

Feature	Minimum Setback (feet)
Springs	300
Spring runs	150
Sinkholes with a direct connection to the aquifer	200, measured from the drainage divide
Other sinkholes	100, measured from the drainage divide
Caves	300, measured on the surface from the outside wall of the cave system
Other karst features with a direct connection to the aquifer (swallet or stream to sink)	200, measured from the drainage divide

Variances from the prohibitions against construction of structures within the above development setbacks from springs, spring runs and karst features may be allowed only when, owing to the

special shape, size, or physical features, the setback would result in the preclusion of all reasonable use of the subject property. When a variance is permitted, encroachment into the setback will be limited to the minimum needed to allow for reasonable use of the parcel.

Policy 3.3 The required setback described in Policy 3.2 shall retain all natural vegetation within the setback area.

Policy 3.4 Where a lot of record is too small to accommodate development in compliance with the setbacks set forth in Policy 3.2, an allowable use may be established provided that the building and associated paved areas are located the maximum distance possible from the karst features identified in Policy 3.2, and further that a swale and berm are located between the development and the karst feature. The swale and berm shall be designed to direct drainage away from the karst feature.

Policy 3.5 Development shall use joint or shared access to the maximum extent feasible in order to minimize impervious surfaces.

Policy 3.6 Non-residential development shall use shared parking to the maximum extent feasible in order to minimize impervious surfaces. All parking lots with 100 or more spaces shall be designed with a minimum of twenty (20) percent of the parking spaces constructed on pervious surfaces.

Policy 3.7 Design of parking lots, sidewalks, buildings, and other impervious surfaces shall minimize connections between impervious surfaces through techniques shown on a site plan such as:

- a. Directing flows from roof drains to vegetated areas or to rain barrels or cisterns for reuse of the water;
- b. Directing flows from paved areas to vegetated areas;
- c. Locating impervious surfaces so that they drain to vegetated buffers or natural areas; and
- d. Breaking up flow directions from large paved surfaces.

Policy 3.8 Porous pavement materials, pervious concrete, and pervious asphalt should be used to minimize the amount of impervious surface within new development and redevelopment.

Policy 3.9 Landscaping standards within the SPZ shall limit plant materials to native or naturalized species in order to avoid or minimize the use of irrigation and fertilizers. Landscaping standards should also require retention of existing native species rather than planting new vegetation.

Policy 3.10 The minimum open space ratio for all development, with the exception of Agricultural / Rural Residential and Forestry / Rural Residential categories within the SPZ, is twenty (20) percent. All open space shall be contiguous with protected open space on adjacent parcels to the maximum extent feasible.

Policy 3.11 Drainage for streets and roads within the SPZ shall be through roadside swales and berms whenever possible. Curb and gutter design shall be discouraged.

Policy 3.12 In order to minimize the contribution of nitrates to groundwater with its resultant effects on increased growth of vegetation in the spring and river and loss of water

clarity, and to foster long-term stewardship of the springs, special design and best management practices (BMPs) shall be instituted for all development in the SPZ.

Policy 3.13 Commercial and industrial development shall be designed to minimize site disturbance by limiting clearing to the minimum area necessary to accomplish development.

- a. Avoid or minimize the removal of existing trees and vegetation;
- b. Minimize soil compaction by delineating the smallest disturbance area feasible; and
- c. Maximize disconnection of impervious surfaces to reduce water runoff flows and increase opportunities for infiltration.

Objective 4 **Site Plan and Plat Review**

All development in the SPZ, with the exception of Agricultural / Rural Residential and Forestry / Rural Residential land use categories shall undergo site plan or subdivision plat review in accordance with the following policies prior to receiving development approval.

Policy 4.1 An analysis of the site to determine the location and nature of sinkholes and other karst features of the property, such as stream-to-sink and other direct connections to the aquifer, is required to be submitted with a subdivision plat or site plan to evaluate the vulnerability of the development sites to leaching of nitrates into groundwater and subsequent transmission to Fanning Springs and Manatee Springs.

Policy 4.2 All development shall conform to the best management practices as stated in the *Guidelines for Model Ordinance Language for Protection of Water Quality and Quantity Using Florida Friendly Lawns and Landscapes*. (Florida Department of Environmental Protection, September 2, 2003).

Objective 5 **Stormwater Management**

The volume, recharge, and treatment of stormwater runoff within the SPZ, in all land use categories, with the exception of Agricultural / Rural Residential and Forestry / Rural Residential, shall be designed to provide protection to the springs and springsheds.

Policy 5.1 Substantial redevelopment projects shall comply with the standards for stormwater runoff that apply to new development. Substantial redevelopment shall be based upon the value and amount of cumulative improvements to the site.

Policy 5.2 Best Management Practices (BMPs) shall be used in combination as part of a BMP treatment train to protect water quality and minimize flooding within the SPZ. Best management practices shall be used in the design of stormwater management facilities and systems within the SPZ. The following stormwater BMPs shall be instituted to reduce nitrate loading within the SPZ:

- a. All residential development shall use swales with swale blocks or raised driveway culverts whenever possible, except when soil, topography, or seasonal high water conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida.
- b. Vegetated infiltration areas shall be used to provide stormwater treatment and management on all sites except when soil, topography, or seasonal high water

conditions are inappropriate for infiltration as determined by a professional engineer licensed in the State of Florida. Design of the stormwater systems for residential and commercial uses shall use bio-retention areas (below grade vegetated areas) to increase stormwater treatment and reduce stormwater volume. Downspouts for both residential and commercial development shall be directed from the roof to vegetated areas for uptake.

- c. Whenever infiltration systems are not feasible, wet detention systems shall be used for stormwater treatment and management.
- d. Developments within the SPZ shall utilize the St. Johns River Water Management District karst sensitive criteria found in SJRWMD Rule 40C-41.063 (7)(a) ERPS – Surface Water Management Basin Criteria and SJRWMD Rule 40C-42, Part II Criteria for Evaluation, Section 9.11 Sensitive Karst Area Basin Design Criteria.
 - i. Sensitive karst features, including sinkholes with a direct connection to the aquifer and stream-to-sink features, and any man-made alterations to the land that result in a direct connection to the aquifer and stream-to-sink feature, shall not be utilized as stormwater management facilities. Prior to subdivision approval, all depressions will be investigated by a licensed professional using a professionally acceptable methodology for suitability of water retention using generally accepted geo-technical practices with an emphasis on identification of potential connections to the aquifer, to include any man-made alterations to the land. If connections are determined to exist, the depression, or man-made alteration to the land, shall not be used for stormwater retention and the area draining to this feature under pre-development conditions shall be preserved through a conservation easement.
 - ii. All development approval by the County shall require the applicant to submit to the County a copy of the Environmental Resource Permit (ERP) issued by the appropriate water management district or DEP stormwater permit and the National Pollutant Discharge Elimination System (NPDES) notice of intent to be covered by the construction generic permit prior to any land clearing when required (FAC 62-621.300).
 - iii. Sensitive karst features will be identified and placed in a conservation easement so that they will be thereafter used solely for passive recreation subject to permitted activities in subparagraph (d) herein. Based on data and analysis submitted with the comprehensive plan amendment, sensitive karst features in the SPZ are defined as sinkholes with a direct connection to the aquifer and spring-to-sink systems and solution pipes.
 - iv. All components of the stormwater treatment and management system shall be in common ownership and shall be maintained by the responsible legal entity identified in the water management district or the DEP stormwater permit.
 - v. The studies required in item (d)(i) above shall be used to characterize on-site soils and determine locations of geologic features including sinkholes, solution pipes, depressions, and depth of soil to lime rock. Sensitive karst features like sinkholes with a direct connection to the aquifer and stream-to-sink features shall be protected from untreated run off.

Objective 6 Wastewater Treatment

All non-residential development and all residential development with a density greater than one dwelling unit per three (3) acres, proposed for location in the SPZ, shall provide a high level of wastewater treatment by 2015 in accordance with the following policies:

Policy 6.1 Levy County shall implement a program within the SPZ to require installation of a sewage treatment system that achieves a treatment standard for nitrogen of 10mg/l, including performance-based septic tank systems, or other system that achieves the standard, for effluent disposal, where central sewer is not available.

Policy 6.2 All development within the SPZ shall connect to central wastewater treatment facilities within one year of when facilities become available, as available is defined in Chapter 381.0065 Florida Statutes.

Policy 6.3 Evaluate the potential for installation of lines for reused water for developments that are located within the Municipal Service Districts within the designated (SPZ), and implement a program when a reused water system is determined to be feasible.

Objective 7 Intergovernmental Coordination

Coordinate with local governments throughout the springs and springshed areas to ensure a consistent approach to springs, springshed, and aquifer protection.

Policy 7.1 The County shall consider an interlocal agreement that specifies responsibilities for land development regulation, stormwater management, and other matters that impact the springs and springsheds. The interlocal agreement containing joint strategies for springs protection shall be implemented by all local governments within a springshed.

Policy 7.2 Levy County shall consider the creation of a joint development review board to be composed of representatives from all local governments within the identified springsheds, as well as affected regional and state agencies.