

CHAPTER 6

CONSERVATION AND COASTAL MANAGEMENT ELEMENT

SUMMARY

The purpose of the Conservation and Coastal Management Element is to provide the framework for the protection, preservation, and enhancement of the City's natural communities and resources. The Element is comprised of goals, objectives and policies and related maps, which are integrated with other seven elements in the Comprehensive Plan.

The Conservation and Coastal Management Element was developed from the data and analysis of existing and future conditions regarding the City's natural communities and resources. The evaluation included the review and analysis of air resources, surface and groundwater, native communities and ecosystems, natural resources and land uses within the coastal study area. The coastal study area includes all areas located east of I-95.

In Florida, coastal communities like Palm Coast are mandated to integrate "Peril of Flood" policies into their Comprehensive Plans. These policies address the risks associated with current and future flooding risks within the City of Palm Coast. The purpose is to establish development and redevelopment principles and strategies to mitigate flood hazards, manage floodplains, and protect other important resources from flooding. By incorporating these policies into this Element, the City will reduce flood risks, augment community safety, and mitigate the impacts of flooding to property and resources.

This Element divides the goals, objectives, and policies into two broad categories: "Protection of Natural Resources" and "Natural Disaster Management". The resources addressed in the "Protection of Natural Resources" include:

- Maintenance of ambient air quality,
- Protection of the quality and quantity of water resources,
- Conservation of water resources,
- Management of stormwater,
- Prioritization of shoreline use and public access,
- Protection of wetlands and estuarine ecological systems, native vegetative communities,
- Protection of cultural resources,
- Floodplain protection,
- Protection of wildlife habitats, threatened and endangered species,
- Consideration of mineral and soil resources,
- Provision of educational outreach, and
- Assurance of environmental sustainability of government operations

The "Natural Disaster Management" category includes objectives and policies that address reducing vulnerability to hurricanes; development within the Coastal High Hazard Area; methods for disaster mitigation and evacuation; provision of shelter space, and Firewise planning strategies.

Although poor ambient air quality is not a measured concern at this time, this Element ensures that degradation of the City's ambient air quality does not occur as growth continues. The destruction and degradation of native vegetation, floodplains, optimal quality wetlands and wildlife habitat corridors through various forms of land alteration, water table lowering and the quality of water entering these areas pose threats to the City's native vegetation and wildlife populations. Effective management of growth is essential to maintaining a delicate balance of natural resources, ensuring that future development does not compromise the integrity of the City's valuable environment and ecosystems for present and future generations.

Through the adoption of the Unified Land Development Code (LDC), the City of Palm Coast has developed regulations that address the potential decline in health and area of our natural resources and requires various protection and restoration efforts. Along with the LDC, continued implementation of land acquisition programs, aquifer and wellhead protection, utilization of Best Management Practices (BMPs), regulatory enforcement, and other appropriate means deemed necessary are critical to on-going protection of the City's natural resources. In addition, intergovernmental coordination with State and Federal agencies and the active participation in those regulatory processes will play a vital role in the City's efforts to protect, manage and maintain the City's natural resources.

According to the *Data and Analysis*, current water sampling data indicate that the natural water bodies within the City contain good water quality. However, as the City grows, land use activities may pose a threat to surface water quality. To protect the future health of surface water systems and its downstream estuarine systems, adjacent land use activities and surface water runoff must be properly managed. Groundwater resource supply protection is becoming increasingly important because of growth trends in development within the City. With increased development come the potential for increased contamination and a potential threat to drinking water quality. The Comprehensive Plan establishes policies and procedures to ensure that adequate and safe supplies of groundwater resources are reasonably protected.

The City is susceptible to a variety of natural hazards, including flooding and high winds associated with hurricanes and tropical storms. Chapter 252, Florida Statutes, authorizes the Flagler County Emergency Management (FCEM) to provide coordination of resources to local governments and decision-making during disasters. FCEM also helps coordinate preparedness programs for the City and is tasked with maintaining an inventory of hurricane shelters to meet the needs of residents evacuated from hazardous areas. The intent of the Natural Disaster Management section is to establish policies in order that common problems can be identified and to emphasize intergovernmental coordination in implementing and achieving the goals. It is not the intent of the City to mandate certain requirements through the Natural Disaster Management section beyond the City's statutory authority.

GOAL 6.1: Protection of Natural and Cultural Resources

Protect, conserve, enhance, appropriately manage, and maintain or improve the quality of natural resources, cultural resources, and environmental systems thereby contributing to the high quality of life and economic well-being of the City. 🌱🐾⚙️

FINDING: Results of air quality readings remain good at the closest monitoring stations located in Flagler, Volusia, and St. Johns Counties. As the City continues to develop, the placement of an air sampling station within the City in the future would be advantageous by providing a higher level of accuracy of air quality. At this time, there are a limited number of industrial uses that are a risk to the City's air quality. Automobiles and other gasoline-powered vehicles remain the primary source of air pollution. The Florida Department of Environmental Protection (FDEP), as mandated through the Clean Air Act, monitors and regulates air pollution sources within the City.

Objective 6.1.1 - Air Quality Standards 🌱🐾⚙️

Meet or exceed the minimum ambient air quality standards established by FDEP.

Policy 6.1.1.1 - Reduce the potential fossil fuel emissions by, at a minimum, the following means:

- A. Encourage non-motorized transportation by establishing and maintaining, bicycle paths, trails, sidewalks, and pathways.
- B. Prevent urban sprawl by promoting development in mixed-use centers and near commercial corridors and by adopting the principles of smart growth planning.
- C. Establishing policies that promote residential interconnectivity via pedestrian, bicycle and electric vehicles in existing and new development.
- D. Require vegetative buffers, where feasible, along major transportation corridors to buffer residential land uses from automobile exhaust.

Policy 6.1.1.2 – Collaborate with FDEP to assess and promote the need for the establishment of an air quality monitoring station within or in close proximity to the City.

Policy 6.1.1.3 – Work with FDEP to address suspected air quality impacts, offering assistance in any way possible to resolve a concern of violation.

Policy 6.1.1.4 - The following strategies are incorporated to protect air quality, which include, but are not limited to:

- A. Require Best Management Practices (BMPs) and enforce standards at active construction sites to control fugitive particulate emissions;

- B. Encourage alternatives and investigate potential incentives for alternatives to open burning practices such as mulching, smoke screens, and other air quality protection techniques;
- C. Maintain coordination with relevant state and local agencies concerning open burning practices;
- D. Address the preservation of natural tree buffers and native vegetation and other possible landscape requirements within the LDC.

FINDING: Groundwater resource supply protection is important due to the increase of impervious surfaces as a result of development. With increased development comes the potential for increased contamination, which may threaten drinking water quality.

Groundwater from the Floridan and Confined surficial aquifer systems is currently the sole source of drinking water available to the residents and businesses. Flagler County, and Palm Coast are identified by the St. Johns River Water Management District (SJRWMD) as a “Water Resource Caution Area” (WRCA) which is defined as:

“existing and reasonably anticipated sources of water may not be adequate to supply water for all existing legal uses and anticipated future needs while sustaining water resources and related natural systems”.

As the City continues to grow, traditional sources of water may be limited in the future. Development of alternative water supplies, expansion of reuse systems, conservation efforts, wellhead protection, and other water resource management strategies are critical to meeting future water demand needs.

Objective 6.1.2 - Quality and Quantity of Ground Water Resources

Establish and enforce policies and procedures to secure a reliable and safe potable water supply that meets anticipated consumer demands, while complying with the standards and regulations required by SJRWMD and FDEP.

Policy 6.1.2.1 - Continue to ensure compliance with wellfield protection regulations in accordance with the Safe Drinking Water Act and in conjunction with FDEP, SJRWMD and other relevant agencies.

Policy 6.1.2.2 - As enforced in the LDC, continue to regulate land uses that handle, produce, store, or dispose of regulated substances by appropriately siting these land uses to prevent the introduction of these substances into groundwater.

Policy 6.1.2.3 - Identify potential non-regulatory groundwater and wellhead protection programs that may include, but are not limited to, land acquisition, land donations, purchase of development rights, and conservation easements.

Policy 6.1.2.4 – Continue to coordinate with the SJRWMD, FDEP, and other applicable regulatory agencies to pursue additional groundwater monitoring studies on the quality of the

Confined surficial, Floridan water resources and brackish water as an alternate water source within the City.

Policy 6.1.2.5 –Monitor construction sites and vacant lots to prevent or abate illegal dumping activities through code enforcement actions.

Policy 6.1.2.6 – Seek administrative inspection warrants, pursue code enforcement proceedings, initiate nuisance abatement actions and pursue other appropriate remedies to protect the public against illegal dumping, hazardous spills, and contaminated sites, when appropriate.

Policy 6.1.2.7 - Utilize the best available information from technical reports, studies, computer models, and guidance from State and Federal agencies to establish regulations within the LDC for wellfield and aquifer recharge protection which regulations may include, but are not limited to, the following:

- A. Require development projects that require a Consumptive Use Permit (CUP), where appropriate, to submit the CUP application and CUP data approved by SJRWMD.
- B. Provide for a minimum percentage of open space and limitation on the percentage of impervious surface as measured per applicable site plan or subdivision application.
- C. Establish stormwater management practices.
- D. Require application of BMPs, where appropriate, as a proactive procedure for handling and usage of potential polluting materials and substances, and the management of stormwater runoff and construction activities.
- E. Protecting environmentally sensitive waterways and wetlands through the establishment of policies limiting development and/or providing adequate upland buffers.

Policy 6.1.2.8 - Make all reasonable efforts to coordinate with Flagler County and other adjacent municipalities in an attempt to facilitate measures to protect quality and quantity of groundwater resources.

Policy 6.1.2.9 – Take all necessary actions to protect its status as a prior legal user of water resources under permits issued by the SJRWMD. The City shall ensure that the rights of the citizens of the City and the purchasers of bonds from which revenues were derived to purchase the City's utility systems are protected.

Objective 6.1.3 - Conservation of Ground Water Resources



Continue and expand the City's water conservation program in order to maintain a low per capita consumption of potable water.

Policy 6.1.3.1 – The City, in coordination with SJRWMD, has established conservation requirements, and shall further encourage, reasonable water conservation practices, the use of native and drought tolerant plants and low volume irrigation systems.

Policy 6.1.3.2 - Continue to implement the following water conservation measures:

- A. Technological, Procedural, and/or Programmatic Improvements Management
 - 1. Water Treatment Plant Technologies
 - 2. Water Use Monitoring
 - 3. Indoor Conservation Programs
 - 4. Develop and enforce water efficient landscape standards. (in cooperation with SJRWMD)
 - 5. Irrigation Design Requirements
 - 6. Requiring Individual Metering
 - 7. Requiring the Use of Low-Volume Plumbing Devices
 - 8. Requiring a certain percentage of landscaped areas to include Water-wise Landscaping and/or native vegetative plantings.
 - 9. Expanding the City's water reuse programs
- B. Customer and Employee Education
- C. Use of Conservation based Rate Schedule

Policy 6.1.3.3 – Consider alternate means and incentives to conserve water including, but not limited to, irrigation meters, re-use of stormwater, surface water pumps, and identifying other alternative potable water resources.

Policy 6.1.3.4 – Implement and enforce the emergency water conservation measures as mandated by SJRWMD.

Policy 6.1.3.5 – Distribute literature and appropriately engage in enforcement actions pertaining to non-compliance with mandatory drought prohibitions, as necessary.

Policy 6.1.3.6 – Collaborate with SJRWMD to ensure the proper closure, sealing, and abandonment of any known abandoned free-flowing artesian wells.

Objective 6.1.4 – Development of Alternative Water Supplies

Continue to explore the development of alternative water supplies to meet future water needs.

Policy 6.1.4.1 – Encourage the use of alternative water supply sources, if feasible, when improving or expanding the City's water system.

Policy 6.1.4.2 – Continue to develop reuse alternatives for treated wastewater and investigate the use of the stormwater collection and storage system as a source for aquifer recharge.

FINDING: The City has an abundance of surface waters, as depicted on Map CP 6.1, that are used for a variety of purposes including a wide range of recreational activities and by the fish, wildlife, and native vegetation that depend on these waters for survival. The Federal Clean Water Act provides the statutory basis for State water quality standards. The State has established programs to protect water quality by establishing specific water quality classifications. Water quality criteria specify concentrations of water constituents that may not be exceeded. According to the Watershed Assessment Section of the FDEP, the natural water bodies within the City

contain good quality water with only one impaired water body being the St. Joe Canal. However, as the City grows, land use activities such as industrial and commercial, and wetland dredging and filling, along with urban stormwater runoff, can be detrimental to surface water quality if these activities are not properly managed.

Objective 6.1.5 – Surface Water Quality



Through coordination with applicable State agencies, ensure that local water quality meets or exceeds state and federal standards by implementing a systemic water quality identification and evaluation process.

Policy 6.1.5.1 – Encourage SJRWMD and FDEP, or other relevant entities to pursue additional water quality monitoring studies and increase routine sampling stations to measure the quality of the water resources within the City.

Policy 6.1.5.2 - Continue its surface water-sampling program to monitor surface water quality for the stormwater canal management system and shall monitor sample results in order to document and evaluate trends in water quality to ensure that water quality continues to meet or exceed surface water quality standards. If warranted, the City may enact a surface and/or a groundwater quality-monitoring program.

Policy 6.1.5.3 - Require the implementation of BMPs that shall include, but are not limited to, measures to prevent surface water quality degradation during construction activities. Where deemed appropriate, a surface water-sampling program in the City may be a requirement of development order approval in order to ensure water quality standards and stormwater BMPs are being achieved.

FINDING: As urban development covers more land area in the City, management of stormwater drainage systems will become increasingly important to maintain water quality. As more surface area is covered, runoff rates and pollution loads have the potential to increase if not appropriately managed. Stormwater runoff can be a significant contributor to surface water quality degradation. Sediment from disturbed lands can be carried into the City's surface water systems by runoff. Urban runoff can be a significant source of inorganic toxins in our waters. Construction sites, lawns (fertilizers and pesticides), streets, roofs, and parking lots, are a source of a variety of pollutants. In addition, fertilizers, fungicides, pesticides, herbicides and other chemicals that are dispersed can negatively impact the environment. Ultimately, pollution loads above regulatory surface water quality standards can negatively impact living marine and freshwater resources, wildlife habitat, and other environmental lands and waters and natural resources.

Objective 6.1.6 - Stormwater Management



Develop and implement policies and coordinate with local governments, State and Federal agencies to ensure that future development activities are conducted in a manner that, at a minimum, shall meet State and Federal water quality standards.

Policy 6.1.6.1 - Continue to follow the Citywide Stormwater Master Plan (as applicable). The Stormwater Master Plan identifies needed improvements that will maintain or improve the conveyance and capacity of storm water within the system, and the quality of water flowing into receiving water bodies such as creeks, rivers, wetlands, ponds, canals, and estuarine systems.

Policy 6.1.6.2 – Pursue funding sources for current and future stormwater management improvements by, at a minimum; pursuing cost share grants, community development block grants, State revolving fund loans and/or other available State and Federal funds.

Policy 6.1.6.3 - Maintain cooperative relationships with all governmental agencies with jurisdiction in order to ensure prompt responses and/or investigations of events that may threaten the quality of water resources and continue to identify point and non-point source pollution.

Policy 6.1.6.4 - Monitor, cooperate, and communicate with FDEP in the development and, if required, implementation of the Total Maximum Daily Loads (TMDLs) for waters within the City.

Policy 6.1.6.5 - Continue to enforce LDC regulations regarding development during construction activities to retain sediment on site and to prevent violations of State water quality standards and impacts to wetland systems. When applicable, the City shall require submittal of details and/or plans in agreement with applicable BMP standards prior to the commencement of construction activities to ensure that surface and groundwater quality standards are achieved.

Policy 6.1.6.6 – Continue implementation of water pollution preventive measures that includes, but are not limited to, the following techniques and standards:

- A. Landscaping methods to filter water and reduce sedimentation.
- B. Establishment of littoral zones and the use of native vegetation buffers between lawn or paved surfaces and water bodies to lower surface water pollution as needed.
- C. The use of appropriate aquatic vegetation to maximize desirable pollution prevention results as needed.
- D. Ensure that approved NPDES construction plans are enforced. Conduct public education and outreach campaigns.

Policy 6.1.6.7 – Where appropriate, coordinate with SJRWMD and FDEP when developing regulations relating to stormwater management and when developing stormwater management plans, programs, projects, and practices.

FINDING: Many water-related recreational opportunities exist within the City and adjacent areas. However, public access to surface water bodies for both passive and active recreational use is limited. Local surface water systems, including the intercoastal waterway (ICW), have limited public access. Existing and future land uses located along the majority of the City's surface waters are single- and multi-family residential. It is essential to balance the need for public access with private property rights.

Objective 6.1.7 - Shoreline Pedestrian Access



Pursue and provide the availability of public access for open surface waters including, but not limited to, estuarine systems, lakes, and the ICW.

Policy 6.1.7.1 - Continue to participate in intergovernmental agreements with State and Federal agencies regarding the use of land and access to government-owned land for public use.

Policy 6.1.7.2 – Continue to expand the availability of public access, saltwater fishing facilities and provide adequate parking facilities adjacent to surface water bodies where appropriate and feasible.

Policy 6.1.7.3- When facilities are constructed for shoreline public access, the City shall implement avoidance and minimization strategies to preserve the natural functions of coastal ecosystems and conserve critical habitats for wildlife.

Policy 6.1.7.4 – Consistently review opportunities that may be available to provide the public with reasonable and safe access to wetland areas, lakes, lands abutting the ICW, canals, water bodies and other natural resource areas for the purpose of providing public recreational opportunities consistent with the type of natural resource and its environmental sensitivity.

Policy 6.1.7.5 –The City will continue to coordinate with Florida Inland Navigation District (FIND) to ensure easement abutting the ICW are appropriately protected.

Objective 6.1.8 - Prioritization of Shoreline Uses



Utilize criteria or standards for prioritizing shoreline uses, giving priority to water-dependent uses.

Policy 6.1.8.1 - Continually review the LDC to ensure that water-dependent and water-related uses which are public in nature and promote tourism remain accessible to the public. The City shall prioritize water-dependent uses based upon the type of water dependent use, adjacent land use, water quality, impact on listed species, quality of the wetlands, and available coastal resources.

Policy 6.1.8.2 –Explore incentives supporting public and private partnerships to facilitate sustained public access for proposed and new uses adjacent to ICW.

Policy 6.1.8.3 – Consider the protection of manatees and other listed species in areas that such species inhabit or frequent when reviewing and considering applications for water-dependent uses.

Policy 6.1.8.4 – Continue to regulate the development of new marinas and multi-slip dock facilities. These adopted LDC regulations shall address, at a minimum, the following issues:

- A. Public marinas and multi-slip dock facilities shall require standards for commercial and non-commercial facilities.
- B. Establish standards for size and quantity of multi-slips and dock facilities.
- C. Provisions establishing fire protection and other safety requirements.
- D. Protection for listed species and other relevant environmental resources.
- E. Provision of sufficient upland areas for accessory support facilities.
- F. Provisions establishing prevention of surface water quality degradation and BMPs.
- G. The location of commercial marinas and multi-slip docks in designated shellfish harvesting areas, Class II Waters, Outstanding Florida Waters, or environmentally sensitive areas is prohibited and shall be furthered in the LDC.
- H. Disposal and management of dredge spoil.
- I. Hurricane mitigation plans for commercial marinas and multi-slip docks to prevent potential hazards.
- J. Requirement for “Clean Marina” designation where appropriate.

Policy 6.1.8.5 – The City shall explore opportunities to expand and improve waterfront walkways to promote a vibrant pedestrian experience and solidify a greater sense of place.

FINDING: There is a long history of altering wetlands in the City and surrounding areas. Agricultural interests altered wetlands and other low-lying areas to create additional lands for farming, cattle grazing, and silviculture. In the 1970s, a comprehensive network of canals and ditches was constructed by ITT to “reclaim” large areas for development. As a result, the hydro period of wetland systems was altered both positively and negatively. Many systems, particularly isolated low-quality systems, may continue to suffer and deteriorate over time. It is important to identify those wetlands that have benefited and adapted to the topographic and hydrogeologic changes so that resource protection can be focused on preserving those wetlands. Map CP 6.1 depicts wetland resources within Palm Coast.

In 2006, the state of Florida established the Florida Uniform Mitigation Assessment Method (UMAM) wetland regulation. It provides a standardized approach for evaluating and assessing wetland mitigation requirements in the state of Florida. UMAM provides a consistent method for determining the ecological value of wetland mitigation projects and ensures that mitigation efforts adequately compensate for wetland impacts. This means that local authorities cannot create additional regulations or requirements beyond those set forth by the state for wetland mitigation projects. This approach streamlines the wetland mitigation process and ensure

consistency across the state while still allowing for effective environmental protection and management.

The State focus has been to create integrated corridors that are connected locally and regionally. The City has the opportunity to plan for connections to these integrated corridors. Establishing integrated corridors in Palm Coast, is crucial for maintaining biodiversity, and facilitating species movement and migration. These corridors serve as vital connections between fragmented habitats, allowing wildlife to access essential resources such as food, water, shelter, and breeding sites. In Palm Coast, with diverse ecosystems and abundant wildlife, establishing and preserving functionality through regulatory development review and processes such as development agreements, conservation easements, and designation of the Conservation FLUM category is essential for the long-term survival of numerous species.

Saltwater systems provide essential habitats for many species of fish, other species of vertebrates and invertebrates. These systems serve as nursery areas and the base of many food chains that end with larger dependent mammals, fish, and birds. Long Creek is considered a high-quality habitat, with large valuable undisturbed areas of productive salt marshes and tidal flats. Any future development near Long Creek should be carefully designed to ensure that the quality of this system is not compromised.

Objective 6.1.9 - Wetlands and Estuarine Ecological Communities



Protect, conserve, and enhance the natural functions of existing wetlands including, but not limited to, estuarine systems.

Policy 6.1.9.1 – Through the LDC, investigate methods for increasing open space such as but not limited to levels of service, maximum impervious/pervious ratios, establishing greenways, and conduct avoidance and minimization of impacts to wetland systems consistent with state and federal regulations.

Policy 6.1.9.2 - The City shall continue enforcement of optimal wetlands through land development regulations, development agreements, the Conservation FLUM designation, conservation easements and other similar methods by considering type, value, function, size, condition and location of wetland systems consistent with state and federal regulations. It is the City's intent to encourage through regulatory development review and processes such as development agreements, conservation easements, or Conservation FLUM as appropriate, functional integrated corridors that typically include larger wetland systems or connect to existing corridors.

Policy 6.1.9.3 - Prioritize the establishment and/or preservation of integrated corridors through the LDC and or Development Agreements. Regulations will prioritize the protection of functional and integrated wetland systems with particular emphasis on their value as connected corridors. Development adjacent to these areas shall be compatible with the functionality of the corridor to minimize disruption of natural systems established. For any properties zoned MPD with a master site plan, corridor overlays will be depicted and described.

Policy 6.1.9.4 - In coordination with SJRWMD, FDEP, and the United States Army Corps of Engineers (ACOE), the City shall continually maintain the existing database of wetlands and other lands that are currently protected by conservation easements. The inventory shall include ecological communities and wildlife. Furthermore, the City shall maintain and assemble information received from SJRWMD wetland aerial interpretations to create the "Potential Wetlands" map and incorporate this data into the Future Land Use Map Series that shall be refined at that time of SJRWMD permit issuance to more accurately delineate, assess and protect resources.

Policy 6.1.9.5 - Work cooperatively with SJRWMD, ACOE, and FDEP with matters related to wetland regulations. The City shall take appropriate actions involving non-permitted activities within identified wetland areas and shall obtain such outside regulatory assistance, as warranted, to ensure compliance with all State and Federal laws, rules and regulations concerning the management of wetlands and estuarine systems.

Policy 6.1.9.6 - The City shall require that BMPs be incorporated into any development plan on property that contains jurisdictional wetlands prior to the issuance of a development order.

Policy 6.1.9.7 - The City shall require, where applicable, an environmental assessment conducted by a qualified environmental professional to be submitted as part of the development application process.

Policy 6.1.9.8 - Study a program to provide incentives within the LDC which may include clustering, reduced setbacks, buffers, landscape areas, etc. for the preservation of optimal wetland systems.

Policy 6.1.9.9 - The City shall support wetland and estuarine systems creation, restoration, enhancement and preservation and shall encourage public and private sector initiatives for these efforts.

Policy 6.1.9.10 - The Conservation future land use designation shall be established on the FLUM to provide protection of wetland systems and other environmentally sensitive lands consistent with the Comprehensive Plan Goals, Objectives and Policies. This FLUM designation provides for preservation of large interconnected optimal wetland systems and other high quality environmentally sensitive areas. Conservation areas are generally a minimum of 10 acres in size, with most being substantially larger. Other areas, which may be classified Conservation, include natural water bodies and lakes, estuaries, oak hammocks and other large areas consisting of native vegetation areas, wildlife corridors, and aquifer recharge zones. Unlike most of the other land use designations that follow property lines, the boundaries of most areas assigned this land use designation have been drawn to encompass the environmentally sensitive area using best available aerial mapping data.

Policy 6.1.9.11 - The City of Palm Coast will continue to uphold the optimal areas of the existing "Conservation" designation on the Future Land Use Map for Pringle Swamp, Hulett Swamp, Big Cypress Swamp, Mulberry Branch, and Pellicer Creek, recognizing their crucial

role in floodplain protection, wildlife habitat, wetland and estuarine ecosystems, native vegetation, and safeguarding water resources.

FINDING: Wetland communities in Florida have historically received significant regulatory attention from both federal and state governments due to their crucial ecological role. However, upland communities and associated specimen trees lack comparable regulatory protections. Despite this, many upland communities within the City possess the potential to support protected plant and animal species unique to Florida, reduce heat island effects, consume stormwater, serve as noise barriers, and offer aesthetic and recreational value. One such example is the "hammock," characterized by its hardwood forest composition, which represents a distinctive natural community within the City.

Unlike wetlands and floodplains, which often benefit from additional regulatory controls due to their lower elevations, hammock areas face heightened vulnerability to development pressures. Most tracts of land containing these upland communities already hold development entitlements and owner have right to develop their property. As a result, a balanced approach must be considered in protecting upland communities and associated specimen and historic trees.

In addition, the City's valuable natural resources face a significant threat from existing invasive species. These invaders pose a serious risk as they outcompete and displace desirable native species, disrupting ecological balance and diminishing overall biodiversity. Therefore, concerted efforts to eradicate invasive species wherever possible are crucial to protecting and restoring the integrity of the City's ecosystems.

Objective 6.1.10 - Preservation of Native Vegetative Communities



Promote and encourage preservation and long-term maintenance of native vegetative communities, wildlife habitat, and environmentally sensitive lands.

Policy 6.1.10.1 – Where appropriate and feasible, the City shall acquire lands for public use. To assist in funding these potential acquisitions, the City shall investigate and pursue, federal, state and other similar grants, when available. The City shall also provide for the protection of environmentally sensitive areas and protect natural resources by obtaining these areas and designating them as preserves or passive open space.

Policy 6.1.10.2 - In order to preserve unique natural resource site features, continue to require and encourage landowners and developers to protect or preserve listed species and native plant communities through innovative site planning techniques. Methods to be considered by the City shall include, but are not limited to, establishing conservation areas, parks, greenways and open space. These enhanced enforcements shall be located in the LDC.

Policy 6.1.10.3 - Identify rare upland communities located within the City such as but not limited to natural Mesic Flatwoods, Mesic Hammock, and scrubby Flatwoods. Amend the LDC, as appropriate, with consideration being given to imposing standards for buffering, setbacks requirements and other appropriate regulations to ensure protection of ecological communities.

Policy 6.1.10.4 - The City shall encourage the protection and maintenance of unique environmental features, including native vegetative communities, in designated passive City parks per LDC requirements.

Policy 6.1.10.5 - Coordinate with neighboring governments to conserve sensitive vegetative communities and for the creation of integrated corridors that exist within more than one jurisdiction.

Policy 6.1.10.6 - The City shall utilize the Conservation future land use designation, the Preservation zoning district, conservation easements, development agreements, and other means as appropriate, for the purpose of protecting optimal quality wetlands, integrated corridors, lakes, designated hammock areas and other environmentally sensitive areas.

Policy 6.1.10.7 - The City shall consider amending the LDC to include regulations that protect natural habitat, ecological communities, and provides for open space. The following standards shall, at a minimum, be considered for incorporation into the LDC:

- A. Preservation of a percentage of existing native vegetation prior to land clearing for new development.
- B. The requirement of native groundcover vegetation within required buffer zones, either preserved or planted.
- C. Requiring the removal of all vegetation defined as “Category I” and “Category II” invasive plants by the Florida Exotic Pest Plant Council (EPPC).
- D. Requiring that a minimum percentage of required landscaping include native and xeric plantings.

Policy 6.1.10.8 - Consider the presence of environmentally sensitive lands, such as but not limited to optimal wetlands, listed or endangered species habitat, or Unique geographical features, in formulating the location of development.

In Flagler County and Palm Coast, monoculture pine agriculture has deep roots. However, these pine tree agricultural areas are often characterized by limited biodiversity compared to more diverse ecosystems that include a variety of tree species and understory vegetation. As our City

expands, there is a growing recognition of the benefits of introducing a diverse urban forest composed of native tree species and varied vegetation.

This shift towards urban forestry offers numerous advantages. A diverse urban forest also provides a broader range of wildlife and promotes overall ecosystem health. Moreover, urban forests contribute significantly to the visual appeal of Palm Coast.

Palm Coast is committed to prioritizing urban forestry initiatives that emphasize planting a diverse array of native trees and vegetation while utilizing efforts to protect our native specimen and historic trees.

Objective 6.1.11 - Tree Mitigation and Protection



Recognizing that the careful management of Palm Coast's extensive urban forest is crucial for preserving the City's high quality of life and fostering a diverse and sustainable ecosystem, the City will continue to enhance, expand, and enforce its tree mitigation and protection programs.

Policy 6.1.11.1 – The City shall promote the establishment, protection, and management of a diverse and sustainable urban forest ecosystem through the following measures:

- A. Develop and maintain an approved list of native tree, shrub, and herbaceous plant species appropriate for the region's ecosystems. This list shall form the basis for all new plantings and landscaping requirements within the City.
- B. Establish regulations for minimum standards for native Tree, understory vegetation, including shrubs, groundcovers, and foundation plantings.
- C. Require detailed vegetation surveys as part of development applications, depicting the location, scientific name, common name, size, and condition of all existing trees, shrubs, and native groundcover vegetation on the site.
- D. Ensure that the LDC clearly states that the City desires to minimize the impact of development on natural resources, including historic & specimen trees. Furthermore, if a developer successfully demonstrates that tree removal for specimen and historical trees is unavoidable as described in the LDC, the developer must mitigate for specimen and historical trees. As an option to on-site mitigation, the City shall explore establishing an Urban Forestry Tree and Vegetative Mitigation Fund to be utilized for landscape and tree enhancements on public lands.
- E. Establish mitigation ratios and standards that promote the diverse, multi-layered native plant landscape communities, including hardwood trees, understory trees, shrubs, and groundcover species.
- F. Maintain existing natural buffers in appropriate areas.

- G. Explore incentive programs, which may include density bonuses, fee reductions, or expedited permitting, for developers and property owners who exceed minimum landscaping requirements, preserve significant native vegetation, or exceed open space requirements.

Policy 6.1.11.2 – Continue to collaborate with the National Arbor Day Foundation to meet the qualifications for and maintain designation of Tree City USA which may include but is not limited to the following:

- A. Have a designated Department responsible for tree management.
- B. Have an enforced tree regulations governing tree planting, maintenance, and removal.
- C. Hold an annual Arbor Day celebration and issue Arbor Day proclamation.

Policy 6.1.11.3 – The City shall pursue grants and other resources to conduct a comprehensive citywide tree inventory to document and manage the urban tree canopy within public lands in the City, which will inform decision-making related to tree preservation, replacement, and enhancement to maintain the City's character and meet resident expectations. The inventory will identify all protected, specimen, and historic trees within the city limits, assess the health and condition of the urban tree canopy, and provide data to guide the City's tree preservation, protection, health, maintenance, and replacement efforts.

FINDING: The Federal Emergency Management Agency (FEMA) has pinpointed specific flood-prone areas within Palm Coast, where periodic flooding could endanger lives and property (Map 6.2). To mitigate potential risks, the City has instituted a comprehensive floodplain management initiative under the National Flood Insurance Program (NFIP). Palm Coast joined the NFIP on February 4, 2002, and has since gone above and beyond NFIP standards, earning a "Class 4" certification. This achievement translates to a 30% reduction in flood insurance premiums for properties within the Special Flood Hazard Area (SFHA) and a 10% discount for those outside the SFHA.

Furthermore, Palm Coast has embraced the professional certification program established by the Association of State Floodplain Managers (ASFPM). Through ongoing employee development, the City boasts multiple certified Floodplain Managers who oversee NFIP and CRS initiatives. These managers also conduct thorough assessments of new developments to ensure they adhere to floodplain regulations.

In addition to their regulatory duties, Palm Coast's Floodplain Managers actively engage with the community through outreach programs and educational events. These efforts aim to raise awareness about floodplains and the insurance benefits available to residents, fostering a more informed and resilient community.

Objective 6.1.12 - Floodplain Protection



Maintain the hydrological and ecological function of floodplain areas by reducing loss of flood storage capacity and protecting the functional value of wetlands.

Policy 6.1.12.1 - Specify limitations on the encroachment, setbacks, buffer zones, alteration and incompatible land uses in design storm event floodplains in the LDC. At a minimum, the following criteria is the basis for the protection of 100-year floodplains:

- A. To minimize flood damage and related losses, prohibit new development within the 100-year floodplain unless the structure(s) is elevated at least one foot above the base flood elevation or is flood proofed and provides compensating storage.
- B. Protection of appropriate floodplain areas by land acquisition or conservation easements that prevent increased impervious surfaces.
- C. Minimum standards regarding stormwater runoff and/or storage for developments within a 100-year floodplain.

Policy 6.1.12.2 - Continue to participate in the FEMA Community Rating System (CRS) program, which involves meeting higher than minimum National Flood Insurance Program (NFIP) standards.

Policy 6.1.12.3 - To mitigate property damage and loss of life, the City's LDC and floodplain management ordinance shall be reviewed annually to ensure that they are consistent with the latest available regulations promulgated by the FEMA.

Policy 6.1.12.4 - Protect the natural functions of the 100-year floodplain so that the flood carrying, and flood storage capacity are maintained by implementing and enforcing floodplain regulations and reviewing development proposals for the presence of impacts on floodplains.

FINDING: Thirty-eight plant species and nineteen animal species protected by Federal and State wildlife agencies have the potential to occur within the City. A number of factors may cause the need for a species to be listed as threatened or endangered. However, the principal factors are associated with human impacts and species habitat destruction. Examples of State-listed species of special interest to the City include the West Indian Manatee, Gopher Tortoise, Eastern Indigo Snake, Florida Pine Snake, Red-Cockaded Woodpecker, Florida Scrub Jay, Hooded Pitcher Plant, and Blue-Flowered Butterwort.

Expanding levels of protection for unique upland habitats, optimal wetlands, named wetland systems and other natural resources will provide the variety of habitats needed by the plants and animals that use these areas. Further implementation of greenways and identifying and establishing integrated corridors will assist in providing long-term survival of wildlife within the City. Corridors that connect major habitats such as the ICW and Long Creek to hammocks and pine flatwoods, allows wildlife to move about without interference from development. Water quality management, appropriate land uses, acquisition of environmentally sensitive lands, the establishment of wildlife corridors and greenways as well as other sound land use planning and growth management activities contribute to the long-term sustainability of the City's wildlife community.

Objective 6.1.13 - Wildlife and Habitat Protection



Protect Endangered and Threatened Species, Species of Special Concern, living marine resources and their associated habitats.

Policy 6.1.13.1 –Protect endangered and threatened species through coordination efforts with the regulatory authority of FDEP, Florida Fish and Wildlife Conservation Commission, and U.S. Fish and Wildlife Service, as mandated by the Federal Endangered Species Act of 1973 and the Florida Endangered and Threatened Species Act of 1977 and other applicable laws, rules and regulations.

Policy 6.1.13.2 - The City shall use appropriate means consistent with state and federal regulations to protect listed species and prevent further reductions in those species population sizes and habitat through land acquisition, public and private partnership, LDC enforcement, the use of the Master Planned Development (MPD) processes, land development application review process, the updating of the LDC as needed, and collaboration and cooperation with agencies with jurisdiction over listed species and/or their habitat.

Policy 6.1.13.3 – Prior to issuance of subdivision or site plan development approval an environmental assessment (EA) report by a qualified environmental consultant identifying site environmental characteristics and the effects that the proposed development would have on the environment is required to be submitted by the applicant. At minimum, the EA shall include the following information. If any conditions are found to warrant additional study, additional assessment may be required.

- A. Identification and description of archeological and cultural resources in applicable areas.
- B. Soils description and map.
- C. A tree survey depicting all trees over three inches DBH and all hardwood hammock communities.
- D. Identification and description of vegetative communities to include methodology.
- E. Identification and description of threatened and endangered species, and species of special concern to include methodology.
- F. Presence of any hazardous materials and/or contamination if applicable.
- G. Identification and delineation of wetland system in accordance with State law.

Policy 6.1.13.4 – The City shall require, within DRI and MPD developments, that the developer obtain, complete, and provide proof thereof to the City, if applicable, the necessary wildlife permits, from FFWCC, and USFWS and comply with all permit conditions prior to commencement of any a site development permit or provide factual information that listed species are not present prior to construction activities.

Policy 6.1.13.5 – The City shall take all reasonable steps to ensure that all development-related activities do not result in the harming, pursuit or harassment of wildlife species classified as Endangered, Threatened or a Species of Special Concern listed by the State or Federal government. The City shall require the developer or property owner to immediately notify the City, FFWCC, and USFWS, to the extent required by law, if such species are determined to be residing on, or are otherwise significantly dependent upon the project site.

Policy 6.1.13.6 - The City will coordinate with the Florida Department of Transportation and other applicable agencies to pursue a wildlife underpass structure on State Road 100, connecting Graham Swamp, Bulow Creek system, and Tomoka River system to improve wildlife movement, hydrologic connections, and enhance public safety.

Policy 6.1.13.7 - The City will work with developers to ensure that new roadway projects consider wildlife crossings of greenway corridors or optimal wetlands, as appropriate. These crossings aim to connect greenway corridors and optimal wetland systems, thereby improving wildlife movement, enhancing hydrologic connections, and increasing public safety.

Policy 6.1.13.8 - The City shall collaborate with the Florida Fish and Wildlife Conservation Commission to promote an annual survey of Bald eagle nests and other bird species within its jurisdiction. The survey conducted with the support of volunteer citizen groups, will aid in the identification, education, and protection of bird species throughout Palm Coast.

FINDING: Over thirty-seven (37) soil types are found within the City (Map CP 6.3). The majority of soils need some type of special planning, design, or maintenance to overcome or minimize the drainage limitations to accommodate development. The most common limitation is the presence of organics within the soils layers that lead to poor drainage, saturation, and irregular compaction. Changes to the landscape can have a detrimental effect on the soils present. Clearing of vegetation can lead to wind or water erosion of sandy soils. Minimizing environmental impacts from mineral, sand, and other extraction activities is necessary and the City will enforce the coquina rock protection ordinance, which will ensure the presence of this unique geologic resource. Shorelines are complex areas that can protect adjacent upland areas, protect waters from land-based activities, and provide habitat for many different types of wildlife. Careful site planning and the utilization of shoreline stabilization methods will help minimize shoreline erosion and protect our water bodies.

Objective 6.1.14 - Mineral and Soil Resources



Minimize the impacts of mineral and sand extraction activities while allowing appropriate utilization of mineral and soil resources; reduce the rate of soil erosion on natural systems and shorelines.

Policy 6.1.14.1 – Mining, operations, including borrow pit extraction activities, will not adversely affect the quality of air, ground water, surface water, or wildlife.

Policy 6.1.14.2 – Ensure that mineral, sand and other extraction activities are adequately buffered from adjacent existing and future land uses, and contain natural buffers, landscape or other means to adequately buffer from adjacent uses.

Policy 6.1.14.3 – Coordinate with State and Federal agencies to ensure that all necessary permits, including, but not limited to, approved reclamation plans, have been obtained prior to any mineral, sand or other extraction activities occur.

Policy 6.1.14.4 – The City shall coordinate with the landowner and FDEP to encourage excavation site reclamation to resemble a natural system to the greatest extent feasible. At a minimum, reclamation standards shall continue to meet all applicable State and Federal requirements.

Policy 6.1.14.5 – Provide measures, including, but not limited to, the use of adequate BMPs, to be implemented to ensure that soil erosion is avoided in the LDC.

Policy 6.1.14.6 – The City shall support the use of onsite borrow pits to supply fill needs for site development consistent with state and federal regulatory processes.

FINDING: Environmental education and public awareness are crucial to the success of the City's conservation and protection efforts. Understanding the City's conservation and coastal issues that include native plant communities, wetland protection, wildlife species, groundwater and surface water protection, and other environmental sensitive areas, will promote protection efforts.

Objective 6.1.15 - Educational Outreach



Provide information and educational activities for the public, developers, and landowners to assist them in understanding the needs and issues related to the conservation and sustainable use of the City's natural resources.

Policy 6.1.15.1 - The City shall increase efforts to educate City staff, the public, developers and landowners on relevant environmental issues including, but not limited to air quality, management and disposal of hazardous materials, water conservation, wellfield protection, energy conservation, native species, stormwater management, wetland protection, code changes, tree maintenance and pruning, and new regulatory requirements.

FINDING: Pursuant to Chapter 163, F.S. comprehensive planning strategies shall promote natural resource sustainability through energy conservation and reduction of greenhouse gases. To effectively promote sustainability, it is critical to first commit to such initiatives which ultimately encourages public investment. In addition, public participation in such activities should be recognized for sustainable achievements and innovative practices. Through existing

and future goals, the City of Palm Coast will continue to lead by example through City operations whereby reducing energy demands of public facilities and services.

Objective 6.1.16 – Sustainability through government operations



The City of Palm Coast will both exemplify and promote environmentally sustainable practices and standards.

Policy 6.1.16.1 - The City will develop and implement an Environmental Resource Management Plan (ERMP) that shall serve to inventory and monitor sustainable initiatives to effectively utilize energy and water demands of public facilities and services. The ERMP shall include strategies and methodologies for reaching immediate and long-term goals through annual reporting.

Policy 6.1.16.2 - Recognizing the importance of ensuring the resilience and safety of Palm Coast in the face of potential challenges and disruptions, the City shall create a City Resilience Initiative. The initiative will comprehensively study, assess, and develop strategies to enhance the resilience of Palm Coast, improving infrastructure and daily life.

The Plan shall consider the following:

- A. Assessment of the existing vulnerabilities, risks, and challenges faced by our City in various domains including but not limited to infrastructure, economy, people, and the environment.
- B. Development of a master plan that outlines proactive strategies and actions to mitigate risks, enhance adaptive capacity, and promote long term sustainability.
- C. Establish mechanisms for ongoing monitoring, evaluation, and adjustment of strategies as needed.
- D. Promote a culture of perseverance through educational initiatives and awareness campaigns.

Policy 6.1.16.3 - To the extent practicable, implement green building standards for existing municipal buildings and future construction.

Policy 6.1.16.4 - Utilize environmentally beneficial landscape principles, incorporating low maintenance strategies, integrated reduced pesticide management and Florida friendly landscape design to landscape City properties as appropriate. Examples of such principles are, native vegetation, wildflower areas, and drought tolerant plants.

FINDING: Palm Coast's cultural heritage spans millennia, from ancient Native American settlements to Spanish and British land grants. Archaeological excavations have uncovered a wealth of prehistoric artifacts attesting to the region's long history of human habitation.

Remnants of the Kings Road, a historic highway constructed in the 1700s to facilitate transportation between Spanish settlements in Florida, can still be found in parts of Palm Coast.

In the last 25 years, at least 18 surveys of historic, cultural or archaeological resources have been identified.

Spanish land grants from the late 18th and early 19th centuries represent some of the earliest documented European inhabitation and agricultural activities in the Palm Coast area, leaving behind archaeological remnants and historical records that shed light on this formative period of the region's past. During the British period of control in Florida (1763-1783), several British land grants were issued in what is now Palm Coast, including plantations owned by colonial elites. Ruins of plantation sites like Mala Compra, once the property of influential Spanish-American Joseph Hernandez, offer a glimpse into 19th century agricultural life.

It was not until the 1960s that Palm Coast began its modern development under the stewardship of ITT Corporation's planned community initiative. This marked a new chapter in the region's rich cultural tapestry. The first neighborhoods in Palm Coast now are reaching the 50-year mark and may be eligible for inclusion into the National Register of Historic Places.

Objective 6.1.17 – Preserve Cultural and Historical Resources

Preserve, protect, and enhance community resources with unique social, historical, and cultural significance to the City.

Policy 6.1.17.1 - The City, in coordination with the Division of Historical Resources (DHR), shall maintain and annually update an inventory of known cultural resources located adjacent to and within Palm Coast. The purpose of the inventory is to help provide a tool to aid in the protection of known cultural resources. The inventory will provide for identification, evaluation, recordation and documentation of known cultural resources. At a minimum, the cultural resource inventory shall include archaeological sites, historical standing structures, historical cemeteries, and properties listed on the National Registered of Historic Places. The cultural resource inventory shall be mapped and periodically updated.

Policy 6.1.17.2 - Encourage preservation and protection of significant cultural resources as determined by the State Historic Preservation Officer.

Policy 6.1.17.3 - The City acknowledges that precise locations of archaeological sites are sensitive, and that unauthorized distribution of Florida Master Site File data may lead to vandalism and destruction of sites. Therefore, archeological site location information may be exempt from public records law when the DHR finds that its release could create a risk to site damage. Therefore, the City shall coordinate with the DHR prior to making such information public.

Policy 6.1.17.4 - Pursue grant opportunities to assist in sponsoring an archaeologist, historian, or historical preservation professional to conduct historical resource surveys for candidate sites to ascertain eligibility or Inclusion to the National Register of Historic Places.

Policy 6.1.17.5 - Requirements and standards for conducting cultural resource assessments and reporting of archeological and historic sites prior to development activities shall be

incorporated into the LDC and be consistent with state regulations. Previously investigated sites reviewed by the SHPO with no significant findings are excluded from further investigation.

Policy 6.1.17.6 - For property which the DHR has jurisdictional review or recommended an archaeological survey, the City shall require a copy of the correspondence from the State Historic Preservation Officer (SHPO) office concurring that historic concerns have been adequately addressed prior to the initiation of construction activities.

Policy 6.1.17.7 - For all properties listed or determined to be eligible for listing on the National Register of Historic Places, the City shall support the requirements and protocols of the DHR.

Policy 6.1.17.8 - Conduct a comprehensive study to assess the historic significance, architectural integrity, and cultural value of potential areas for designation as Historic Districts.

Policy 6.1.17.9 - Collaborate with the Palm Coast Historical Society and other applicable agencies to integrate cultural and historical education opportunities within the community. Educational opportunities may include interpretive materials such as brochures, signage, and online resources to inform residents and visitors about the significance of cultural and historic resources.

Policy 6.1.17.10 - Promote collaborative efforts with relevant agencies and organizations to explore the potential for developing heritage tourism centered around cultural and historic resources.

GOAL 6.2: NATURAL DISASTER MANAGEMENT

Establish growth management strategies which do not damage or destroy the function of coastal resources, protects human life, and minimizes property loss to destruction by natural disasters.  

FINDING: The City is susceptible to a variety of natural hazards such as flooding and high winds associated with hurricanes and tropical storms, thunderstorms, lightning, tornadoes, and forest fires. The actual physical and geographical features that provide the high quality of life for residents and visitors contribute to these hazards. 163.3178, F.A.C. defines the Coastal High Hazard Area as the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes model (SLOSH) computerized storm surge, Map CP 6.4 illustrates the Coastal High Hazard Hurricane Vulnerability Zone, evacuation routes, and shelter locations.

The most recent storm to directly strike the Northeast Florida Coast in the last 100 years was Hurricane Dora. There is no data regarding areas that have historically experienced destructive or severe damage in the City. However, the City must cooperatively work with and encourage Flagler County to identify and undertake mitigation activities that will avoid or reduce future loss of property or damage.

Objective 6.2.1 - Reduce Exposure to Hurricanes

 

Building and development activities shall be carried out in a manner that considers the danger to life and property from hurricane wind and storm surge damage.

Policy 6.2.1.1 - The City shall continue to enforce the Florida Building Code to limit the potential damage of all buildings and structures from the effects of hurricanes, wind borne debris and flooding. Buildings and structures shall be engineered to meet wind-resistance design commensurate with the building or structure's Risk Category and flood design provisions as determined by the Florida Building Code. Where City floodplain regulations are more restrictive than the Florida Building Code, the City's floodplain regulations shall prevail.

Policy 6.2.1.2 - Continue to require all buildings and structures located within the "City of Palm Coast Wind-Borne Debris Region" (WBDR) to be constructed with protected openings or impact resistant coverings as prescribed by the Florida Building Code. The Windborne Debris region which is defined as "areas within 1 mile of the mean high-water line where an Exposure D condition exists upwind at the waterline and the ultimate design wind speed Vult is 130 mph or greater. The City of Palm Coast WBDR is generally located east of Colbert Lane extended. The City shall ensure that buildings and structures, shall be engineered for the minimum required. Vult design wind speed based on the assigned Risk Category as determined by the Florida Building Code.

Policy 6.2.1.3 - Continue to participate in the FEMA Community Rating Systems (CRS) program, which involves meeting higher than minimum FEMA standards.

Policy 6.2.1.4 - The City shall enforce LDC specific to floodplain protection to address general hazard mitigation and to reduce exposure of human life and property to natural hazards.

Objective 6.2.2 - Coastal High Hazard Area

Direct population concentrations away from known or predicted Coastal High Hazard Area.

Policy 6.2.2.1 - The Coastal High Hazard Area is the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricane (SLOSH) computerized storm surge model prepared by the Northeast Florida Regional Council for the 2020 Regional Evacuation Study-Northeast Florida Region.

Policy 6.2.2.2 - The City shall continue enforcement of LDC regulations to limit and/or prohibit the reconstruction of certain non-conforming structures or non-conforming portions of structures in the event that they are destroyed to an extent more than fifty percent of their replacement value at the time of destruction.

Policy 6.2.2.3 - The City shall consider the acquisition of property within the Coastal High Hazard Area.

Policy 6.2.2.4 – The City shall encourage the relocation of threatened and/or damaged structures and infrastructure landward of the Coastal High Hazard Area.

Policy 6.2.2.5 –The LDC shall be amended to incorporate flood damage protection regulations within V or AE Zones located within the Coastal High Hazard Area. Regulations will continue to meet or exceed the Federal Emergency Management Agency (FEMA) requirements.

Objective 6.2.3 - Disaster Mitigation

In coordination with the Flagler County Emergency Management (FCEM), NEFRC, and other relevant State and Federal agencies, develop a pre-hazard mitigation plan and a post-disaster redevelopment plan (PDRP) which provides operational strategies to guide long-term redevelopment decisions.

Policy 6.2.3.1 – Annually prior to June 1st, the “City of Palm Coast Emergency Plan” shall be reviewed and updated as necessary to ensure maximum coordination and communication with FCEM and affected County and City departments to coordinate pre-hazard preparation and expedite post-disaster recovery.

Policy 6.2.3.2 – The City shall ensure that, following a major disaster, the City evaluates the Damage Assessment Team and Damage Survey Team reports, as required by the Peacetime Emergency Plan.

Policy 6.2.3.3 – Develop a PDRP in coordination with the FCEM and relevant County and City departments. The purpose of the City’s PDRP will focus on rebuilding efforts after the

storm impact immediate recovery timeframe of approximately four weeks and shall, at a minimum, be developed to address long-term recovery efforts including:

- A. Prioritization of the repair of damaged infrastructure needed to protect health and safety.
- B. Coordination of long-term recovery operations to City infrastructure and public structures with FEMA and other agencies.
- C. An action plan for temporary land uses such as temporary housing needs, economic redevelopment, and debris removal storage sites.
- D. The City will develop an action plan for temporary communication needs and restoration of communications infrastructure.

FINDING: A hurricane evacuation for the City is typically ordered well in advance of hurricane landfall, thus providing citizens with adequate time to safely evacuate from a threatening storm. However, the scheduling of future roadway improvements and additional access must address volume and capacity as related to hurricane and other disasters to help ensure a safe and timely evacuation.

Chapter 252, Florida Statutes, authorizes the FCEM to provide coordination of resources to local governments and decision-making during disasters. FCEM also helps coordinate emergency preparedness programs for the citizens of Flagler County, County agencies, and support organizations.

There are a number of locations in the County that are available for use as shelters during a hurricane event. As the population grows, the need for more shelters increases. The majority of evacuees will seek appropriate shelters successfully through a variety of means. However, special needs groups such as the elderly and patients of medical facilities will require special attention during evacuations. FCEM is tasked with maintaining an adequate inventory of hurricane shelters for current and future residents and evacuation planning. The City recognizes the critical importance of intergovernmental coordination with the County and neighboring coastal communities.

Objective 6.2.4 – Evacuation

Coordinate with FCEM, NEFRC, FDOT, or other agencies to reduce or maintain hurricane evacuation time.

Policy 6.2.4.1 – Evacuation time for hurricane categories shall be consistent with the following times as provided in the 2022 Regional Evacuation Study-Northeast Florida Region:

2025 Clearance Times for Base Scenarios

	Evacuation Level A	Evacuation Level B	Evacuation Level C	Evacuation Level D	Evacuation Level E
Clearance Time to Shelter	12.5	12.5	12.5	12.5	12.5
In County Clearance Time	18.5	21	23	27.5	30.5
Out of County Clearance Time	18.5	21	23	27.5	30.5

Policy 6.2.4.2 - The City shall coordinate with FCEM, NEFRC, and other agencies to improve emergency planning with emphasis on maintaining or reducing evacuation times for the City.

Policy 6.2.4.3 - The City shall coordinate with FCEM, NEFRPC, and other agencies to update and employ the hazard mitigation annex of the Flagler County Comprehensive Emergency Management Plan (CEMP), the purpose of which includes, at a minimum, the following:

- A. Showing evacuation routes, hurricane hazards, shelters, safety procedures, and other pertinent information for its citizens.
- B. Assigning responsibilities and establishing procedures for governmental agencies, volunteer agencies, and individuals, in preparing for and executing evacuation of designated areas of the City.
- C. Providing maximum warning time possible to residents of those areas that are deemed to be in danger.

Policy 6.2.4.4 – If a determination is made that deficiencies in hurricane evacuation times or facilities exist, the City shall coordinate with FCEM, NEFRC, and other agencies to analyze, plan for, and address all noted deficiencies.

Policy 6.2.4.5 –The City shall coordinate with FCEM, FDOT, NEFRC, and/or other relevant State or federal agencies to identify street and other improvements to the hurricane evacuation street network in order to maximize people who can be evacuated within an optimum evacuation time limit. Such as alternate travel lanes, reverse traffic flow, controlling signalization, and future expansion of the City roadway network.

Policy 6.2.4.6 – Ensure that the Comprehensive Plan is consistent with the Statewide Evacuation Study.

Objective 6.2.5 - Provision of Shelter Space

Ensure adequate and safe hurricane shelter space for special needs population and other persons in the hurricane vulnerability zone.

Policy 6.2.5.1 - The City shall coordinate with FCEM, the school board, and other relevant local governments and organizations to ensure that hurricane evacuation shelters meet or exceed regulatory standards, and that facilities are provided to meet needs of elderly and disabled persons.

Policy 6.2.5.2 – The City shall coordinate with Flagler County Emergency Management (FCEM), the school board, and other relevant local government agencies in providing adequate and safe hurricane shelter space for special needs population, pets, and other persons in the hurricane vulnerability zone.

Policy 6.2.5.3 –Support all relevant local governments and emergency management partners in their efforts to utilize enhanced hurricane shelter protection standards for all reconstruction and new developments in public buildings in accordance with Florida Law.

FINDING: On May 21, 2015, Governor Rick Scott signed into law Florida Senate Bill 1094, “An Act relating to the peril of flood.” SB 1094 requires consideration of future flood risk from storm surge and sea level rise in certain portions of local government comprehensive plans. In accordance with SB 1094, Florida Statute section 163.3178(2)(f)1 now includes sea-level rise as one of the causes of flood risk that must be addressed in the “redevelopment principles, strategies, and engineering solutions” to reduce flood risk. F.S. 163.3178(2)(f) specifies components that must be contained in the Coastal Management Element required for a local government comprehensive plan. Each must contain a coastal redevelopment component that addresses how to eliminate inappropriate and unsafe development in the coastal areas when opportunities arise.

Objective 6.2.6 – Peril of Flood

Continue to assess the current and future risks to human life and property from floods and other natural hazards in the coastal areas and implement development and redevelopment strategies that reduce or mitigate such risks.

Policy 6.2.6.1 - Palm Coast shall adopt, as needed, all maps—including FEMA flood zones, storm surge/Coastal High Hazard Area/Special Flood Hazard Area maps, and sea level rise impact maps that identify current and potential future areas subject to high flood hazard.

Policy 6.2.6.2 - Continue to monitor and maintain maps of extreme high tides (“king tides”), severe rainfall events and newly revealed areas at risk of flooding to efficiently target mitigation efforts.

Policy 6.2.6.3 - Continue to utilize the Comprehensive Plan, LDC, and Florida Building Code as the basis for development and redevelopment.

Policy 6.2.6.4 - A structural engineering certification is required when consideration of redevelopment of a storm-related damaged dwelling unit located within the CHHA.

Policy 6.2.6.5 - Require development activities seaward of the Coastal Construction Control Line (CCCL) established pursuant to Chapter 161.053, F.S. to be consistent with the statutory provisions.

Policy 6.2.6.6 - Amend the LDC as necessary to enhance flood mitigation measures in vulnerable areas to reduce future risks associated with high tide events, storm surge, flash floods, stormwater runoff, and related storm events. Such LDC regulations for new developments may include but are not limited to vulnerability mitigation measures such as conveyance improvements, additional hardening, higher floor elevations, enhanced pesticide and fertilizer management or incorporation of natural infrastructure.

Policy 6.2.6.7 - Palm Coast shall consider, whenever feasible, purchasing properties in areas most vulnerable to destructive storm surges for recreational uses and open space through grants or other funding sources.

Policy 6.2.6.8 - Seek funding and opportunities to advance the Stormwater Management System and operations through exploring innovative technologies and techniques.

Policy 6.2.6.9 - Flood prone areas or other similar hazardous conditions shall be taken into consideration in all future decisions regarding the design, location, and development of infrastructure and public facilities.

Policy 6.2.6.10 - The CHHA is an Adaptation Action Area (AAA) for those low-lying coastal zones that may experience coastal flooding due to extreme high tides and storm surge and are vulnerable to the impacts of sea level rise.

Policy 6.2.6.11 - Consider the implications of the AAA when reviewing changes to the use, intensity, and density of land lying within the AAA.

Policy 6.2.6.12 - Expand the messaging related to flood risk and emergency preparedness to identify the existence of and reasons for the AAA. The link between emergency preparedness and adaptation will be strengthened so that residents and businesses understand that readiness for storm events is enhanced by adaptation efforts to increase resiliency.

Policy 6.2.6.13 - Continue to apply the best planning and engineering practices in development to attenuate and mitigate future flood events and modify the LDC and other relevant regulatory documents as needed.

Policy 6.2.6.14 - Continue to restrict critical facilities such as but not limited to hospitals, congregate living facilities for persons with special needs, nursing homes, and the like from locating within CHHA and FEMA designated Special Flood Hazard Area Encourage such existing facilities to relocate to less hazard-prone locations within the City.

Policy 6.2.6.15 - Regularly update the floodplain related ordinances for consistency with the Florida Building Code and ensure that all future modifications of the flood-resistant

construction requirements in the Florida Building Code are incorporated in the LDC as applicable.

Policy 6.2.6.16 - All permit applications shall be reviewed to determine whether the proposed development sites are subject to potential flood risk. If a proposed development site is in a Special Flood Hazard Area, all site development activities including grading, filling, utility installation and drainage modifications for all new development and substantial improvements shall be designed and constructed with methods, practices, and materials that minimize flood damage and that are in accordance with the City Code.

Policy 6.2.6.17 - Continue to participate in the National Flood Insurance Program's Community Rating System (CRS) administered by FEMA to reduce flood losses and achieve flood insurance premium discounts for their residents.

Policy 6.2.6.18 - Coordinate with FCEM, FEMA, NOAA, and other relevant state and federal agencies to monitor and update future areas subject to high flood hazards.

FINDING: As people move into formerly wooded areas, the risk increases that a high intensity, wildfire could damage or destroy homes. Cypress Knoll and Grand Haven subdivisions are two of 596 communities nationwide to be designated a "Firewise" community. Continued and improved Firewise planning reduces the risks to homes by wildfires through the use of various architectural, site planning, and landscaping and materials decisions.

Objective 6.2.7 - Firewise Planning

Ensure thorough consideration and enforcement of wildfire mitigation strategies in land use planning, development, and management to protect public safety, welfare, and property against wildfire hazards.

Policy 6.2.7.1 - Develop wildfire mitigation strategies for future development areas and appropriately site uses of land to assure public health, safety, and welfare and protection of property. Applicable land uses in specific development plans shall adequately address wildfire mitigation. Such plans may include but not limited to maintained fire break buffers, methods of ingress and egress, and water supply.

Policy 6.2.7.2 - The City shall consider wildfire risk and will incorporate regulations into the LDC implementing mitigation strategies:

- A. Require that developments provide for a minimum of two emergency ingress/egress access ways consistent with Policy 2.2.1.2,
- B. Require streets, roads, driveways, bridges, culverts, and cul-de-sacs to be designed to assure access by firefighting equipment, providing for weight class, cornering, sufficient water supply, turn around and overhead clearance.
- C. Provide a defensible space on land between the wild land urban interface areas and adjacent development.

Policy 6.2.7.3 – All new developments in wildfire hazard areas shall complete and implement a wildfire mitigation plan specific to that development, subject to review and approval by the City, which shall be incorporated as part of the development plan approved for that development. The mitigation plan shall include:

- A. Project and parcel design features, such as defensible project perimeters, interior project fuel breaks, individual site defensible space, landscaping guidelines and plant material suggestions, and the placement of structures.
- B. Provisions for periodic inspections by the City to verify construction, implementation, and maintenance of the wildfire mitigation features in accordance with the plan. The inspection period may range from once a year to once every three years depending on site conditions.
- C. Implementation of the wildfire mitigation plan for the entire life cycle of all developments requiring plans.
- D. Water storage facilities, accessible by standard fire-fighting equipment, shall be provided, dedicated, or identified for fighting wildfires. Where public supply is available, fire hydrants of sufficient pressure shall be required.

Policy 6.2.7.4 - The City shall coordinate with the Florida Forest Service to manage the wild land urban interface areas within the City and in surrounding areas and wildfire management practices shall include, but not be limited to, controlled burns, mechanical mowing of vegetation, herbicide treatment, or other means deemed appropriate.

Policy 6.2.7.5 – The City shall promote the expansion of the Firewise Communities Program into other high-risk subdivisions and areas of the City and implement and enhance educational programs promoting Firewise principles.

Policy 6.2.7.6 - The City shall seek funding from public and private agencies to assist in the development and enhancement of wildfire mitigation programs and practices such as but not limited to creating buffers, methods of ingress and egress, and water supply.