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## 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.

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:

- Air quality,
- Quality and quantity of water resources,
- Conservation of water resources,
- Stormwater management,
- Shoreline access, prioritization of shoreline use,
- Wetlands and estuarine ecological systems, native vegetative communities,
- Floodplain protection,
- Wildlife habitats, threatened and endangered species,
- Mineral and soil resources,
- Educational outreach, and
- Environmental sustainability of government operations

The “Natural Disaster Management” includes objectives that address reducing exposure to hurricanes, coastal high hazard area, disaster mitigation, evacuation, provision of shelter space, and Firewise planning.

Although air quality is not a significant issue at this time, this Element attempts to ensure that degradation of the City’s air quality does not occur as urban growth continues. The destruction and degradation of native vegetation, floodplains, high quality wetlands and wildlife habitat 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. Once lost, the plant and animal species diversity, groundwater recharge capacity, and recreational and educational opportunities are irretrievable.

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 of 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), 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 the 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 Department of Emergency Services (FCDES) to provide coordination of resources to local governments and decision-making during disasters. FCDES 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 Coastal Zone 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 Coastal Zone Management section beyond the City's statutory authority.





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## GOAL 6.1: Protection of Natural Resources

**Protect, conserve, enhance, appropriately manage, and maintain or improve the quality of natural 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 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, will monitor and regulate air pollution sources within the City.*

### **Objective 6.1.1 - Air Quality Standards**

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

**Policy 6.1.1.1** - The City shall attempt to 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 personal electric vehicles in existing and new development.
- D. Require vegetative buffers, where appropriate, along major transportation corridors to buffer residential land uses.

**Policy 6.1.1.2** – The City shall collaborate with FDEP to assess the need for the establishment of an air quality monitoring station within or in close proximity to the City.

**Policy 6.1.1.3** - The City shall report suspected air quality violations to FDEP.

**Policy 6.1.1.4** - The City shall develop policies to require various strategies to protect air quality, which include, but are not limited to, the following:





- A. Utilizing Best Management Practices (BMPs) at active construction sites to control fugitive particulate emissions;
- B. Alternatives to open burning practices such as mulching, smoke screens, and other air quality protection techniques
- C. Taking appropriate actions to ensure that open burning occurs during appropriate times and locations; and
- D. Preserving tree buffers and native vegetation

**Policy 6.1.1.5** - The City shall support FDEP in its implementation and enforcement of the State and Federal air pollution laws, rules and regulations by placing conditions, where appropriate, on applicable development approvals, in accordance with law, to require developers to consult the FDEP on methods to control fugitive emission.

**FINDING:** *Groundwater resource supply protection is becoming increasingly important because of growth and in development patterns within the City. With increased development comes the potential for increased contamination, which may threaten the 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, including the City, is identified by the St. Johns River Water Management District (SJRWMD) as a “Priority Water Resource Caution Area” (PWRCA) which means that*

*“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”.*

*The City finds that it has legal rights that have vested in the City and which predate and have priority over other water users. The City has invested considerable time and resources to attain prior legal right status.*

*As the City continues to grow rapidly, 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**

Implement policies and procedures to ensure that an adequate supply of potable water that is sufficient in quality and quantity to meet projected consumer demands and ensure that the post-





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development quantity and quality of aquifer recharge, at a minimum, is equivalent to pre-development conditions.

**Policy 6.1.2.1** - The City shall continue to enforce 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, the City will continue to regulate the land uses that handle, produce, store, or dispose of regulated substances to prevent the introduction of these substances into groundwater.

**Policy 6.1.2.3** - The City shall identify potential non-regulatory groundwater and wellhead protection programs that may include, but are not limited to, the following: land acquisition, land donations, purchase of development rights, and conservation easements.

**Policy 6.1.2.4** – The City shall encourage SJRWMD, FDEP, and other applicable regulatory agencies to pursue additional groundwater monitoring studies on the quality of the Confined surficial and Floridan water resources within the City.

**Policy 6.1.2.5** –The City shall ensure diligent monitoring of construction sites and vacant lots to prevent or abate illegal dumping activities.

**Policy 6.1.2.6** – The City shall 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** - The City shall utilize the best available information from technical reports, studies, computer models, and guidance from State and Federal agencies to establish regulations within the LDC, as needed, for wellfield and aquifer recharge protection which regulations may include, but are not limited to, the following:

- A. Requiring development projects, where appropriate, to submit data approved by SJRWMD or licensed professional engineer or geologist that provide assurances that post-development quantity and quality of recharge, at minimum, shall be at least equivalent to pre-development conditions.
- B. Providing for a minimum percentage of open space and limitation on the percentage of impervious surface.
- C. Establishing stormwater management practices.





- D. Requiring application of BMPs, where appropriate, as a proactive procedure for handling and using potential polluting materials, and managing stormwater runoff and construction activities.
- E. Protecting environmentally sensitive waterways and wetlands through the establishment of policies limiting development and encouraging enhancement in these areas.

**Policy 6.1.2.8** - The City shall 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** – The City shall 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** - The City shall 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. Free Water Conservation Plumbing Retrofitting Kits for Residential Customers
  - 4. Indoor Conservation Programs
  - 5. Develop and Enforce Water Efficient Landscape Ordinance (in cooperation with SJRWMD)
  - 6. Irrigation Design Requirements
  - 7. Requiring Individual Metering
  - 8. Requiring the Use of Low-Volume Plumbing Devices
  - 9. Promoting Water-wise Landscaping through encouraging the Florida Yards and Neighborhoods Program.





- B. Customer and Employee Education
- C. Use of Conservation based Rate Schedule

**Policy 6.1.3.3** – The City shall 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** – The City shall implement and enforce the emergency water conservation measures as mandated by SJRWMD.

**Policy 6.1.3.5** – The City shall distribute literature and appropriately engage in enforcement actions pertaining to non-compliance with mandatory drought prohibitions, as necessary.

**Policy 6.1.3.6** – The City shall cooperate with SJRWMD in ensuring that abandoned free-flowing artesian wells are properly closed, plugged and abandoned.

**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 NIO report analysis, the natural water bodies within the City contain good quality water. 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 6.1.4 – Development of Alternative Water Supplies**

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

**Policy 6.1.4.1** – The City shall utilize alternative water supply sources, if feasible, when improving or expanding the City’s water system.

**Policy 6.1.4.2** – The City shall 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.





### **Objective 6.1.5 – Surface Water Quality**

Develop and maintain a systematic program for identifying and evaluating water quality problems related to surface and groundwater resources including surface waters that flow into estuarine marine systems.

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

**Policy 6.1.5.2** - The City shall 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** - The City shall 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 increase and have less land to aid in absorption and filtration. 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 fresh water 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** - The City shall continue developing a Citywide Stormwater Master Plan by modeling two subdivision sections every two years. The Stormwater Master Plan shall identify needed improvements that will maintain or improve the quantity of water stored 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** – The City shall aggressively pursue funding sources for current and future stormwater management improvements by, at a minimum:

- A. Seeking the designation of the Northern Coastal Basin as a priority surface water improvement and management (SWIM) watershed.
- B. Coordinating with SJRWMD in implementing a SWIM plan for the City.
- C. Pursuing cost share grants, community development block grants, State revolving fund loans and other available State and Federal funds.

**Policy 6.1.6.3** - The City shall 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** - The City shall 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** –The City shall continue to enforce standards found in the LDC for construction activities to retain sediment on site and to prevent violations of State water quality standards and impacts to wetland systems. Where appropriate, the City may 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 and amend the LDC as needed to implement any such standards.

**Policy 6.1.6.6** – The City shall 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;





- C. The use of appropriate aquatic vegetation to maximize desirable pollution prevention results;
- D. Prohibition of invasive and aggressive weeds restricted by State or Federal law.

**Policy 6.1.6.7** – The City shall adopt and enforce acceptable water quality standards for surface water bodies that equal or exceed State and Federal standards.

**Policy 6.1.6.8** – Where appropriate, the City shall 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 ICW, have limited public access. Current 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** - Where appropriate, the City shall 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** – The City shall 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** - The City shall enforce the federally mandated public access requirements of the Coastal Zone Protection Act of 1985, as appropriate.

**Policy 6.1.7.4** – The City will consistently review opportunities that may be available to provide the public with reasonable and safe access to wetland areas, lakes, lands abutting the Intracoastal Waterway, canals and other lands, water bodies and 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, when practicable and feasible, seek to preserve and protect wetland areas, lakes, lands abutting the Intracoastal Waterway, canals and other lands, water bodies and natural resource areas by endeavoring, as appropriate in each case, to obtain the legal right to use such land and water resources and to obtain public ownership interests in such land and water resources by means of dedication, purchase, the granting of easements, leases, cooperative private/public agreements and other legal mechanisms serving the public interest.

**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** - The City shall continually review and enforce the LDC, to address water-dependent and water-related uses that are public in nature and promote tourism. The City shall prioritize water-dependent uses based upon the type of water dependent use, adjacent land use, water quality, impact on listed species, wetlands and coastal resources.

**Policy 6.1.8.2** – The City shall preserve, when appropriate and in accordance with law, areas adjacent to shorelines that are comprised of a high percentage of recreational uses.

**Policy 6.1.8.3** – The City shall 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** – The City shall 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 be permitted only in appropriate locations.
- 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. Prohibition of location of marinas and multi-slip docks in designated shellfish harvesting areas, Class II Waters, Outstanding Florida Waters, or environmentally sensitive areas.
- H. Disposal and management of dredge spoil.
- I. Hurricane mitigation plans for marinas and multi-slip docks to prevent potential hazards.
- J. Requirement for “Clean Marina” designation where appropriate.

**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, will 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.*

*Regulatory trends in Florida have focused on allowing mitigation impacts to smaller isolated wetland systems with a low functional value, but protecting the larger high quality wetland systems. As part of enhancing degraded wetlands, it is important for the City to promote restoration activities within adversely affected wetlands. Events that contribute to altering wetland systems include, but not limited to silviculture activities, stormwater drainage, and wildfire events.*

*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** - The City shall continue enforcement of wetland protection through land development regulations to ensure effective protection of high quality, functional, and





integrated wetland systems. Land development wetland regulations shall consider type, value, function, size, condition and location of wetland systems. The City shall permit appropriate mitigation requirements consistent with State regulatory requirements to allow regulatory permitted impacts to low-quality, isolated wetland systems if it is demonstrated that mitigation will promote infill development, discourage urban sprawl or improve the overall wetland function within the Northern Coastal Basin. Mitigation within the City shall be preferable to mitigation occurring outside of the City.

**Policy 6.1.9.2** – 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 date into the Future Land Use Map Series that shall be refined to more accurately delineate, assess and protect existing resources. The City shall recognize all marine and major wetland systems as environmentally sensitive lands and the City shall designate said areas as conservation areas.

**Policy 6.1.9.3** - The City shall work cooperatively with SJRWMD, ACOE, and FDEP to educate, permit, and enforce applicable 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 6.1.9.4** - The City shall require that BMPs be incorporated into any development plan on property that contains jurisdictional wetlands or that is located adjacent to property that contains jurisdictional wetland resources prior to the issuance of a development order. The City may require, where appropriate, an environmental study if the size and land use activities of the proposed development has the potential to be incompatible with the protection of high quality wetland systems or other environmentally sensitive lands.

**Policy 6.1.9.5** – With regard to any proposed development on lands that contains a jurisdictional wetland, the City shall require the applicant to submit copies of all approved Federal and State environmental permits prior to construction activities, and to comply with all terms and conditions of such approved permit(s), including, but not limited to, on and off site mitigation, if applicable.

**Policy 6.1.9.6** – Where appropriate, the City shall require proposed developments located on parcels which wetlands are located to retain and protect such wetland resources through clustering, setbacks, and other innovative planning techniques. The City may grant relief to





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applicants who demonstrate an ability to protect on-site wetlands by approving requests for relief from LDC requirements in the nature of variances (i.e., setbacks, required buffers, landscape areas, etc.). The City shall consider utilizing density credits, transfers or other incentives.

**Policy 6.1.9.7** - 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 6.1.9.8** - The City shall coordinate its activities with Flagler County, FDEP and other regulatory agencies with jurisdiction to ensure that facilities comply with applicable regulations regarding the proper disposal and management of hazardous waste by:

- A. Promoting the recycling of hazardous wastes.
- B. Distribution of educational materials for the proper management and disposal of hazardous waste.
- C. Coordinating with Flagler County to ensure that their database of hazardous waste generators located within the City is periodically updated.

**Policy 6.1.9.9**- The Conservation future land use designations shall be established on the FLUM to provide protection of wetland systems and other environmental sensitive lands. This FLUM designation provides for preservation of large interconnected high quality 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 and will require field verification to determine wetland quality and boundaries with precision.





**FINDING:** *Although wetland communities currently have several layers of regulatory protection, there is little protection for upland communities and specimen trees. Many of the upland communities in the City have the potential to support protected plant and animal species that are found only in Florida, act as noise barriers, and provide resources for recreation and research. A “hammock”, which is a hardwood forest, is a unique natural community located within the City. Hammock areas are threatened with land clearing and encroachment from development. Protection of this plant community would preserve not only the unique variety of trees and plants, but also animals that utilize this habitat. Preservation of tree canopy is vital to controlling global warming, clean air, noise abatement and maintaining community character.*

*Emphasis must be placed on preserving native vegetation on all appropriate sites. Preserving the native species promotes water and wildlife conservation, wildlife utilization and does not require fertilizers and herbicides. Existing invasive species threaten the City’s valuable natural resources and should be eradicated whenever possible because they choke and crowd out desirable native species.*

#### **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 the public and pursue grant opportunities. The City shall also provide for the protection of additional environmentally sensitive areas and protect the natural resources of the City by attempting to obtain said areas as preserves and passive open space in order to expand the opportunities for conservation and increase public appreciation of natural habitats and maintenance of vegetative communities.

**Policy 6.1.10.2** - The City shall continue to require and encourage landowners and developers to protect or preserve listed species and native plant communities through innovative site planning techniques to preserve unique natural resource site features. The methods to be considered by the City shall include, but not be limited to, establishing conservation areas, parks, greenways and open space, and providing for enhanced enforcement of the LDC.

**Policy 6.1.10.3** - The City shall identify rare upland communities located within the City and amend the LDC, as appropriate, with consideration being given to imposing standards for





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buffering, setbacks requirements and restrictions on land use intensities and densities to ensure protection of ecological communities.

**Policy 6.1.10.4** - The City shall protect and maintain the unique environmental features, including native vegetative communities, in designated passive City parks.

**Policy 6.1.10.5** - The City shall cooperate with neighboring governments in order to conserve, and to appropriately use and protect wetlands and other sensitive vegetative communities that exist within more than one jurisdiction.

**Policy 6.1.10.6** - The City shall protect its environmentally sensitive areas that include, but are not limited to, large interconnected wetland systems, by utilizing the Conservation land use designation. The Conservation land use designation, as well as the Preservation Zoning classification, shall be utilized by the City, as appropriate, for the purpose of protecting high quality wetlands, lakes, designated hammock areas and other environmentally sensitive areas.

**Policy 6.1.10.7** - The City shall pursue annexation of environmentally sensitive lands such as Graham Swamp to ensure additional protection of environmental ecosystems.

**Policy 6.1.10.8** – The City shall consider amending the LDC to include regulations that preserve and protect natural habitat and ecological communities. The following standards shall, at a minimum, be considered for incorporation into the LDC:

- A. Where feasible, preservation of existing native vegetation prior to land clearing for new development.
- B. Where feasible, requiring native groundcover vegetation within required tree buffer zones, either preserved or planted.
- C. Requiring the removal of all plants defined as “Category I” pest plants by the Florida Exotic Pest Plant Council (EPPC) or other State and local requirements from sites seeking City development permits.
- D. Encouraging native xeric plantings where new landscaping is required to reduce the need for irrigation.

**Policy 6.1.10.9** - The City shall consider the presence of environmentally sensitive lands in formulating all actions relating to development.

**Policy 6.1.10.10** - To address the impacts of the Grand Haven North FLUM amendment on the area’s environmental resources, a minimum of sixteen (16) acres of similarly situated, adjacent land shall be designated “Conservation” on the Future Land Use Map.







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**Objective 6.1.11 - Tree Mitigation and Protection**

Maintain or increase tree canopy coverage, where feasible.

**Policy 6.1.11.1** – The City will continue to enforce landscape land development regulations and mitigation regulations pertaining to tree loss to maintain canopy tree species. The LDC has been amended to address, at a minimum, the following:

- A. The list of acceptable mitigation tree species shall consist of predominately native tree species.
- B. Site plan requirements that depict the location, scientific name, common name, and size of all trees as specified in LDC requirements.
- C. Mitigation requirements and standards.
- D. Establish criteria for determining specimen/historic size trees and develop specific criteria for protection or mitigation.

**Policy 6.1.11.2** – The City shall seek funding for reforestation and encourage landowners and developers to regenerate the tree canopy by reforesting the areas impacted by the 1998 wildfires and any future uncontrolled wildfire events that may occur.

**Policy 6.1.11.3** - The City shall maintain annual records on tree removals and planting in the City and enforce the Tree Protection Ordinance.

***FINDING:*** *Floodplain areas exist in the City, as depicted on Map 6.2, due to the relatively flat topographic relief of the land surface with only slight elevations of land above sea level. Floodplain areas, when left undisturbed, protect uplands from erosion and flooding caused by overflowing waterways and serve as storage areas for increased stormwater runoff from the upland areas. Removal of portions of land from use as a floodplain area may have the potential to shift flood waters to another area, thus causing more flooding or new flood problems elsewhere. Additionally, as elevations are required to be higher due to construction within floodplain areas, more fill may be required for construction projects, which in turn can result in a loss of existing tree canopy and groundcover due to filling activities.*

*Floodplains also perform certain valuable ecological functions. Floodplains provide the most productive habitat for a variety of wildlife and plant species and also provide valuable wildlife corridors. The Federal Emergency Management Agency (FEMA) currently is*





*reviewing changes to updated Flood Insurance Rate Maps for the City, which should provide additional information about these critical resources. The hydrological and ecological benefits to be gained by proper management and protection of floodplain areas may need to be addressed in more detail in the land development regulations.*

### **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** - The City shall enforce land development regulations and amend the LDC, as necessary, to specify limitations on the encroachment, setbacks, buffer zones, alteration and incompatible land uses in design storm event floodplains. At a minimum, the City shall include the following criteria as the basis for the protection of 100-year floodplains:

- A. Minimization of flood damage and related losses by prohibiting new development within 100-year floodplains unless the structures use elevated lowest first floors or flood proofing, and provide compensating storage.
- B. Protection of appropriate floodplain areas by land acquisition or conservation easements.
- C. Minimum standards for drainage from developments within 100-year floodplains to reduce impacts on adjoining properties or degradation of the quality of the receiving surface water bodies.

**Policy 6.1.12.2** - The City shall continue to participate in the FEMA Community Rating Systems (CRS) program, which involves meeting higher than minimum National Flood Insurance Program (NFIP).

**Policy 6.1.12.3** – The City’s LDC shall be reviewed annually to ensure that it is consistent with the latest available regulations promulgated by the FEMA to reduce property damage and loss of life due to flooding.

**Policy 6.1.12.4** – The City shall 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-two plant species and twenty-two 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, Sherman's fox squirrel, red-cockaded woodpecker, Florida black bear, Florida scrub jay, hooded pitcher plant, and yellow butterwort.*

*Expanding levels of protection for unique upland habitats, wetlands, wetlands 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 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, restriction of 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** – The City shall protect endangered and threatened species through the regulatory authority of FDEP, Florida Fish and Wildlife Conservation Commission (FFWCC), and U.S. Fish and Wildlife Service (USFWS), 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. Based on potential legislative changes, the City shall amend the LDC, as appropriate, to implement this Policy.

**Policy 6.1.13.2** - The City shall use appropriate means to protect listed species and prevent further reductions in the population sizes and habitat through land acquisition, LDC enforcement, environmental review processes for Development of Regional Impact (DRI), the use of the Master Planned Development (MPD) processes, land development application review processes, 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 development activities and during the site plan and subdivision review process, the City shall continue to require applications for development to include 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. When relevant and appropriate, the EA shall include:





- A. Information and findings resulting from the permitting requirements for wetland protection, surface water management, air quality, land clearing, protection of sensitive land and critical habitat, and protection of endangered and threatened species as well as species of special concern.
- B. The listed species survey shall identify areas of favorable habitat and identify known listed species (plants and animals) that may be affected by the specific site development activities. When listed species have been identified, a copy of all appropriate permits for the listed species shall be submitted to the City prior to construction activities.
- C. Environmental conditions for the presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release into the ground, groundwater or surface water of the property.

**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, including but not limited to, gopher tortoise, scrub jay, manatee, bald eagles (requires state management plan), and wood storks (as a listed species) from FFWCC, and USFWS and comply with all permit conditions prior to commencement of any 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.

***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 affect 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** – The City shall enforce land development regulations so that mining, including borrow pit extraction activities, will not adversely affect the quality of air, ground water, surface water, and wildlife.

**Policy 6.1.14.2** – The City shall continue to ensure that mineral, sand and other extraction activities shall be adequately buffered from adjacent existing and future land uses, and shall contain aesthetically pleasing landscape.

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

**Policy 6.1.14.4** – The City shall enforce 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** – The City shall enforce LDC regulations to require developers to indicate on a site plan, areas of highly erodible soils, as defined by the U.S. Department of Agriculture Natural Resources Conservation Service or the Florida Department of Agriculture, and require appropriate measures, including, but not limited to, the use of adequate BMPs, to be implemented to ensure that soil erosion is avoided.

**Policy 6.1.14.6** – The City shall evaluate the impacts of shoreline construction on natural resources, and take all necessary and reasonable actions and amend the LDC, as applicable to protect the environment and the natural functions and appearance of shorelines.

**Policy 6.1.14.7** – The City shall evaluate the desirability of enacting building regulations that either mandate, in appropriate circumstances, non-structural shoreline construction and methods to limit shoreline erosion.





**Policy 6.1.14.8** – The City shall seek funding from State and federal agencies to remediate areas impacted by significant shoreline erosion.

***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, the following: air quality, management and disposal of hazardous materials, water conservation, wellfield protection, energy conservation, native species, stormwater management, wetland protection, code changes, and new regulatory requirements.

**Policy 6.1.15.2** - The City shall provide environmental education and distribute information by: establishing an environmental web page containing informational links within the City Website, public presentations, information boards, distribution of brochures, and specific environmental training for relevant City staff.

***FINDING:*** *With the passing of House Bill 697 and subsequent revisions to Chapter 613, 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 continue to lead by example and will both exemplify and promote environmentally sustainable practices and standards.





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**Policy 6.1.16.1** - Within two (2) years of adoption, the City will develop and implement an Environmental Management System (EMS) Plan that shall serve to inventory and monitor sustainable initiatives to effectively reduce energy demands of public facilities and services. The EMS shall include strategies and methodologies for reaching immediate and long-term goals through annual reporting.

**Policy 6.1.16.2** – To the extent practicable, the City shall implement green building standards for new City buildings and implement sustainable operations for existing facilities.

**Policy 6.1.16.3** - Within two (2) years of adoption, the City shall require energy efficiency in its operations and buildings, and will incorporate, to the extent practicable, non-traditional, sustainable energy options where feasible, so as to be a model for sustainability and to reduce carbon emissions.

**Policy 6.1.16.4** - The City shall continue to utilize environmentally beneficial landscape principles, incorporating low maintenance design and strategies, integrated pesticide management and will incorporate Florida and Neighborhoods elements to re-landscaped City properties as appropriate.

**Policy 6.1.16.5** - Within one (1) year of adoption, the City shall develop a recognition program for citizens, development and commercial community regarding sustainable initiatives.





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## GOAL 6.2: NATURAL DISASTER MANAGEMENT

**Establish growth management strategies that will allow growth to continue within the City and coastal zone area which does 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. Chapter 9J-5, F.A.C. defines the Hurricane Vulnerable Zone as the area subject to evacuation in a Category 3 hurricane event and defines the Coastal High Hazard Area as the evacuation for a Category 1 hurricane, 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 addresses the danger to life and property from hurricanes.

**Policy 6.2.1.1** - The City shall continue to enforce, at a minimum, the Florida Building Code to limit the potential damage of structures from hurricanes and high winds. Enforcement of the Florida Building Code shall include, but not limited to, wind-resistance commensurate with the risk of coastal environment and building elevations requirements that conform with applicable Federal laws, and related City regulations.

**Policy 6.2.1.2** - The city shall continue to require construction standards within the “City of Palm Coast Wind-Borne Debris Region” which is generally located south of Palm Coast Parkway and east of Colbert Lane. The City shall ensure that design standards, for any building permit permitted after March 2012, shall be engineered for a minimum of 130 mph wind.







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**Policy 6.2.1.3** - The City shall 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 City shall identify 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 Hurricane (SLOSH) computerized storm surge model prepared by the Northeast Florida Regional Council for the 2013 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 measures including, but not limited to, the acquisition of property within coastal land and land 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 continue to enforce flood damage protection regulations within V 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 Department of Emergency Services (FCDES), NEFRC, and other relevant State and Federal agencies, develop a pre-hazard and post-disaster mitigation plan and provide immediate response to post-disaster situations via the timely response of a damage assessment.

**Policy 6.2.3.1** – Prior to June 1<sup>st</sup> of each year, the “City of Palm Coast Emergency Plan” shall be reviewed annually and updated as necessary to ensure maximum coordination and





communication with FCDES 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, and the City shall develop a specific post-disaster redevelopment plan in coordination with the FCDES and relevant County and City departments. The purpose of the City’s post-disaster redevelopment plan will, at a minimum, be to:

- A. Repair damaged infrastructure needed to protect health and safety.
- B. Coordinate long-term recovery operations to City infrastructure and public structures.
- C. Include funding and staffing estimates and set priorities for post-disaster activities.

***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 FCDES to provide coordination of resources to local governments and decision-making during disasters. FCDES 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. FCDES 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.*

*Currently, the Statewide Evacuation Study is being updated by the Northeast Florida Regional Council and is not yet complete. Once the study is complete, the City will update the Comprehensive Plan to ensure consistency with the Statewide Evacuation Study.*





**Objective 6.2.4 - Evacuation**

Coordinate with FCDES, 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 2013 Regional Evacuation Study-Northeast Florida Region:

**2020 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	15.0	18.5	20.5	21.0	27.0
Out of County Clearance Time	15.5	19.0	20.5	21.5	27.0

**Policy 6.2.4.2** - The City shall coordinate with FCDES, 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 FCDES, NEFRC, and other agencies to update and employ the hazard mitigation annex of the Peacetime Emergency Plan annually, 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** – The City shall, if a determination is made that deficiencies in hurricane evacuation times or facilities exist, coordinate with FCDES, NEFRC, and other agencies to analyze, plan for, and address all noted deficiencies.





**Policy 6.2.4.5** – The City shall coordinate with FCDES, FDOT, NEFRC, and/or other relevant State or federal agencies to identify street and other improvements to the hurricane evacuation street network based upon the number of people who cannot be evacuated within an optimum evacuation time limit.

**Policy 6.2.4.6** – The City shall update the Comprehensive Plan to ensure consistency with the Statewide Evacuation Study.

### **Objective 6.2.5 - Provision of Shelter Space**

Provide 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 FCDES and other relevant local governments, 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 the FCDES, NEFRC, and/or other relevant local governments to prepare and update an inventory for special needs population and ensure that adequate shelters are available to accommodate their needs and to establish a program to assist the special needs population in evacuation and sheltering.

**Policy 6.2.5.3** – The City will encourage existing recreational, mobile or manufactured housing communities to provide emergency shelter for their residents.

**Policy 6.2.5.4** – The City shall develop a hazard mitigation strategy in the LDC which prohibits the development of new recreational, mobile or manufactured housing and the expansion of existing recreational, mobile or manufactured housing unless the developer/owner has provided emergency sheltering sufficient to house a minimum of 50% of the residents of that development.

**Policy 6.2.5.5** – The City shall support the Flagler County School Board in their efforts to utilize enhanced hurricane shelter protection standards for all reconstruction and new developments in accordance to Florida Law.

***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 6.2.6 - Firewise Planning**

Protect life, property, and the economy by eliminating or minimizing the present and future vulnerability to wildfire hazards.

**Policy 6.2.6.1** - The City shall carefully consider all land uses in areas at risk from wildfire and restrict or prohibit certain land uses as necessary to assure public health, safety, and welfare and the protection of property. Land uses and specific development plans for which adequate wildfire mitigation cannot be provided, or that would preclude or severely limit the use of wildfire mitigation or natural resource management options such as prescribed fire, shall not be authorized in severe wildfire hazard areas.

**Policy 6.2.6.2** - The City shall continue to identify areas with high wildfire risk and enforce LDC regulations implementing mitigation strategies.

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

**Policy 6.2.6.3** – 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.





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- 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 6.2.6.4-** The City shall coordinate with the Florida Division of Forestry 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. The City shall amend the LDC, if necessary, to implement this Policy.

**Policy 6.2.6.5-** 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 6.2.6.6 -** The City shall seek funding from public and private agencies to assist in the development and enhancement of wildfire mitigation programs and practices.





**Explanation of items that are not applicable to the City of Palm Coast Rule 9J-5.012, F.A.C.**

- 9J-5.012(2)(c)** See Future Land Use Element for an inventory and analysis of historic resources and sites.
- 9J-5.012(2)(f)** There are no beaches or dune systems located within City limits.
- 9J-5.012(2)(h)** A separate inventory of infrastructure in the coastal area is not included because Palm Coast is not listed in the document entitled “Local Governments Required to Include Coastal Management Elements in their Comprehensive Plans,” dated July 1, 1986. Although not required to submit a separate coastal element, Palm Coast has combined requirements 9J-5.012 into the Conservation Element, thus creating a Conservation/Coastal Element. Palm Coast does not contain a beach within the City jurisdiction. See Transportation element and Infrastructure element for infrastructure inventories.
- 9J-5.012(3)(b) 4 and 9** There are no beaches or dune systems located within City limits.
- 9J-5.012(3)(b) 10** See Future Land Use element for protection and preservation of historic resources.
- 9J-5.012(3)(c) 10** There are no beaches located within City limits.
- 9J-5.012(3)(c) 11** See Future Land Use Element for historic resource protection and site identification.
- 9J-5.012(3)(c) 12** There is no deep-water port located within the City limits.
- 9J-5.012(3)(c) 13** See Transportation Element and Infrastructure Element for infrastructure inventories
- 9J-5.012(4)** The City does not participate in a marina-sitting plan.
- 9J-5.012(5)(a-e)** There is no deep-water port located within City limits.
- 9J-5.013(1)(A) 4** There are no areas known by the local soil and water conservation district to have experienced soil erosion problems within the City limits.

**Notes:**

1. The criteria and policies for preserving historic and archaeological resources are detailed in Future Land Use element of the Comprehensive Plan.





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2. As required by Chapter 163.3177(6)(d), FS, an Energy Conservation map has been created for use in the Transportation Element of the Comprehensive Plan.
  
  3. The City has determined that the Level of Service standards established elsewhere in the Comprehensive Plan are sufficient to serve development and redevelopment in the coastal area.

