

# **CONSERVATION ELEMENT**

## **CITY OF ZEPHYRHILLS 2025 COMPREHENSIVE PLAN**

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## **CONSERVATION ELEMENT**

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### **PURPOSE**

The purpose of the conservation element is to provide a guide for the conservation, use and protection of natural resources including air, water, water recharge areas, wetlands, water wells, soils, shores, flood plains, rivers, lakes, forests, fisheries and wildlife, minerals, and other natural and environmental resources within the City of Zephyrhills.

In addition, the element establishes a plan and policy direction concerning conservation of natural resources and will provide a basis for decision-making by City officials. Zephyrhills lies primarily within the Hillsborough River Basin. It has a moderate climate which is favorable for crop production and livestock. The summers are long, hot and humid. Winters, although punctuated with occasional cold fronts dropping temperatures below freezing, are mild due to the southern latitude and short distance from relatively warm ocean waters. The mean annual precipitation is about 54 inches.

A Land Cover Map prepared by the Florida Game & Fresh Water Fish Commission, Appendix 3, illustrates the various land covers located in the City of Zephyrhills and surrounding area. The map identifies that the majority of the remaining undeveloped land within the city limits consists of grass lands and barren property. The Zephyr Lake basin is also identified on the map. This map will be utilized for the review of development proposals and when property is annexed into the City.

The 1988 population is estimated to be 6,888. The 1980 population was 5,742. The county's growth between 1980 and 1988 was primarily due to migration from other states. Development pressure is accelerating due to the close proximity of the I-75 corridor east of Tampa. The City of Zephyrhills is approximately 22 minutes driving time from the intersection of I-75 and Fowler Avenue in Hillsborough County. The I-75 corridor is projected to have one of the largest concentrations of jobs within the State of Florida by the year 2000.

### **ENVIRONMENTAL CONDITIONS**

Currently there are no significant environmental problems within the City, but the Floridan aquifer could be threatened from pollution due to runoff from more intense development. The water quality of the Hillsborough River which receives runoff from this area could also be threatened if adequate mitigation measures are not taken. Another potential regional environmental problem is the pumping of large amounts of water from existing well fields. This issue is addressed further in the section titled Groundwater Quality.

General degradation of environmentally sensitive lands, regionally significant recreation areas and critical habitats for flora and fauna is occurring, and given the present growth rate, will continue to occur unless mitigative measures are taken.

Presently, the only wetlands in the City of Zephyrhills are located around the Municipal Airport. A priority Wetlands Map for Listed Species has been prepared by the FGFWFC (Appendix 4) that identifies the wetlands for listed species for the Zephyrhills area. The map illustrates that the majority of wetlands are located to the east and south of Zephyrhills. These wetlands are associated with the Hillsborough County State Park and the Withlacoochee Wildlife management Area.

The City needs to utilize the wetlands map and coordinate with the SWFWMD and the FDEP to prepare individual maps for the few wetlands in the City limits and others located in the County on properties that are likely to be annexed into City. Each map should identify the following: location, size, classification, values, and functions of the wetlands. The map should also identify any existing incompatible land uses. These maps will be incorporated into the City Land Development Code and utilized when and if development is proposed that may directly and/or indirectly affect the wetlands.

The existing City Land Development Code identifies the following three classifications of wetlands:

<b>Class I:</b>	Wetlands that meet any of the following criteria:
	<ul style="list-style-type: none"> <li>a. A hydrological connection to natural surface water bodies; or</li> <li>b. Lake; littoral zone; or</li> <li>c. Uninterrupted wetlands 40 acres or larger; or</li> <li>d. Provide critical habitat for species of special concern of federal and/or state listed threatened or endangered species.</li> </ul>
<b>Class II:</b>	Wetland areas that meet any of the following criteria:
	<ul style="list-style-type: none"> <li>a. Isolated wetlands or formerly isolated wetlands which by way of man's activities have been directly connected to other surface water drainage and are greater than or equal to 5 acres; or</li> <li>b. Do not otherwise qualify as a Class I wetland area.</li> </ul>
<b>Class III:</b>	Wetland areas that meet all of the following:
	<ul style="list-style-type: none"> <li>a. Isolated wetlands less than 5 acres; and</li> <li>b. Do not otherwise qualify as a Class I or II wetland area.</li> </ul>

The City's goal for wetlands shall be a no net loss of wet-lands standard. In the case where wetlands are unable to be protected/conserved, mitigation will be required to compensate for the loss of wetlands as described Chapter 11 of the City Land Development Code.

### **Surface Water**

The most prominent water feature of Zephyrhills is Lake Zephyr within Zephyr Park, although the original natural lake has been extensively reconfigured in past decades. The present surface area is approximately six acres. The upper Lake Zephyr drainage basin extends to approximately one mile east of Handcart Road and ½ mile north of Geiger Road. Downstream the outfall from Lake Zephyr is channeled via a man-made ditch to US 301 near Chancey Road. From US 301 the outfall is not well defined as water flows across open land to the Hillsborough River.

When Zephyrhills Municipal Airport was constructed in 1942, the U.S. Army Corps of Engineers developed a drainage system which is essentially a "Y" shaped open ditch. The airport is in the crotch of the "Y" and the lower leg of the "Y" extends to a bay-head which in turn overflows to the Hillsborough River. During the succeeding 55 years the ditches have become ecologically similar to natural streams with a full compliment of aquatic plant and animal species. In 1987 the City annexed 351 acres of a cattle ranch northwest of the city which has been developed as a golf course and residential community (Silver Oaks). The

pre-existing cattle watering ponds were extensively expanded to provide on-site stormwater storage capacity as well as aesthetic features of the development. The outlet for this series of ponds is across Simons Road to a natural lake of approximately 40 acres (Little Lake Austin). A site including most of this lake was annexed into the City in 1988. This lake is also within the upper Lake Zephyr drainage basin.

Map PUB-3 identifies the location of: (1) Water wells and cones of influence and (2) Rivers, lakes, flood plains, and wetlands. An additional water well has been identified as a need for the City. However, the location of the proposed well has yet to be determined. The primary wetlands in the City of Zephyrhills are located on the municipal airport.

### **Water Quality**

Lake Zephyr is essentially an integral element of the stormwater drainage system for the City of Zephyrhills and the upper Lake Zephyr drainage basin. Water quality of the lake does support some species of fish, but is not adequate for swimming.

The airport drainage ditch system supports extensive wildlife, but has extremely poor water quality. During most seasons the water in these ditches is stagnant.

The series of ponds on the Silver Oaks golf course are so recently constructed that water quality observation is not meaningful.

### **Groundwater Quality**

A recent development in central Pasco County has resulted in problems with draw downs in Pasco County wetlands as a result of others pumping too much water from existing well fields. The City currently has ample water resources available to serve its residences and other businesses. However, the City is currently developing an ordinance that would require anyone wanting to re-sell city water to obtain a permit from the City. The intent and goal of the City is to ensure that sufficient and quality water resources are available to serve the people and businesses into the future. Staff will make efforts to get involved and coordinate with local and regional governmental and environmental agencies regarding the status of the draw down issue. Although, the draw down issue has not directly affected Zephyrhills, continued over pumping of the well fields in Pasco County could eventually affect the City.

### **Air Quality**

Zephyrhills is not within an area with identified significant air quality problems which result from excessive automotive exhaust and/or point sources of air pollutants.

### **Flood Plains**

The only flood plain in Zephyrhills is adjacent to Lake Zephyr and the related drainage basin. Specific identification of the area subject to flooding was the subject of a major drainage study in 1988 funded by Pasco County and SWFWMD. There have not been any significant modification of hydrologic features within the City. The portion of this flood hazard area within the City is shown on Map PF-3 in the Public Facilities Element (Appendix).

### **Commercial Minerals**

The only commercially valuable mineral within the Zephyrhills community is lime rock. There are no rock mines within the City limits. Plaza Materials Corporation has an active limestone quarry adjacent to the Hillsborough River approximately one mile south of the airport.

## **Soils Susceptible To Erosion**

There are no significant soil erosion problems in the Zephyrhills area.

## **WILDLIFE**

A Strategic Habitat Conservation and Listed Species Map was also prepared by the Florida Game & Fresh Water Commission. Appendix 5 and 6 have been included to identify any strategic habitat conservation areas and listed species. The maps represent identified listed species locations and areas that are important to flora, fauna and natural communities based on known occurrences that will be used during development review. State rules and guidelines will be used for identification of species and habitat. GFC map series will be required for proposed development on properties that have or may have potential for endangered, threatened or species of special concern. There are five animal species of special concern within the Zephyrhills area:

Common Name	Scientific Name(s)	Designated Status
American Alligator	Alligator mississippiensis	Special Concern
Burrowing Owl	Speotyto cunicularia	Special Concern
Gopher Tortoise	Gopherus Polyphemus	Special Concern
Eastern Indigo Snake	Drymarchon corais couperi	Threatened
Southeastern American Kestrel	Falco sparverious paulus	Threatened

There are numerous have been sightings of alligators in the drainage ditches at the airport. This habitat was created when the City constructed an earth dam across the ditch to allow the ditch to function as a storm water detention facility to protect water quality of the Hillsborough River.

Burrowing owl habitats consist of open grass lands on well drained sandy soils. The known occurrence of burrowing owls in Zephyrhills is on the municipal airport. Other probable habitat is former pasture land which has been withheld from grazing.

Extensive areas within the City provides habitat suitable for the gopher tortoise and south-eastern american kestrel. Refer to the appendix of this element for a description of habitat suitable for both the gopher tortoise and southeastern american kestrels. Recent development projects have required the owners to relocate gopher tortoises to alternate sites as required by the State of Florida. All proposed development of vacant property requires an inventory of endangered threatened or species of special concern. Written notification must be provided by the appropriate governmental entity with assurances/permits have been received prior to issuance of permits. The eastern indigo snakes' habitat area is extensive and consists of flatwoods, upland pine forest, sandhill and scrub.

Future development plans are reviewed during the site plan review process for potential habitat of the five species of special concern known to exist in the area.

A land cover and habitat map and species (endangered, threatened, and species of special concern) listing will be developed and analyzed using information from the Florida Natural Areas Inventory and the Florida Game and Fresh Water Fish Commission. The data will be



used to address both wildlife and wildlife habitat issues during the development review process.

## **CONSERVATION NEEDS**

As previously stated, Lake Zephyr is an integral link in stormwater management for the City and the upper Lake Zephyr drainage basin. The City, County and SWFWMD are each involved in permitting any new development. One objective of these permitting procedures is to mitigate any further deterioration of water quality. On-site retention of storm water is an integral part of site plan approval for all development in the City other than a single residence or a single duplex. To the extent that post-development runoff is less than pre-development, the quantity of pollutants entering Lake Zephyr would be reduced.

Efforts will also be made to coordinate with the environmental agencies to consider improvements to the quality of the Lake Zephyr basin. A specific stabilized elevation of the water in Lake Zephyr and planting of native species along the littoral zone of the lake should enhance the water quality.

Flood hazard areas have been identified by Pasco County and SWFWMD. Only a small portion of the flood hazard area is a physiological flood plain. Portions of the flood plain within the City are adjacent to Lake Zephyr and west of West Elementary School (Map PF-3). No further development will be permitted within the flood plain without adequate mitigation.

The only known sighting of burrowing owls to date has been on the municipal airport. These birds can co-exist with aviation activity if there is sufficient undisturbed area for burrows and forage. Large portions of the airport land must be maintained as "open area" for safe aviation activity. In those instances when a structure or pavement would eliminate habitat, any owls affected can be relocated with minimal effort.

Gopher tortoise are relatively common in the east Pasco area and it is quite probable they exist within the City. Potential habitat has been described by Florida GFWFC and are used in evaluation of future site development plans.

## **WATER SUPPLY NEEDS**

The local current and projected water needs and sources are addressed in the Public Facilities Element.

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## **GOALS, OBJECTIVES AND POLICIES**

### **Introduction**

Pursuant to Sections 163.3177(6)(d), F.S., and Section 9J-5.013, F.A.C., the following represents the Conservation Goals, Objectives and Policies of the City of Zephyrhills. In addition to statutory requirements, the following Goals, Objectives and Policies were developed in keeping with the character, conditions, both environmental and social, and desires of the community. These Goals, Objectives and Policies are intended to address the establishment of the long-term end towards which the conservation programs and activities are ultimately directed.

### **Implementation**

Unless otherwise stated, the implementation of objectives and policies shall be developed, adopted, and application of regulations set forth in the City Code of Ordinances and Land Development Code.

**GOAL CON-1:** MEET OR EXCEED MINIMUM AIR QUALITY STANDARDS ESTABLISHED BY FDEP.

**OBJECTIVE CON-1-1:** The City shall continue to comply with all state and federal standards for air quality.

**POLICY CON-1-1-1:** No development will be approved within the City which would result in a significant point source of air pollution.

**POLICY CON-1-1-2:** The City shall reduce the potential for automobile pollution by the following means:

- a. encourage developments such as PUDs and multi-use centers;
- b. require vegetation buffer strips between arterial roadways and residential development; and
- c. promote alternative transportation modes such as bicycle and pedestrian paths.

**GOAL CON-2:** TO PROTECT AND CONSERVE WATER RESOURCES WHICH ARE VITAL TO COMMUNITY SUSTAINABILITY.

**OBJECTIVE CON-2-1:** Continue to evaluate and protect wet-lands as required in the City Land Development Code with ongoing communication with SWFWMD and FDEP.

**POLICY CON-2-1-1:** Utilize the Priority Wetlands Map for Listed Species to prepare individual maps for wetlands in the City and for properties that are likely to be annexed into the City. Each map should identify: location, boundary, size, classification, values and functions of the wetlands, and any existing incompatible land uses within or surrounding the wetland.

**POLICY CON 2-1-2:** The City shall continue to review and identify land uses compatible and not compatible with wetlands. Future land uses incompatible with protection and conservation of wetlands shall be directed away from wetlands. The factors considered should be land use: wetland classification, intensity, density, wildlife, extent, distribution and location of allowable land uses. This information will be incorporated into the City Land Development Code.

**POLICY CON-2-1-3:** The City's goal for wetland protection shall be a no net loss of wetlands standard. In cases where wetlands are unable to be protected / conserved, mitigation will be required to compensate for the loss of wetlands as described in the City Land Development Code.

**POLICY CON-2-1-4:** Prohibit impervious surfaces to be added within 30 feet of a delineated wetland larger than 40,000 square feet, but allow wetland area to be used for setback and landscaping requirements. Development activity near wetlands shall be permitted if it can be shown that these activities will not adversely affect the wetland.

**POLICY CON-2-1-5:** Encourage development of sites with significant wetlands to be designed as Planned Unit Developments. Land development in general shall be distributed in a manner that minimizes impact on wetlands.

**POLICY CON-2-1-6:** Protect the hydrologic continuity and water quality of wetlands. Development activities or other land disturbances in the drainage area of wetlands shall minimize alterations to the surface or subsurface flow of water into and from the wetland and shall not cause impairment of the water quality of the plant and wildlife habitat value of the wetland. Land use planning and development decisions shall consider the impact on surface and groundwater quality.

**GOAL CON-2:** TO PROTECT AND CONSERVE WATER RESOURCES WHICH ARE VITAL TO COMMUNITY SUSTAINABILITY.

**OBJECTIVE CON-2-2:** Protect, conserve, and appropriately use potable water sources in order to meet the needs of the existing and future population of the Zephyrhills Future Service Area.

**POLICY CON-2-2-1:** The City shall protect and conserve the natural functions of existing lakes, floodplains and wetlands.

**POLICY CON-2-2-2:** Encourage water conservation through education, awareness and incentive programs oriented to residential and commercial water customers. Such programs may include:

- a. Rebates for installation of low-flow plumbing fixtures
- b. Water conservation information for the City's website
- c. Water conservation displays and printed information at community focal points (e.g. libraries, recreation centers, City Hall)
- d. Community awards and demonstration projects for water efficient landscapes
- e. Staff involvement in "Drop Savers" and "Project WET" programs conducted in private schools.
- f. Requirement for installation of soil moisture sensors, rainfall sensors or other water-saving irrigation technologies
- g. Requirement for installation of water efficient landscaping in new developments and redevelopment.
- h. Requirement for facilities that support stormwater reuse as a source for supplemental irrigation when feasible.

**POLICY CON-2-2-3:** Enforce provisions of the Southwest Florida Water Management District Water shortage Plan, Chapter 40D-21, Florida Administrative Code.

**POLICY CON-2-2-4:** Investigate the feasibility of a wet-weather storage option as a water source to augment reclaimed water flows.

**POLICY CON-2-2-5:** Coordinate with the Southwest Florida Water Management District, including consideration of the Regional Water Supply Plan, to ensure that water supplies are adequate to meet the City's current and projected potable water needs and to reduce dependence on the Floridan aquifer to meet potable water demand.

**POLICY CON-2-2-6:** Implement traditional and alternative water supply projects and conservation and reuse programs deemed necessary to meet the water needs identified in the Zephyrhills Water Supply Facilities Plan (2008-2025).

**OBJECTIVE CON-2-3:** Improve the natural biological functions of the Zephyr Lake basin.

**POLICY CON-2-3-1:** Coordinate with the Southwest Florida Water Management District and Florida Department of Environmental Protection to develop a plan to improve the water quality of Lake Zephyr. At a minimum, the plan should address consistent water elevations and improvements to the littoral zones of Zephyr Lake and the overall drainage basin.

**GOAL CON-3:** PRESERVE MINERALS, SOILS AND VEGETATIVE COMMUNITIES.

**OBJECTIVE CON-3-1:** Conserve, appropriately use, and protect minerals, soils and native vegetative communities.

**POLICY CON-3-1-1:** Protect native vegetative communities from destruction by development activities. The City shall review all development projects and to the maximum extent possible protect and preserve remaining native vegetation.

**POLICY CON-3-1-2:** Protect and conserve the natural functions of existing soils and wildlife habitats. The development of property will require identification of soil types and wildlife.

**POLICY CON-3-1-3:** Annually coordinate with adjacent local government biologists to conserve, appropriately use, or protect unique vegetative communities located within more than one jurisdiction.

**POLICY CON-3-1-4:** The City shall enforce emergency water conservation orders issued by the Southwest Florida Water Management District.

**GOAL CON-4:** TO MAINTAIN THE HIGH QUALITY OF GROUNDWATER RESOURCES IN THE ZEPHYRHILLS UTILITY SERVICE AREA.

**OBJECTIVE CON-4-1:** Monitor and protect ground water quality/quantity and location of development/appropriate uses in recharge areas as identified by the Southwest Florida Water Management District.

**POLICY CON-4-1-1:** The Land Development Code shall restrict land uses known to adversely affect water quality and quantity of within natural groundwater recharge areas, wellhead protection areas and surface waters used as a source of public water.

**POLICY CON-4-1-2:** Develop a water protection ordinance that will provide the City with a mechanism to review and regulate large water consumers and/or businesses that resell water.

**POLICY CON-4-1-3:** Adopt by reference aquifer recharge areas and their classifications as identified by the Southwest Florida Water Management District.

**GOAL CON-5:** HABITAT PRESERVATION AND MITIGATION FOR RARE AND ENDANGERED SPECIES AND SPECIES OF SPECIAL CONCERN.

**OBJECTIVE CON-5-1:** Conserve, appropriately use and protect wildlife and wildlife habitat. Restrict activities known to adversely affect the survival of endangered, threatened, and species of special concern.

**POLICY CON-5-1-1:** The City shall ensure the protection of endangered, threatened, and species of special concern. The City shall coordinate with the FDEP, FG&FWFC, and the U.S. Fish & Wildlife Service to ensure protection of wildlife and wildlife habitat. Development shall be directed away from areas of protected wildlife and wildlife habitat and that land use decisions on property containing or impacting wildlife or wildlife habitat include adequate strategies to preserve endangered species and habitat and to provide mitigation strategies for preservation or mitigation. State rules and guidelines will be used for identification purposes for species and habitat. GFC map surveys will be required for proposed development on properties that have or may have potential for endangered, threatened, or species of special concern.

**OBJECTIVE CON-5-2:** Establish and maintain criteria for mitigating the loss of wildlife habitat for species of special concern.

**POLICY CON-5-2-1:** Confer with Florida Game and Fresh Water Fish Commission to determine acceptable habitat mitigation for presently identified species of special concern within the area (alligator, burrowing owls, gopher tortoise, southeastern American kestrels and indigo snakes).

**POLICY CON-5-2-2:** Adopt a definition for "overriding public interest", as it pertains to description of habitat.

**POLICY CON-5-2-3:** Any project including unavoidable destruction of habitat shall mitigate all lost wetland habitat on a 1:1 in-kind basis, at minimum. Mitigation shall include monitoring with assurance of an 80-85% natural cover area after 2-5 years.

**GOAL CON-6:** PROPERLY DISPOSE OF ALL HAZARDOUS WASTE GENERATED OR COLLECTED WITHIN THE CITY OF ZEPHYRHILLS.

**OBJECTIVE CON-6-1:** Maintain the Hazardous Waste Management Plan in coordination with Pasco County and FDEP to address storage and disposal of hazardous waste.

**POLICY CON-6-1-1:** Inform citizens of proper methods to store and dispose of household and commercial hazardous materials.

**POLICY CON-6-1-2:** Manage hazardous wastes to protect natural resources.

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