

Section 9: Protection Techniques

Current Protection Policies and Techniques

Each State Park located along the Corridor has a developed Management Plan that provides for the protection of their resources. The Florida State Parks system preserves representative portions of the state's original natural lands for all time, and makes them accessible for public enjoyment and recreation. The state park system has grown to encompass over 600,000 acres of diverse conservation lands - a substantial and irreplaceable part of the public's natural heritage. However, simply acquiring land does not ensure preservation of its resources. The lands must be actively managed to retain the values for which they were acquired.

The health of Florida's ecosystems depends on dynamic natural processes associated with fire, hydrology, and a delicate ecological balance between native species. The State Park resource management goal is to restore and maintain the original landscapes of Florida State Parks by reestablishing these processes. In this way we insure that citizens and visitors experience healthy old-growth forests, wildflower-blanketed prairies, free-flowing springs, and an abundance of diverse native wildlife in The Real Florida.

Natural resource management of the uplands in Florida State Park system involves four major activities: prescribed burning, invasive exotic species control, hydrological restoration, and other kinds of habitat restoration. Most of this work is done by park staff as a part of their day to day activities, which also include the many other aspects of providing recreational facilities and opportunities.

The Scenic Highway section of the Transportation Element of Ormond Beach's and Volusia County's Comprehensive Plans specifically provides protection for Scenic Highways. Scenic Highway designation will protect the Corridor from the introduction of Outdoor Advertising Structures (billboards) along roadways that are a part of the State Highway System. Further protection in the form of an overlay Zoning District is one of the adopted Strategies of the Corridor Management Plan.

Volusia County and the City of Ormond Beach have Land Development Regulations that control growth and development and help to protect the Corridor's intrinsic resources. These Codes regulate the removal of trees, the landscape requirements for new developments, the preservation of wetlands, the buffering requirements between different uses, the landscaping requirements for parking areas and the size, number and installation of signage.

The development of the CMP builds upon the hard work completed by stakeholders to date. Volusia County's and City of Ormond Beach's Comprehensive Plans address numerous areas of protection for the eligibility elements. Volusia County and the City of Ormond Beach Future Land Use elements in their Comprehensive Plans direct growth to maintain the County's/City's character.

The Transportation Element of Volusia County's Comprehensive Plan identifies all the County roadway facilities along the Loop as constrained roads by County Policy. In addition, it designates The Ormond Scenic Loop & Trail Corridor as scenic. The City of Ormond Beach has designated Beach Street and John Anderson Drive

within the City limits as scenic roads. The City of Ormond Beach has also designated John Anderson Drive and North Beach Street within the city limits as Canopy Roads in the Land Development Code and set protections for existing trees allowing for mitigation of tree canopy should the road be expanded.

The Conservation Element of the Volusia Comprehensive Plan supports the Natural Resources Management Areas (NRMA) through special use areas with an Environmental System Corridor (ESC). This element stresses the importance of connectivity of natural resources. This element protects the headwaters of the Tomoka River and Tomoka Basin. It also addresses manatee protection, specifically the importance of protecting critical habitat, regulating and enforcing boat speeds, using signage to designate manatee areas, and the dissemination of educational materials. The ESC encompasses much of the land area around the Intracoastal Waterway.

Additionally, Ormond Beach and Volusia County have a Coastal Management Element in their Comprehensive Plans. The plans purpose is to plan for and, where appropriate, restrict development activities where such activities would damage or destroy coastal resources, protect human life and limit public expenditures in areas that are subject to destruction by natural disaster. The Coastal Management Elements addresses land use, water quality, beach and dune systems, coastal hazards, public access, public services, and intergovernmental coordination. This element specifically protects watersheds/water bodies and includes the Tomoka and Halifax Rivers.

The Recreation, Open Space, and Historic Preservation Elements of the Volusia County Comprehensive Plan provide protection and guidance for historical and recreational resources along the Corridor. Similarly, the City of Ormond Beach's Cultural Affairs Element and Recreation and Open Space Element serve as guidance within the City limits.

Volusia County's Land Development Ordinance provides regulations to implement the Comprehensive Plan for development and management of public and private lands within Volusia County. The City of Ormond Beach implements its Comprehensive Plan through its Land Development Code.

The St. Johns River Water Management District (SJRWMD) regulates water quality impacts. An Environmental Resources Permit from the SJRWMD is required for every development that adds more than 5,000 square feet of impervious area. These permits are based on the treatment of stormwater runoff based on pre and post conditions and typically require on-site retention and treatment. This is to ensure that stormwater runoff is not carrying pollutants into surface water bodies and to provide aquifer recharge.

Related Goals, Objectives and the specific Strategies are:

- Strategy 1.4.1 Create overlay district.
- Strategy 1.4.2 Coordinate, monitor, and establish public and private signage standards for the scenic corridor.
- Strategy 1.4.3 Bury utilities.
- Strategy 1.4.4 Create and implement a master plan that will strategize and coordinate overall long and short-term activities along the corridor including the management of vegetation, land acquisition, scenic easements, design of improvements and new construction.

The Master Plan shall include:

- Bus shelters;
 - Bike rest stops;
 - Water fountain facilities;
 - Trash receptacles; and
 - Signage/information kiosks indicating location of public facilities (i.e. restrooms and water).
- Strategy 1.4.5 Add Scenic Highway protections to the City of Ormond Beach and Volusia County Comprehensive Plans.
 - Strategy 2.1.1 Develop a standard Ormond-by-the-Sea signage program as part of Overlay District.
 - Strategy 2.1.2 Coordinate with jurisdiction entities to develop/implement the signage program.
 - Strategy 2.2.2 Adopt an Overlay District with design standards.
 - Strategy 5.3.1 Develop a sign inventory.
 - Strategy 5.3.2 Coordinate with jurisdictional entities.
 - Strategy 5.3.3 Develop signage plan for roadway.

Action Plan 1-1, 1-4, 1-5, 3-3, 3-3 and 3-4

Ormond Beach Comprehensive Plan

Transportation Element Goals, Objectives, Policies

Ormond Beach, Florida

2010 Comprehensive Plan updated April 1, 2004

Objective 1.5

The city shall promote alternate modes of transportation through the construction of bike paths and pedestrian facilities, and the use of mass transit, and shall promote pedestrian safety. The City shall strive to attain a five percent modal split for transit, bicycle, and pedestrian traffic, and reduce pedestrian fatalities as much as possible.

Policy 1.5.1

Ormond Beach will maintain and continue to implement regulations within its Land Development Code for the safe and efficient movement of pedestrians within all new platted development.

Policy 1.5.2

Bikepaths shall be established where feasible on one side of every arterial (except I-95) and collector street with sidewalks established on the opposite side of the street.

Measure: Number of bikepaths and sidewalks constructed.

Policy 1.5.3

New commercial, industrial, and residential developments shall provide bus stop improvements if located on existing or proposed bus route and shall provide transit information to employees and/or residents.

Measure: Percentage of applicable projects providing.

Policy 1.5.4

Pedestrian safety shall be incorporated into the design of all new developments. Pedestrian activated walk signals shall be considered at signalization intersections in downtown Ormond Beach, at beach access points, and at other appropriate areas as warranted.

Measure: Number of intersections studied for walk signal warrants.

Policy 1.5.5

The City shall implement its adopted Sidewalk Master Plan to add sidewalks to existing roadways including funding sources and an implementation schedule.

Measure: Status of program in 2001.

Policy 1.5.6

The City shall request that VOTRAN establish a new bus route along US 1 from north of Ormond Beach to Port Orange with short headways and low fares to serve the shopping centers, employment centers, governmental offices, and other major generators located along US 1, as well as provide an alternative to the automobile for trips to the corridor.

Measure: Whether or not route is established by VOTRAN.

Policy 1.5.7

The City shall request that all major employers within the City consider implementing Transportation System Management techniques such as flextime, parking policies, carpools, vanpools, or alternate work schedules for their employees to spread the peak travel times in the City.

Measure: Number of employers who implement alternative work schedules.

Policy 1.5.8

Coordinating with the mass transit provider (VOTRAN), the City will help facilitate the additional bus bays to all non-limited access arterial roads in the City at VOTRAN bus stop locations when the roads are constructed or widened.

Objective 1.10

The City's transportation system shall be designed to promote aesthetics through the creation of overlay districts and the provision of appropriate landscaping of medians which will not adversely impact public safety. Landscaping will primarily consist of grass and low height plantings.

Policy 1.10.6

The City shall formally recognize and provide appropriate protection for scenic highways and roadways including John Anderson and Beach Street.

Measure: Number of scenic roads recognized.

Policy 1.10.7

Transportation improvements shall be evaluated by the Ormond Beach Historic Landmark Preservation Board for possible effects on properties listed or eligible to be listed on the National Register. Also, such improvements shall be consistent with the "Volusia County Scenic Road Element" and program. Impacts to historic resources shall be avoided to the maximum extent possible.

Future Land Use Element Goals, Objectives, and Policies

Ormond Beach, Florida

2010 Comprehensive Plan updated April 1, 2004

Goal 3: Historic Resources

Older buildings provide continuity of social heritage and give a community distinctiveness that sets it apart from other towns, cities, or neighborhoods. The destruction of older buildings often results in a tragic loss of community identity. Ormond Beach is fortunate in that its historic residential neighborhoods consist of buildings that are in good to excellent condition and will probably continue to be well maintained on a voluntary basis. However, decisive preservation action needs to be continuously applied both to the historic site itself as well as to the potential impacts of new adjoining development. The City shall identify and preserve the historic archaeological, architectural, and paleontological resources that represent the city's past.

Objective 3.1 Inventory of Historic, Archeological, and Paleontological Resources

The City shall continue to identify significant historic resources and add them to the existing historic properties survey. The inventory shall also include significant architectural, archaeological and paleontological resources.

Policy 3.1.1

By 2000, a local historic resources master file shall be updated to include all relevant resources identified by local outside agencies, providing information for each regarding significance, architectural style, date of construction, present condition, current and previous owners, and current and previous uses. The file should also include photographs of the resources where possible.

Policy 3.1.2

The master file shall be updated regularly to reflect changes in ownership, condition, or appearance of the resources. Such updates shall be coordinated with the appropriate Federal, State and County authorities.

Objective 3.2 Nomination of Landmarks

Upon property owner's approval, each historic resource shall be evaluated for eligibility of either local or National nomination.

Policy 3.2.1

Apply the site designation criteria to all the landmarks identified in the inventory, and determine their eligibility for local listing.

Policy 3.2.2

On a continuous basis, the City shall identify resources, which are deemed eligible for National listing by qualified historic preservation professionals and submit nomination forms, upon owner's approval, for review by the Florida National Register Review Board.

Objective 3.3 Protection of Historical, Architectural, and Archaeological, and Paleontological Resources

The City shall protect historic, architectural, archaeological and paleontological landmarks from alteration, destruction or demolition.

Policy 3.3.1

The City shall continue to implement the historic preservation ordinance that protects historic landmarks from alteration or demolition, and apply it to architectural, archaeological and paleontological resources as well. The Historic Landmark Preservation Board is the designated review board.

Policy 3.3.2

If, during the course of development activity or any other on-site activity, archaeological or historically significant resources are discovered, then that activity shall cease until the appropriate City Departments and State agencies have been notified. Where the City can determine that there is a high probability that such resources may be discovered or disturbed, the developer shall be notified through the site plan review process and site inspection activities shall be increased in this regard.

Policy 3.3.3

By 2001, establish standards for the rehabilitation and adaptive reuse of historic properties so that their historic integrity will be preserved.

Policy 3.3.4

The City shall identify and establish historic districts as a way of unifying scattered historic resources, protecting the landmarks from alteration and demolition, protecting the historic resources from negative impact from new development occurring in the same area, and protecting the general character of historically significant neighborhoods.

Policy 3.3.5

By 2001, the City shall establish design criteria for signs and street elements that would enhance and promote the integrity of historic resources.

Policy 3.3.6

On a continuous basis, the City shall study alternative programs such as density transfer tax abatements, easements or purchase that would make the preservation of marginal historic structures financially feasible.

Objective 3.4 Creation of the Old Ormond Historic District

The City shall establish the Old Ormond Historic District in the area generally bounded by Wilmette and Neptune Avenues on the north, Division Avenue and Willis Drive on the south, Ridgewood Avenue on the west, and Halifax Drive, Hotel Street and John Anderson Street on the east.

Policy 3.4.1

The Historic Landmark Preservation Board shall work with staff and property owners to identify specific boundaries where at least 20% of the property owners consent to the designation and at least 40% of the structures have been classified as historic.

Policy 3.4.2

By 2001, district regulations shall be drafted in order to protect the character of existing properties and to prevent negative impact from new developments in the area. The regulations shall include color, materials, and architectural guidelines, based on a detailed survey identifying the predominant features of the area.

Policy 3.4.3

The Historic Landmark Preservation Board shall review the impact of new development and renovation projects in the area.

Policy 3.4.4

By 2000, the City shall develop a plan to provide streetscape elements such as pavers, street lamps, street signs, and historical markers that would create a common theme for the district (this objective and these policies were amended by Ordinance 93-14, adopted on April 6, 1993).

Objective 3.5 Citizen Awareness and Participation

The City shall inform the public about historic preservation activities and resources in the City.

Policy 3.5.1

By 2001, the City, through historic preservation organizations, should develop an educational campaign to acquaint residents with the wisdom of preserving their historic buildings and neighborhoods and the social and economic value of restoring older buildings.

Objective 4.3 Preservation of Natural Flora and Fauna

The City shall encourage developers to incorporate, to the extent feasible, retention of natural vegetation in project design and ensure that significant aesthetic and natural features are not destroyed.

Policy 4.3.1

All new developments shall be reviewed for potential adverse environmental impacts.

Policy 4.3.2

The City shall maintain on-going programs that identify and preserve unique aesthetic and natural features.

Policy 4.3.3

The City shall, in cooperation with Volusia County, monitor and analyze surface water quality in the Tomoka River and Halifax River. The City shall take remedial action and adopt new regulations, as appropriate to maintain or improve its quality.

Conservation Element Goals, Objectives, and Policies

Ormond Beach, Florida

2010 Comprehensive Plan updated April 1, 2004

Objective 1.3

The City shall continue to promote intergovernmental coordination to maintain or improve the water quality, water quantity, recreational, and fish and wildlife resource values of the Halifax River, the Tomoka River, and their tributaries.

Policy 1.3.1

On a continuous basis, the City shall support and promote programs to improve natural tidal flushing action for the Halifax River to restore ambient water quality.

Policy 1.3.2

The City shall coordinate its water quality testing program with appropriate State, regional, and local government testing programs to ensure efficient use of resources and to eliminate duplication of effort.

Policy 1.3.3

In cooperation with State, regional, and local agencies, including the Volusia County Sheriff's Department, the City shall develop a river safety program that utilizes to the maximum extent possible miscellaneous media sources, newspaper advertising, signs, and literature to prevent surface water pollution, to protect manatees and other wildlife, and to promote proper boating safety standards.

Objective 1.4

The City shall continue to review development proposals and establish programs to balance the functioning values of the Halifax River and the Tomoka River in order to maintain an optimum combination of aesthetic, ecological, recreational, and historical resources.

Policy 1.4.1

On a continuing basis, the City shall coordinate the identification and protection of significant archaeological, ecological, historical, and paleontological sites under and along the Tomoka River with other agencies and private organizations. This shall include promoting studies by colleges, universities, and researchers and requiring archaeological studies by developers for projects in areas that may contain significant resources.

Policy 1.4.2

On a continuous basis, the City shall encourage college and university studies of the Halifax and Tomoka Rivers.

Policy 1.4.3

On a continuous basis, the City shall seek to acquire suitable property to meet public access requirements adjacent to the Tomoka River and its tributaries and the Halifax River for passive park and canoe access facilities.

Policy 1.4.4

In order to effectively monitor the effects of development activities on surface water conditions, the applicant or its successors shall provide, as determined by the City, the establishment and operation of a surface water and wetland biological monitoring program.

Policy 1.4.5

In calculating maximum potential density or maximum permitted density for any given parcel of property.

Goal 5

The City shall provide for the protection, enhancement, and management of significant natural vegetative communities in order to maintain their ecological, aesthetic, economic and recreational values.

Objective 5.1

The City shall maintain and periodically review standards and programs that maintain upland ecological communities to the maximum extent feasible within the City.

Policy 5.1.1

An inventory of natural vegetative communities shall be provided by the applicant for all development proposals requiring site plan or plat approval. The applicant shall provide a plan for protection of species which are designated by either State or Federal agencies as endangered, threatened, or of special concern.

Policy 5.1.2

The City shall maintain, refine, and expand its FLUCCS inventory and make such information available to land developers.

Policy 5.1.3

Ecologically viable portions of natural upland plant communities including, but not limited to, rare or endangered ecosystems within proposed urban development sites, should be preserved and maintained in their original state, to the greatest extent practicable.

Policy 5.1.4

The City shall maintain and periodically review provision in the Land Development Code to preserve the upland buffers of native vegetation; significant habitat area (including wildlife corridors); scenic vistas; areas where native vegetation is important to impede erosion, and other areas where the public interest is best served by preserving native vegetation.

Policy 5.1.5

The City shall maintain and periodically review standards that preserve the present forested tree cover to the maximum extent practical.

Policy 5.1.6

The City shall preserve designated canopy roads and Greenbelts as implemented by the Land Development Code.

Policy 5.1.7

The City shall minimize the clearing of trees for rights-of-way, to protect existing habitats as implemented by the Land Development Code.

Policy 5.1.8

Significant mesic or xeric communities shall not be disturbed or affected by water detention, retention, or reuse activities or structures as implemented by the Land Development Code.

Objective 5.2

Balance the combination of aesthetic, ecological, recreational, and utilitarian qualities of the land for the long-term public interest.

Policy 5.2.1

Require habitat corridors and buffers of sufficient length and width to protect the long-term viability of significant habitat areas, for designated plant and animal species.

Policy 5.2.2

The development plan review process shall consider the overall impact of a project on adjoining ecosystems based on Ecosystems Management Practices.

Policy 5.2.3

Require property owners to protect wetland systems in accordance with the criteria and standards for each wetland classification as noted under Objective 5.4 of this element and in the City Wetlands Protection Section of the Land Development Code, Chapter 3, Article II. Flexibility may be allowed for industrial land uses as provided under Policy 5.4.47.

Policy 5.2.4

In cooperation with adjacent governmental entities, ensure the survival of significant habitat areas, habitat corridors and specimen trees.

Policy 5.2.5

Work with adjacent governmental entities to ensure that planned wildlife corridors are contiguous with and provide for unimpeded movement of wildlife.

Policy 5.2.6

Manage undeveloped City-owned lands for the long-term public interest, doing so in a manner by which the City sets an example for private development to follow. For example, the City should follow Ecosystems Management Practices as defined by the Department of Environmental Protection when applicable.

Policy 5.2.7

Development may incorporate isolated wetlands into effective stormwater management systems, provided that the stormwater runoff is treated prior to entering any wetland system, so that the wetland is used for nutrient and volume attenuation.

Policy 5.2.8

Make land use decisions in conjunction with the carrying capacity of the land and its ecosystems.

Policy 5.2.9

On a continuous basis, the City shall study and upgrade as necessary its buffer width requirements for projects abutting waterways and wetlands.

Policy 5.2.10

On a continuous basis, the City shall upgrade as necessary its standards for Class I, Class II, Class III, and Class IV wetlands.

Policy 5.2.11

On a continuous basis, the City shall coordinate and cooperate with contiguous governmental entities to protect environmentally sensitive vegetative habitats which extend into contiguous jurisdictions.

Policy 5.2.12

The area of land disturbed by development shall be as small as practicable. Those areas which are not to be disturbed shall be protected by an adequate barrier from construction activity. Whenever possible, natural vegetation shall be retained and protected.

Policy 5.2.13

Land that has been cleared for development and upon which construction has not commenced shall be protected from erosion by appropriate techniques designed to revegetate the area.

Policy 5.2.14

Wherever feasible, site design shall accommodate any designated plant species with protected status which are in the path of development; where this is not feasible, these plants will be relocated to protected sites having appropriate growing conditions, whenever possible.

Goal 7

The City shall provide for the protection and sensitive use of natural resources through development regulations and public programs.

Objective 7.1

The City shall support the acquisition of unique or environmentally significant properties for public conservation reservations and maintain its proposed level-of-service for passive parks.

Policy 7.1.1

Upon adoption of the Comprehensive Plan, the City shall require developments along the Tomoka River and its tributaries with individual properties of five acres or larger to include all Class I and Class II wetlands in a conservation easement to the City. The easement shall not prohibit the construction of an elevated wooded catwalk to the waterway, provided the construction is done in the most environmentally sound manner. Developments, when property along a waterway or wetland is divided into tracts of less than 5 acres, shall put those wetlands in either public or semipublic (e.g. homeowner's association) control; properties with multiple riparian ownership of less than 5 acres which are under homeowner association control shall grant a conservation easement to the City. For lots of less than 5 acres, if part of a subdivision project, only one community dock shall be allowed.

Policy 7.1.2

On a continuous basis, the City shall consider acquisition of vacant lands abutting the Tomoka River, its tributaries, Dodson Creek and the Halifax River.

Policy 7.1.3

The City shall, in coordination with local and State agencies, participate in a strategy to acquire environmentally sensitive lands.

Objective 7.2

All development activities shall properly assess impacts on the environment and provide an effective mitigation plan as required.

Policy 7.2.1

The City shall require Environmental Assessment Reports for all planned unit developments, subdivisions, and other development that must comply with the special requirements of the residential suburban zoning district and that must prepare a water management plan in accordance with the provisions of the Land Development Code. The following criteria shall apply in implementation of this policy:

Floodplains:

- Identify boundaries on a site plan and determine amount of acreage in and out of the floodplain.

- Demonstrate compliance to Flood Damage Control Ordinance that limits fill.
- Discuss methods which will be used to compensate for the potential flood hazards.

Vegetation:

- Provide a survey of specimen trees and demonstrate compliance to the City Tree Protection Standards.
- Map of natural systems.
- List of vegetation and identification of endangered and threatened species or species of special concern; specify their ecological function, health, and condition.
- Indicate acres of each natural system found on the site.
- Describe what alterations and disturbances to the wetlands are proposed and what areas will be preserved in their natural state.
- Prepare a wetland management plan, if necessary.

Soils:

- Identify and describe soils on the site.
- Map of soils and soil borings.
- Analysis of suitability of soils to development.

Legal Constraints:

- Identify environmental constraints based upon law or regulation, including comprehensive plan performance standards.
- Identify the nature and boundaries of the legal constraints (i.e., Department of Environmental Protection, St. Johns River Water Management District, and Army Corps of Engineers jurisdictional boundaries).

Wildlife Habitat:

- Demonstrate what wildlife nest, feed, reside on or migrate to the site and describe measures to be taken to protect this wildlife and their habitat areas.
- Inventory wildlife areas.
- Map habitat areas for species of special concern, threatened species, and endangered species.

Archaeological and Historical Sites:

- Identify and map possible sites.
- Describe measures to protect sites.

Water:

- Describe existing hydrologic conditions (ground and surface water) on and abutting the site.
- Describe, in terms of water quality parameters, the existing ground and surface water quality conditions on and abutting the site which will be influenced by development.

Air Quality:

- Describe impact, if any, of the air quality index.
- Describe, if applicable, the proposed industrial development plan and impacts.

Water Management Plan:

- Develop a written report meeting the criteria of Chapter 2, Article V of the City Land Development Code.

Mitigation Measures:

- Comprehensive assessment of the impact of the proposed project on the natural values and functions of the area.
- Identify all the important environmental consequences that are likely to result from the development and proposed mitigation measures.

Policy 7.2.2

Policy 4.1.1 of the Future Land Use Element designates environmentally sensitive lands. The enhancement of natural resources, specifically environmentally sensitive lands, is accounted for by Goal 4 of the Future Land Use Element.

Coastal Element Goals, Objectives, and Policies

Ormond Beach, Florida

2010 Comprehensive Plan updated April 1, 2004

Objective 2.3 Protection of Flora

The maximum amount of protection possible shall be provided for existing trees and other vegetation in order to assist in the control of flooding, soil erosion, dust, heat, air, and noise pollution and to improve the appearance, environmental character, and value of the total urban area and to protect nearby properties.

Policy 2.3.1

All new development and expansions of existing development, except for single-family homes in an existing subdivision, shall provide for the protection of native vegetation on the site. Existing developments should utilize native plants in common areas (entranceways, pavilion) in instances where replanting or relandscaping becomes necessary.

Policy 2.3.2

The City shall continue to designate and administer standards for the Scenic Roads Overlay District which includes all lands within fifty feet of the centerline for those roads designated pursuant to the Land Development Code.

Policy 2.3.3

Native vegetation shall be used to the maximum extent possible to meet landscaping and open space requirements.

Policy 2.3.4

Exotic plant species, as listed as exempt species in Chapter 3, Article II of the Land Development Code shall be removed from development sites during the time of construction.

Policy 2.3.5

Development shall preserve fifty percent of ecologically viable portions of natural upland plant communities, including rare or endangered ecosystems, present on-site.

Objective 2.4 Fish and Wildlife

The City shall protect and preserve the City's fish and wildlife habitat areas from development practices which may jeopardize their ecological and economic value and shall maintain and restore habitat areas under public ownership.

Policy 2.4.1

The entire area within the City limits shall continue to be designated a bird sanctuary.

Policy 2.4.2

No dredging or filling shall be performed within designated estuarine waters, except for those occasions when there is an overriding public interest or for private access to recreational facilities.

Policy 2.4.3

Activities within the estuaries that will adversely impact seagrass beds and other valuable submerged aquatic vegetation shall be prohibited, unless an overriding public interest can be shown and adequate mitigation and monitoring measures are included.

Policy 2.4.4

The City shall continue to administer and effectively enforce Chapter 2, Article II of the Land Development Code to protect the threatened and endangered sea turtles from the emission of light from areas on or adjacent to the beach. Additionally, the city shall consider financially supporting volunteer organizations that help relocate sea turtles to safe nesting areas.

Policy 2.4.5

The disturbance of sea turtle nesting areas shall be prohibited.

Policy 2.4.6

The City shall encourage the County to restrict mechanical beach cleaning activities during the nesting period for sea turtles.

Policy 2.4.7

Manatees shall be protected through the regulation of boat speeds and the prohibition of marinas in the designated Tomoka River Manatee Sanctuary.

Policy 2.4.8

The City shall, in cooperation with various governmental agencies, adopt a Wildlife Corridor Management Plan along the Tomoka River, similar to, but not less than six hundred foot St. John's River Water Management District (SJRWMD) Tomoka River Riparian Habitat Protection Zone, to maintain and enhance the riparian wildlife diversity. In the interim, the City shall continue to preserve contiguous wetland systems and review development proposals with the intent of maintaining the diversity of riparian wildlife.

Policy 2.4.9

The City shall support a manatee public awareness program (in consultation with FDEP Volusia County) which will include the posting of signs to advise boat users that manatees are an endangered species which frequent the waters of the region's estuaries and lagoons and the provision of manatee literature at conspicuous locations.

Policy 2.4.10

In order to maintain good water quality in stormwater management detention ponds and maximize the provision of fish and wildlife habitat, stormwater management systems with permanently wet detention ponds shall be designed, operated, and maintained so as to resemble a natural pond to the greatest extent practicable. A natural pond design should include: a littoral zone comprised of native emergent and submerged aquatic macrophytic vegetation; a deep, open-water limnetic zone free of rooted emergent and submerged vegetation; and, where feasible, an upland buffer of native trees, shrubs and understory vegetation.

Goal 3 Beach and Dunes

The City shall protect, enhance, and restore the functioning of the beach dune systems and regulate development activities that would damage or destroy such systems.

Objective 3.1 Beach and Dune Assessment Report

The City shall require multi-family, tourist/commercial, and subdivision shoreline development and redevelopment proposals along the Atlantic Ocean to submit a Beach and Dune Assessment Report, which is to include a form with a checklist of items to be submitted. The following policies shall apply in implementation of the objective that a beach and dune assessment report be prepared.

Policy 3.1.1

The following Policies shall apply in implementation of the Objective that a Beach and Dune Assessment Report be prepared:

- Demonstrate compliance to City, County, State, and Federal regulations.
- Delineate the Coastal Construction Control Line on a plat.
- Describe and map the natural systems on the site and adjacent to the site, including the active beach zone and vegetated dune.
- Determine development impact on hurricane evacuation routes and the level-of-service standard of 6 hours for clearance time and 14 hours for total evacuation time.
- Describe methods to prevent and/or mitigate damage to the stabilizing vegetation on the dunes.
- Demonstrate compliance to Chapter 2, Article II of the Land Development Code.
- Determine the wind velocity for a 100-year storm event for the site and design the structure to withstand the 100-year storm.
- Describe methods to prevent surface water flow and storm surges from undermining the structure.
- Architecturally design the structure to maximize protection against storms.
- Provide copies of permits, reports, etc. as required by County and State agencies.

Objective 3.2 Dune System Preservation and Protection Standards

The City will regulate new development and redevelopment and monitor existing development to preserve and protect the dune system, as implemented in the Land Development Code.

Policy 3.2.1

The City shall regulate new construction activities seaward of the Coastal Construction Control Line consistent with the policies of the Department of Environmental Protection.

Policy 3.2.2

The City shall coordinate with the Florida Department of Environmental Protection to ensure the preservation and maintenance of beach/dune vegetation.

Policy 3.2.3

Because beach/dune vegetation will provide the varying degrees of continued growth of the dunes which form a buffer area and give protection from storm damage to coastal structures and property, the following general standards for development shall be established in cooperation with DEP:

- To protect the crest and face of the dune system, which is the area closest to the wind and wave action of the active beach where grasses such as sea oats, vines, and other low-lying plants are dominant, the area seaward of the bulkhead line will be preserved such that no

development or construction activities shall be allowed except in the overriding public interest and then only when such alteration is mitigated by the creation of dunes at a 4 to 1 compensatory dune mitigation ratio.

- When vegetation seaward of the bulkhead line is sparse or has been damaged by pedestrian or other activities, revegetation shall be undertaken.
- 20% of the natural dune vegetation remaining on the site shall be preserved.

Policy 3.2.4

The City shall require, to the maximum extent possible, the use and preservation of existing natural vegetation.

Policy 3.2.5

Policy owners shall be required to seek advice from the Department of Environmental Protection before the cutting, pruning, or removal of beach/dune vegetation.

Policy 3.2.6

Alternatives to seawalls shall be encouraged with priority given to soft engineering techniques, such as sand nourishment, the development of new sand dunes, or the enhancement of existing or historical dunes. Any beach stabilization measure shall be required to provide for dune preservation enhancements, creation or restoration.

Policy 3.2.7

Excavation and clearing of properties abutting the beach or containing significant dune systems shall provide for the sensitive reuse of the vegetation and sand by transplantation and relocation in order to reestablish the dunes. Significant dune systems located seaward of the Coastal Construction Control Line that are excavated or disturbed for development and construction shall be mitigated by the creation of dunes at a dune compensatory mitigation ration of 2 to 1. Dune creation shall occur on-site or as close to the site as possible.

Policy 3.2.8

Exotic trees and plants not indigenous to the beach and dune environment shall be prohibited. Exotic plant species removed shall be in conjunction with Policy 2.3.4. Removed plants shall be replanted with native species as deemed appropriate by the City's Landscape Architect.

Policy 3.2.9

Reconstruction or replacement of existing hard erosion control structures along the oceanfront which are more than seventy-five percent destroyed shall meet the criteria contained under Objective 3.4, except for maintenance and care of structures which are needed to protect evacuation routes and public facilities and utilities. Any such reconstruction or replacement shall be done in conjunction with State Statutes.

Policy 3.2.10

Structural development along beaches fronting the Atlantic Ocean shall enhance and not further degrade the coastal beach and dune system. The following criteria shall apply in implementation of this Policy:

- Shoreline buffer zones shall be established to protect and preserve the coastal beach and dune systems fronting the Atlantic Ocean.
- Structures shall be prohibited within the established buffer areas except where an overriding public interest is apparent for public park and recreation facilities, or for structures that are necessary for reasonable access and are elevated above the dune vegetation.
- Buffer areas shall be measured at least thirty (30') feet landward from the bulkhead line or measured in accordance with the criteria of the Land Development Code which states that no structures are allowed to extend beyond a line projected between the average of the existing buildings rear setback within 800' to the north and south of the site.

Policy 3.2.11

The City shall utilize outside technical assistance and expertise available in the coastal geology/engineering field within the FDEP, school system, or other local governments to aid in the review of development proposals along the Atlantic Coastline that may potentially harm the beach and dune system.

Policy 3.2.12

Sand fences should be allowed, provided they are designed and constructed to maximize dune rebuilding and minimize disturbance to sea turtle nesting areas.

Goal 4 Historical, Archaeological, and Paleontological Resources

Consistent with the Future Land Use Element, the Housing Element, and the Cultural Affairs, Recreation and Open Space Element, the City shall protect and preserve historical, archeological, and paleontological resources.

Objective 4.1 Historic Overlay District

The City shall consider the creation of historic overlay districts to protect significant historic areas.

Policy 4.1.1

District Regulations contained in Article X of the Land Development Code shall be maintained and periodically reviewed in order to protect the character of existing properties and to prevent negative impacts from new development.

Policy 4.1.2

The Planning Department shall perform a detailed survey to identify the predominant architectural features, colors, and materials of any area targeted for the designation.

Policy 4.1.3

A setback policy shall be maintained for those properties located on the west side of North and South Beach Street which shall not be less than the average building setback of all existing single-family dwelling units within 300 feet of either side of the proposed single-family dwelling unit.

Policy 4.1.4

The City shall consider the addition of Streetscape elements such as pavers, street lamps, street signs, and historical markers that would project a common theme for each historic district.

Policy 4.1.5

The City shall consider, on an ongoing basis, the feasibility of historic districts in other areas of the City.

Objective 4.2 Protection of Historic, Archaeological, and Paleontological Resources

Development activities shall protect significant historic, archaeological and paleontological resources to the extent practicable and in the public interest. When no other practicable alternative exists to the proposed development activity, then appropriate management and mitigation plans shall be prepared and implemented by the applicant for such development activity.

Policy 4.2.1

Coordination shall be maintained with the Florida Department of State, Bureau of Historic Resources, for review of development activities in potentially significant historic, archaeological, and paleontological areas. If the State determines that an area is potentially significant, then an archaeological or historic survey shall be prepared by the applicant prior to development approval and in accordance with criteria established and recommended by the Florida Department of State, Bureau of Historic Resources.

Policy 4.2.2

All capital improvement projects shall be devised and implemented in a manner sufficient to protect and preserve significant historic, archaeological, and paleontological resources.

Policy 4.2.3

The City shall maintain and periodically review the standards, regulations, and guidelines for the protection of historic, archaeological, and paleontological resources contained within the Land Development Code.

Goal 5 Water Quality of Estuaries and Ocean

The City shall protect, enhance, and improve the water quality of the estuaries and ocean.

Objective 5.1 Ocean Water Quality

The City shall continuously review development and devise standards and programs to protect ocean water quality.

Policy 5.1.1

New development shall not directly discharge stormwater or effluent into the coastal beach area.

Policy 5.1.2

Berm and swales shall be required for new development abutting the coastal beaches and dune systems.

Policy 5.1.3

All new development on the barrier island shall be required to connect to central water and sewer.

Policy 5.1.4

Backwashing of pools into the ocean/beach area shall be prohibited.

Policy 5.1.5

The City shall encourage the State and Federal government to prohibit oil drilling offshore of City Limits.

Objective 5.2 Estuarine Water Quality

The City shall continuously review development and devise standards and programs to protect, enhance, and improve estuarine water quality so that there is no further degradation of the water quality.

Policy 5.2.1

Direct discharge of untreated stormwater from new development into surface waters shall be prohibited and no new point sources of pollution shall be permitted.

Policy 5.2.2

In coordination with other governmental entities, the City shall continue efforts to procure funding to develop a strategy to provide central sewer to the unincorporated area of the North Peninsula where there is a proliferation of package treatment plants and septic tanks. This strategy shall include the feasibility of the County establishing a tax assessment district for the installation of municipal sewer lines and extension of trunk lines to the wastewater treatment plant.

Policy 5.2.3

The City shall protect and ensure there is no further degradation of the water quality of the estuarine system.

Policy 5.2.4

The City shall cooperate with other governmental entities to develop a strategy to provide central water and sewer services to the west portion of the City, including but not limited to: Tomoka Estates, Tomoka View, Tanglewood, and Twin Rivers and Riverbend Estates.

Policy 5.2.5

Septic tanks shall not be permitted within 120 feet of the mean high water mark or 75 feet of the upland/wetland interface, whichever is greater.

Policy 5.2.6

The City shall utilize a monitoring program so that point and non-point pollution sources and facilities which are identified as potential water quality problems are regularly and periodically inspected.

Policy 5.2.7

The City shall continue to upgrade its existing sewage treatment plant. As additional sewage treatment plants are constructed and/or the existing plant is expanded, a concerted effort and commitment shall be made to utilize the highest level of treatment possible, or alternative methods of effluent disposal such as re-use and land spreading/spray irrigation should be used to reduce nutrient loadings to the rivers and estuaries.

Policy 5.2.8

Best management practices shall be maintained in the Land Development Code that limit the amount of sediment reaching all surface waters. These practices shall be used in agriculture, silviculture, construction, dredge and fill operations, and stormwater management systems. Erosion and sediment control provisions shall be incorporated as part of the development review process.

Policy 5.2.9

The construction of future municipal stormwater management systems and the redesign of existing systems shall consider the timing of discharge of fresh water to the estuary, the hydroperiod of the wetlands as well as the potential loadings and shall maximize the use and preservation of existing wetlands. Stormwater systems should be designed to gradually release water via sheet flow through natural or constructed wetlands.

Policy 5.2.10

No development shall be permitted to degrade the Class III waters of the Tomoka River, a designated Outstanding Florida Waters water body.

Policy 5.2.11

The City shall require all PRD's and multi-family greater than fifty (50) units, commercial and industrial development greater than ten (10) acres, adjacent to the Halifax River, the Tomoka River, and tributaries to properly assess the potential impacts of the project on the surface waters by preparing an individual surface water monitoring program to assess the predevelopment condition. After the initial baseline data is completed, the monitoring shall continue through the construction phase. The monitoring program shall be designed to detect any decline in water quality as defined by ambient standards as approved by the City Engineer. Should any decline in water quality be attributable to the development project, suitable actions shall be undertaken to test further the source and to make recommendations for immediate corrective actions. The monitoring program shall continue for the life of the project with reports submitted to the City yearly for the first 5 years after construction and then every 5 years thereafter.

Policy 5.2.12

All development shall review and report on their stormwater management system and provide an assessment of the impacts of the development with regards to the established ambient chemical and biological conditions of the wetlands and waters within and adjacent to the subject site.

Objective 7.10 Scenic Routes and Overlooks

The City shall establish scenic routes and overlooks to preserve the natural beauty and scenic vistas of the Community.

Policy 7.10.1

The City shall maintain the following scenic route designations:

- US 1 from Thompson's Creek to Nova Road
- All of Beach Street
- All of John Anderson Drive
- All of Riverside Drive
- Addison Drive

Policy 7.10.2

Scenic routes shall be protected by the following criteria:

- The City shall preserve and nurture the existing canopy of native vegetation over the scenic roadways by developing a program of replanting in areas where the cover is nominal or diminishing.
- Any widening of the roadways shall mitigate against the loss of canopy by planting mature trees at least three (3) to five (5) years in advance of the planned construction.
- Lots adjacent to scenic roadways shall be developed in such a manner that maximizes the scenic vistas from the roadway.
- Front yard setback requirements shall be established for lots fronting scenic roadways and routes.

Policy 7.10.3

The City shall continue to provide scenic overlooks and parking areas along the scenic roadways.

Policy 7.10.4

If the City owns the land in the future, a scenic overlook shall be established on US 1 between Thompson's Creek and the Tomoka River.

Policy 7.10.5

Priority for bike paths construction shall be for scenic highways and scenic routes excluding those bike paths necessary for public safety.

Policy 7.10.6

The City shall continue to encourage the County to retain a maximum allowable speed limit of 35 miles per hour on the North Beach Street scenic corridor. The City shall continue to, in cooperation with the County, develop procedures for maintaining or reducing the number of vehicular trips including the provision of an alternative roadway to meet traffic circulation demands.

Policy 7.10.7

The City shall, through interlocal agreement with adjacent local governments, establish corridor management strategies and recommendations to protect the scenic quality of the identified scenic roadways by limiting or prohibiting commercial or industrial land uses, conducting an inventory of existing land uses and ownership patterns, establishing desired right-of-way widths, establishing standards for additional screening, buffering, and setbacks, controlling access, and including urban design criteria for structures and signage.

Policy 7.10.8

Signage shall be maintained that designates Scenic Roadways.

Policy 7.10.9

The Land Development Code provisions that implement this objective may include land use controls such as overlay districts or site plan review requirements to maintain the natural appearance and aesthetics of the Scenic Routes.

Volusia County Comprehensive Plan

Future Land Use Categories

Conservation (C)

Includes public and private land areas that have been acquired or reserved by mutual agreement with the owner for the preservation and protection of Volusia County's natural resources. Said areas are identified on the Future Land Use Map and include portions of stream and river banks, drainageways, beaches, shorelines, wetlands, uplands, groundwater recharge areas, and flood plains. If privately owned land is designated unintentionally as Conservation, the landowner may request a Comprehensive Plan amendment which would be processed administratively and considered in accordance with the Comprehensive Plan amendment procedures. In lieu of a Plan amendment, the landowner may develop said land for a use or at a density comparable to and compatible with surrounding land use designation provided that such use is consistent with the zoning designations and the Comprehensive Plan. This category does not apply to land designated Conservation or Conservation easement that was set aside for park or open space use as a part of, or as a basis for approving the density of, a residential development.

Natural Resource Management Areas (NRMA)

Volusia County contains expanses of relatively uninterrupted environmentally sensitive areas which need to be managed as part of a system. Among the functions these areas support are a wide range of wildlife species; continually help recharge the County's groundwater supply; ensure high quality surface waters; and provide recreation, aesthetic and open space areas that have become an integral part of the quality of life for Volusia County residents. It is the intent of the Natural Resource Management Area land use category to ensure that the development that does occur within its boundaries does not adversely impact the quality and quantity of existing resources. Development standards established for land use activities within the NRMA are more restrictive for the same uses falling outside the NRMA; such standards are set forth in the Conservation Element. In effect, the NRMA provides a mechanism to protect environmental site features without depriving a landowner the use of his property. The areas targeted for the NRMA include: the Talbot and Pamillico Terraces; Turnbull Hammock (particularly from S.R. 442 south); the headwaters of Tomoka River and Spruce Creek; Rima Ridge; immediate drainage basins of the Tomoka Basin, Mosquito Lagoon/Indian River and Strickland Bay, and the St. Johns River Valley.

The NRMA, consists of three subcategories. The environmental standards and safeguards are presented in the Conservation Element. The three subcategories are: Environmental System Corridor, Forestry Resources and Low Impact Urban. Each is described in more detail below. The NRMA may also contain the future land use categories of Conservation, Agriculture Resource, and Rural. These categories may be applied inside the NRMA where existing site characteristics indicate they would be appropriate. In those instances, development within the above three future land use categories must also meet the requirements of the NRMA.

Environmental System Corridor (ESC)

These consist of important ecological corridors consisting of environmentally sensitive and ecologically significant lands. Land use activities occurring within these corridors shall not degrade these natural functions and connections. The intention is to provide protected, natural pathways which connect to other protected areas such as parks, conservation lands and water bodies. This inter-connection helps maintain the ecological integrity and biodiversity of the County's vast natural resources. ESC's shall include significant interconnected natural systems of environmentally sensitive lands, connecting to and including conservation areas where

possible. The ESC's are not intended to include pre-existing improved, cultivated, or developed lands unless such lands contain unique or exceptional ecological value. Conservation and silviculture, utilizing Best Management Practices (BMP's), will be the preferred use, however, other compatible passive agricultural activities may also be permitted such as, unimproved pasture. The primary consideration of compatible agriculture should be potential adverse impacts to the short and long term ecological stability of the system, as well as adjacent lands and waterways. The residential density after the effective date of the Comprehensive Plan shall not exceed 1 dwelling unit per 25 acres. The Environmental System Corridor configuration displayed on the Future land Use Map is intended to show a generalized location for the corridor. The actual boundaries will be established after the corridor has been reviewed to determine the boundary in relation to a proposed development based upon site specific information and features. Any adjustments will be included in the next amendment cycle.

Forestry Resource (FR)

Land that is primarily suited for silviculture (the cultivation and harvesting of timber for commercial purposes), however, other limited agricultural activities may be appropriate. Forest lands are a multiple-use resource which yields valuable agricultural products while providing wildlife habitat and recreational opportunities. In addition to being a multiple-use resource, the forests in Volusia may provide important environmental functions that may also be components of the land's value for silviculture, limited agriculture, wildlife habitat, protection of watershed lands, the prevention of soil erosion, reduction of stormwater runoff, and provision of high quality groundwater recharge. The Forestry Resource category was developed to help provide protection to the silviculture business in Volusia County, in recognition of the need for adequate timber resources and to protect the value of the land for forest purposes and significant environmental purposes as well. Over the years, the conversion of timber lands to other agricultural uses has occurred. Due to the various soil types occupied by forested lands, many areas can be incorporated into agricultural management activities other than silviculture. Expansion of the fern industry and pasture land have been the major cause for the timberland conversion, but many other agricultural uses have been established as well. In addition to protecting the timber industry, the Forestry Resource category is also intended to permit limited agricultural activities. This category is intended to preserve and protect farms for personal and limited agricultural production or to provide a transition to valuable natural resources. To ensure protection of natural resources, agricultural uses occurring within the Forestry Resource category should be consistent with the Natural Resource Conservation Service and other agricultural best management programs. The residential density after the effective date of the Comprehensive Plan shall not exceed 1 dwelling unit per 20 acres. In order to protect residential development from normal silviculture activities, clustering of residential dwelling units may be appropriate (refer to Policy 1.2.3.3). The clustering of units will provide opportunities to:

- retain open space
- provide buffers to the ESC or as a secondary corridor connection
- preserve the rural character
- maintain significant areas for silviculture and agriculture production

The manner in which a site is developed shall be consistent with the policies contained in the Conservation and Future Land Use Elements and with the County's land development regulations. Increased densities in the range of 1 du/20 acres to 1 du/5 acres may be allowed if part of an existing development or project is developed as a cluster subdivision under Policy 1.2.3.3. In other instances, densities of 1 du/10 acres may be permitted if consistent with Policy 1.2.1.6 or 1.4.1.8.

Low Impact Urban (LIU)

Lands within the NRMA which are determined to be suitable for urban type development, and are adjacent to existing urban development. Any land use considered to be urban may be permitted within this category, but shall comply with standards consistent with the provision of the NRMA. The standard shall include, at minimum:

- a requirement to be serviced by central utilities as required by the Potable Water and Sanitary Sewer Sub-elements;
- designation of at least 50% of required open space as provided for in land development regulations to be preservation of upland habitat and sited in an ecologically strategic manner (e.g., adjacent to wetlands); and
- clustering of both residential lots into less than 1 acre in size and non-residential buildings.

The gross residential density after the effective date of the Comprehensive Plan shall not exceed 1 dwelling unit per acre, however, net density may be greater than 1 dwelling unit per acre. Non-residential development shall be designed to protect the environmental resources included inside the NRMA. In addition to the minimum standards above, non-residential development proposals shall be reviewed using the following criteria:

- reduced lot coverage for buildings or impervious surfaces if needed to protect any environmental resources.
- increased landscaped buffers that would be added to the protection of any environmental resources on site (i.e., 10% of required buffer);
- reduced parking areas (if documented through the development review analysis);
- limitations on the type of industrial uses to insure neighborhood compatibility, and
- commercial would primarily be office, neighborhood convenience or an ancillary use. More intensive commercial uses may be appropriate if not adjacent to existing residential uses.

All requests for more intensive commercial uses (retail) on parcels greater than 8 acres shall be submitted as a Planned Unit Development (PUD). The PUD shall be submitted to the VGMC for review to determine if a Comprehensive Plan amendment is required or the project can proceed through the County's Zoning review process. If a development or subdivision located inside a Low Impact Urban designation has been determined to be vested, then that development or subdivision shall be considered consistent with the Comprehensive Plan. This subcategory will be defined as an urban classification and all development which occurs in this classification shall meet all appropriate urban policies.

Volusia County Comprehensive Plan

Goals, Objectives, and Policies

Goal

1.1 Ensure that future growth is timed and located to maximize efficient use of public infrastructure.

Objective

1.1.1 Growth management criteria will be established to ensure that future land use patterns will maintain vital natural functions and in conjunction with the availability of public facilities and services to support that development at the appropriate level of service.

1.1.3 Volusia County has adopted land development regulations that contain specific and detailed provisions required to implement the Comprehensive Plan and which as a minimum:

- Regulate the subdivision of land;
- Regulate the use of land and water bodies consistent with this Element and ensure the compatibility of adjacent land uses;
- Provide for open space;

- Ensure the protection of native vegetation and trees;
- Protect the Natural Resource Management Areas designated on the Future Land Use Map;
- Regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management;
- Protect potable water wellfields and aquifer recharge areas;
- Regulate signage;
- Ensure safe and convenient traffic flow on and off site and vehicle parking needs;
- Provide that development orders and permits issued shall not result in a reduction below the level of services standards adopted in this Comprehensive Plan;
- Provide for the transfer of development rights;
- Contain performance standards for protecting historically significant properties or areas; and
- Protect against adverse impacts to wildlife and their habitats.

Objective

1.2.2 Volusia County shall protect natural and historic resources from the adverse impact of development as outlined in the Conservation and Historic Preservation elements.

1.2.2.9 Species of flora and fauna listed in the Conservation Element of the plan as endangered, threatened, or species of special concern shall be protected through inclusion of their habitats in the Conservation, Environmental Systems Corridor, and Natural Resource Management Area (NRMA) land use categories and shall be given priority in the land acquisition program.

1.2.2.14 The County shall encourage the propagation, planting and maintenance of trees on public lands, whenever practical, thereby adding to the County's aesthetic appeal and providing habitat for urban wildlife. A good diversity of tree species shall be established in order to avoid insect and disease problems often associated with monocultures. Trees planted and managed by the County on public lands shall be well suited to local conditions (climate, soil, etc.) so as to promote a healthier urban forest and reduce overall maintenance costs.

1.2.2.15 Preserving and enhancing wildlife populations is recognized to be an important aspect of forestry management and should be a consideration, in managing forest resources.

1.2.2.19 Significant historical and archaeological resources, as identified on the Significant Historic Resources Map (Fig. 1-1) are included in the Historic Preservation Element and will be reviewed for state and national recognition (e.g., The National Register of Historic Places) using the procedures from that Element.

1.2.2.20 Volusia County shall preserve and protect significant historic and archaeological resources through the policies contained in the Historic Preservation Element and Chapter 62, Code of Ordinances, Volusia County.

1.2.2.21 Volusia County shall promote public awareness and appreciation for local history and resources.

Transportation Element

Bicycle and Pedestrian

Roadways throughout Volusia County have been constructed with consideration given to the needs of non-motorized travelers. The Federal Highway Administration estimates that two-thirds of all urban trips are less than five miles, which is indicative of the potential demand for non-motorized travel. In addition, increasing numbers of people walk for exercise. Volusia County, over twenty-five years ago, developed a construction program to build sidewalks in needed areas. Projects built within the past ten years have included sidewalks in

urban areas and paved four foot shoulders in rural areas. Volusia County sets aside approximately \$500,000 a year on this program alone.

The County is currently working with the Volusia County MPO to develop a County Wide Bicycle and Pedestrian Systems Plan. This Plan will focus on areas of high bicycle and pedestrian activity, identifying existing facilities and recommending where needed improvements should be implemented. In 1999 Volusia County had an injury rate of 48.5 and a fatality rate of .23 per 100,000 population. This is significantly better than the 1990 injury rate of 70.68 and fatality rate of 1.62 per 100,000 population. Though the statistics look promising, the County needs to continue expanding safe bicycle facilities and educate users in Florida traffic laws, particularly rules about riding bicycles with the flow of motorized traffic. As part of the Volusia County MPO's Long Range Transportation Plan an evaluation of major thoroughfares for bicycle suitability was conducted. For the purpose of forecasting bicycle suitability for 2020, the following assumptions were used to develop future recommendations for bicycle improvements.

- Improved roads (adding additional lanes) in urban areas should include marked bicycle lanes;
- Improved roads in rural areas should include paved shoulders or marked bicycle lanes;
- Improved roads will have outside lanes not less than twelve feet; and
- On street parking will be removed from improved roads in areas with constrained right-of-way.

As improvements are programmed and constructed by the FDOT and Volusia County, every effort will be made to include sidewalks, bikelanes, and/or paved shoulders to accommodate the mobility needs of both bicyclists and pedestrians. In January of 1999, the Volusia County Council accepted the Volusia County Trails Master Plan. The Plan is intended to be Volusia's vision for trails. It is useful for cities to use this Master Plan in linking to the County's trail network, as well as providing a guide for their own trail development. The trails map is envisioned as a trails network that will cover 76 miles throughout Volusia County linking neighborhoods, parks, schools, and downtowns. In 2000, the first phase of the Spring to Spring Trail in DeBary was completed. Historically, bicycle and pedestrian needs have not routinely been considered in planning for most transportation projects. Since the increased use of bicycles can significantly reduce congestion, Volusia County encourages walking and bicycling where practical and safe.

Scenic Corridors

One aspect of land use planning which is often addressed indirectly is the concern for the visual form and composition of a community. It is projected that the population of Volusia County in the year 2020 will be approximately 610,213. Accommodation of this growth will likely require the intensification and/or conversion of existing land uses. This development activity may erode the visual quality of the County's transportation system through, for example, the establishment of typically intensive land uses (industrial and commercial projects), the inappropriate placement of structures (including associated signage and supporting infrastructure), and increased traffic volumes which may necessitate capacity related roadway improvements and degradation of the quality of the natural landscape, in particular the loss of tree canopy. The challenge is to strike a balance between the pressures brought about by growth and the desire to preserve and enhance the existing visual qualities of Volusia County. The natural and manmade environments of Volusia County provide a diversity of visual opportunities which may be incorporated into a Scenic Corridors program. These attributes range from urban/suburban land uses set amid a coastal environment to regions characterized by low intensity rural agricultural land uses. Similarly, the natural environment of the County includes both coastal and freshwater environments and spans the range from hydric and xeric vegetation communities. As depicted in Figure 2-7 the County has designated seven Scenic Corridors. Collectively, these corridors provide a range of the visual experiences available to the traveler of the County's thoroughfares. A brief narrative of each of these roadways is contained in the companion document supporting this Element.

Goal

2.1 Volusia County shall provide a coordinated multimodal transportation system to serve current and future land uses and population needs.

Objective

2.1.1 Volusia County shall implement programs to provide a safe, convenient, and energy efficient multimodal transportation system.

2.1.1.29 Volusia County shall research traffic calming techniques and explore their feasibility.

2.1.2.30 Volusia County shall participate in safety education programs to include all types of roadway users on the road.

Objective

2.1.10 Encourage bicycle use and pedestrian activity throughout Volusia County.

Policies

2.1.10.1 Volusia County shall use the Volusia Trails Plan, as accepted by the Volusia County Council, as a guide to supplement Volusia's transportation network with interconnected non-motorized bicycling and walking corridors.

2.1.10.2 Volusia County shall develop pedestrian and bicycle ways to connect public uses such as schools, libraries, parks, and intermodal transit nodes where feasible.

2.1.10.3 Volusia County shall develop bicycle-compatible design standards in the Land Development Code for all new and reconstructed collector and arterial roads.

2.1.10.4 Volusia County shall include sidewalks alongside all roadways as consistent with the requirements of the Land Development Code.

2.1.10.5 Volusia County shall integrate bicycle (i.e., bicycle racks on buses, secure bicycle storage lockers, and park and ride lots), and pedestrian features into transit planning.

Goal

2.2 Volusia County shall develop a multimodal transportation system that will minimize the adverse effects on the environment and loss or destruction of scenic views and natural vegetation.

Objective

2.2.1 Where possible, development of the Volusia County transportation system shall be directed away from areas which are naturally incapable of the service capacity to accommodate growth in an environmentally acceptable manner.

Policies

2.2.1.1 Where possible, Volusia County shall direct major transportation system improvements away from environmentally sensitive areas.

2.2.1.2 Volusia County shall evaluate the potential environmental impacts of major transportation system improvements.

2.2.1.3 Volusia County shall coordinate its transportation system with the Conservation Element of the Comprehensive Plan to ensure that there is compatibility and that environmentally sensitive areas are protected from the present and future impacts of the transportation system.

Goal

2.3 Volusia County shall provide for the designation and management of a system of Scenic Corridors which reflect the varying aesthetic qualities of the County.

Objective

2.3.1 Volusia County has established and will maintain a program for the designation of aesthetically significant corridors.

Policies

2.3.1.1 Volusia County has established procedures and the evaluative criteria to be used in designating Scenic Corridors.

2.3.1.2 Volusia County may not designate a new Scenic Corridor which traverses an incorporated area unless the governing body of the appropriate municipality has entered into an interlocal agreement with the County to preserve the scenic value of the roadway corridor.

2.3.1.3 Volusia County shall refrain from designating isolated roadways as scenic unless the corridor possesses significant aesthetic value.

2.3.1.4 The establishment of a comprehensive system of interconnected scenic roadways which reflect the diverse environments of the County is to be encouraged.

2.3.1.5 Wherever historical sites, parks, recreational, and other public uses exist along a Scenic Corridor, consideration shall be given to continue the scenic qualities to driveways and accessways leading into these sites.

Objective

2.3.2 Volusia County has established and will maintain a program for the management of designated Scenic Corridors.

Policies

2.3.2.1 The County's land development regulations may include standards designed to ensure preservation of the scenic value of designated corridors. Such standards may include, but are not necessarily limited to, identification of permissible adjacent land uses, location and heights of structures, establishment of scenic easements, landscaping requirements, access controls, signage, and the placement of utilities.

2.3.2.2 Subsequent to designation as a Scenic Corridor, a management plan for each corridor must be prepared. The plan shall, at a minimum, analyze existing conditions and provide guidelines for the management of the vegetation within the public right-of-way, establish speed limits along the designated route, consider the potential for multiple-use bicycle and pedestrian facilities, design and placement of information and directional signs, and needed roadway improvements.

2.3.2.3 Volusia County may negotiate interlocal agreements with the appropriate municipalities for the preservation of the scenic values of currently designated corridors which traverse their jurisdiction. Failure to successfully negotiate an agreement may result in the discontinuation of the scenic designation accorded the route.

2.3.2.4 Should the Volusia County Council find that the scenic value of a designated corridor outweigh the benefits of increased vehicular capacity or other considerations, exceptions to minimum levels of service standards and minimum roadway design standards may be considered provided that the route is not a State road.

2.3.2.5 Volusia County shall hold a public hearing prior to the construction or reconstruction, other than routine maintenance, of any designated Scenic Corridor.

Coastal Management Element

Goal

11.1 Conserve, protect and manage the coastal resources of Volusia County including the wetland and upland ecosystem so as to maintain and enhance native habitats, floral and faunal species diversity, water quality, and natural surface water characteristics.

Objective

11.1.1 Maintain management programs to ensure the long-term protection and enhancement of wetland habitats, water quality, and selected natural upland habitats. The primary means of accomplishing this objective will be through the retention of interconnected hydroecological systems where the wetlands and uplands function as a productive unit resembling the original landscape.

Policies

11.1.1.1 The Volusia County Environmental Management Services Group in connection with the Environmental and Natural Resources Advisory Committee will be responsible for developing management plans and standards that protect and conserve natural systems within the coastal area.

11.1.1.4 Areas of critical wetland and native upland habitats not connected to corridors that exhibit resource values should be evaluated for inclusion as conservation or recreation areas within future development plans. Secondary linkage to nearby corridors, even if by artificial means, should be considered and encouraged. Construction of new corridors or linkages should be considered as a form of mitigation where appropriate.

11.1.1.5 The Growth Management and Environmental Management Services Center shall continue to implement conservation, management, and development review standards of the development review process. Such reviews are intended to minimize long-term and cumulative impacts on coastal habitat by requiring site specific analysis during the review process.

11.1.1.6 Land development regulations which require an Environmental Impact Assessment, as outlined in the Conservation Element of this Comprehensive Plan, were adopted. The assessment shall be submitted, reviewed, and approved prior to the issuance of a development order to insure protection of the NRMA.

11.1.1.15 The Environmental Management Services Group will provide an annual report to the County on the status of natural resources. The report will focus on the adequacy of land use and development regulations and management plans to protect and enhance the natural systems. Adjustments shall be made in the regulatory process whenever deficiencies are noted.

11.1.1.16 Development adjacent to estuarine and riverine shoreline areas shall maintain a habitat buffer zone to protect or conserve the canopy, understory and ground cover of native upland vegetation and wetlands.

11.1.1.17 Development in habitat areas listed by the State of Florida and U.S. Fish and Wildlife Service as Endangered, Threatened or Species of Special Concern shall not adversely impact the listed species.

Objective

11.2.4 Consistent with the Historic Preservation Element protect and preserve historic and archaeological resources.

Policies

11.2.4.1 Include historic and archeological resources in land acquisition programs for open space, recreation, preservation, or conservation.

11.2.4.2 The County has undertaken a comprehensive historic and archeological survey of the unincorporated coastal area. The survey has been added to the Florida Master Site File data base and is archived at the County.

11.2.4.3 Volusia County shall maintain standards, regulations and guidelines for the protection of historic and archeological resources through the Volusia County Historic Preservation Ordinance.

11.2.4.4 Maintain a common data base to include survey information, a complete set of Florida Master Site file forms for all recorded sites and archival materials.

11.2.4.5 Nominate eligible historic and archeological resources to the National Register of Historic Places.

11.2.4.6 Utilize as feasible incentive-based techniques for historic and archeological preservation such as building code relief, TDRs, tax relief, or waiving of certain zoning requirements (setbacks, lot coverage, parking, etc.).

11.2.4.7 Volusia County shall cooperate with local governments in establishing historic preservation commissions, conducting surveys and studies, developing standards, regulations and guidelines, and adopting historic preservation ordinances or developing historic and archeological preservation programs.

Goal

11.4 Protect, enhance and restore the functioning of the beach and dune systems and prohibit development activities that would damage or destroy such systems.

Objective

11.4.1 Maintain standards to minimize the impacts of structures and development on beach and dune systems and where necessary initiate dune restoration programs.

11.4.1.6 A dune system shall be developed and vegetated with suitable materials to bury all new, and/or reconstruction or replacement seawalls within the County.

11.4.1.7 Dune systems created to bury seawalls shall be maintained to emulate natural dune systems and to prevent seawalls from being exposed. If a dune system created to bury a wall is eroded resulting in a seawall being exposed, the dune system shall be reconstructed to bury the wall and repair dune damage. All dune reconstruction or maintenance shall be done following the end of, and prior to the beginning of the marine sea turtle nesting season.

11.4.1.8 Volusia County shall maintain standards for the maintenance and restoration of dune areas.

11.4.1.9 Coastal construction shall be planned, designed, and constructed to avoid the man-made destruction or removal of existing dunes and dune vegetation. Where such impacts cannot be avoided, such impacts shall be mitigated.

11.4.1.17 Incorporate dune restoration projects and revegetation into public improvement projects such as park, recreation facilities, and off-beach parking on or adjacent to the beach

Goal

11.6 Maintain and improve public access to the sovereign lands of the Coastal Management Planning Area through the provisions of coastal beach access facilities, fishing piers, boat ramps and marinas.

Objective

11.6.1 Coastal Beach Access Facilities. In the areas of unincorporated Volusia County, except Ormond-by-the-Sea, Coastal Beach Access Facilities (Vehicular Beach Ramps, Walkways, or Walkovers) shall be provided at no greater than 2 mile intervals, except for the area north of Bass Drive and that area in Canaveral National Seashore. In the area of unincorporated Ormond-by-the-Sea, Coastal Beach Access Facilities shall be provided every ¼ mile, on average. Volusia County shall be responsible for the actual provision, maintenance, and operation of these facilities.

Policies

11.6.1.1 Beach Access Facilities shall, to the extent feasible, be provided in accordance with the Beach Management Plan.

11.6.1.2 Volusia County, shall ensure that all Coastal Beach Access Facilities shall include access to a public road.

11.6.1.3 The establishment and/or improvement of vehicular beach ramps, including ramp expansion and improved handicapped access shall be consistent with the County's Beach Management Plan.

11.6.1.4 The priority for new pedestrian access shall be pedestrian walkovers or other alternatives that do not harm the dune system. Existing Unimproved Public Pathways and improved walkways should be converted to dune walkovers or eliminated in accordance with the County's Beach Management Plan.

Objective

11.6.5 Scenic Routes. Volusia County may establish scenic routes and roadways consistent with the Scenic Roadway Element, to preserve the natural beauty and vistas of the Coastal Management Planning Area.

Policies

11.6.5.1 The County and the appropriate Coastal Cities should mutually agree to establish corridor management strategies and recommendations to protect the scenic quality of the identified scenic roadways, if any.

11.6.5.2 Signage shall be provided to identify Scenic Roadways, if any.

11.6.5.3 The County's Land Development Regulations may include land use controls such as overlay districts or site plan review requirements to ensure preservation of the natural and scenic resources of any Scenic Routes.

Objective

11.8.10 Scenic Routes. Volusia County and the coastal cities shall establish the scenic routes identified in the Coastal Management Element.

Conservation Element

Objective

12.1.2 To protect and enhance the natural hydrologic functions and wildlife habitat attributes of surface water resources, including estuarine and oceanic waters, as well as waters which flow into estuarine and oceanic water, and the floodplains associated with these waters.

Policies

12.1.2.1 Natural shoreline buffers or setbacks shall remain established for surface water bodies, the extent of which will depend on, at minimum: existing soils; cover and type of vegetation; topography; wildlife habitat; ambient water quality; and the protective status of the water body.

12.1.2.2 Where possible, Environmental Systems Corridors shall connect with significant surface water resources, particularly those which have special protection status.

12.1.2.7 Undisturbed segments of flood plains associated with surface water bodies shall continue to be protected through public acquisition, land use controls, conservation easements, or other methods as appropriate.

Natural Communities and Wildlife

Goal

12.2 Protect, conserve, and enhance the ecological resources of the County, maintaining their quality and contribution to the quality of life and economic well-being of Volusia County.

Objective

12.2.1 To provide for the protection of areas determined to be environmentally sensitive, and direct growth away from such areas.

Policies

12.2.1.1 Existing, relatively uninterrupted expanses of natural resources contained within the County shall be managed as an individual unit, providing natural resources the highest degree of protection in land development decisions and planning. These lands shall comprise the Natural Resource Management Area (NRMA) established in the Future Land Use Element.

12.2.1.4 Land use activities adjacent to environmentally sensitive lands, including conservation areas designated in the Future Land Use and Recreation/Open Space Elements, shall be limited to non-intensive uses such as Environmental Systems Corridors, Forestry resource, Agriculture, rural, or low impact urban. Otherwise, proposed land use activities must ensure that such activities will not degrade the natural physical, biological, aesthetic, or recreational functions of such lands.

12.2.1.5 Lands/areas proposed for acquisition under the Volusia Forever Program will be processed and evaluated in the manner specified by County Resolution #2004-80, as amended, or any successor Resolution.

12.2.1.6 Preservation of land and environmental resources (flora and fauna) may be accomplished by both fee simple and less than fee simple acquisition techniques.

Objective

12.2.3 To eliminate any net loss of wetlands and prevent the functional values of such wetlands to be degraded as a result of land development decisions.

Policies

12.2.3.1 Coastal and riverine wetlands shall be preserved wherever possible. In cases where adverse impacts to such wetlands are found by the County to be necessary to the overriding public interest, appropriate mitigation as specified in Policy 12.2.3.5 shall be required. In those instances where coastal and riverine wetlands are found to be functionally degraded, restoration of such wetlands may be considered as appropriate mitigation.

12.2.3.2 Proposed activities within the NRMA (Policy 12.2.1.1) shall avoid adverse impacts to wetlands and their associated natural physical and biological functions, except in cases where it can be demonstrated to be in the overriding public interest. In such cases, appropriate mitigation as outlined in Policy 12.2.3.5 shall be required. Wetlands which are shown to be functionally degraded shall be targeted for restoration.

12.2.3.3 Proposed activities within urban, rural, or agricultural land use categories as indicated on the Future Land Use Map (those which are located outside of the NRMA) shall protect or enhance existing wetlands. Interior isolated wetlands which are shown to be significantly degraded, or cover small areas, may be modified to a form more suited for urban, rural or agricultural wetland functions, while allowing no net loss of wetlands. The County shall maintain acceptable criteria and designs for wetland modification, and shall address, at minimum, provisions for:

Maintaining, at least partially, stands of old mature forested vegetation; planting of littoral shelves and shorelines with appropriate vegetation in cases where an open water system will be created; an overall wetlands management plan which will discuss water levels and quality, and the ability of the wetland to attract and harbor wildlife species which are compatible in an urban, rural, or agricultural setting. This provision for wetland modification shall not be allowed in wetlands which are known or are found to provide habitat to wildlife species which are state or federally listed as rare, threatened, endangered, or of special concern, or locally designated as such.

12.2.3.4 Natural Buffer Zones or setbacks shall be required landward of all protected wetlands occurring in unincorporated Volusia County.

- Natural Buffer Zones for wetlands occurring within the NRMA shall be determined on an individual basis with standards and formulas derived for the following criteria, at minimum: existing soil erodibility; cover and type of vegetation; slope; water table depths; water quality; wildlife; and the protective status of the receiving waters. Natural buffer zones shall consist of intact natural communities comprised predominantly of appropriate native vegetative species in the overstory, shrub, and understory layers. Activities within the Natural Buffer Zone shall be limited to those which are shown to be consistent with the intended use of this zone while providing for reasonable access to water bodies.
- Proposed activities adjacent to isolated wetlands occurring outside the NRMA shall have yard setbacks or natural buffers measured from the upland/wetland interface, as determined by vegetative dominance. Wetlands which are hydrologically connected to a surface water body, and not located within the NRMA, shall require a natural buffer zone consistent with the standards provided in Subsection (a).
- In cases where the alteration of the Natural Buffer Zone is determined to be unavoidable, appropriate mitigation shall be required.
- For land development proposals subject to the St. Johns River Water Management District Environmental Resource permit process, the secondary impact requirement (pursuant to Section 12.2.7 of the MSSW Handbook) shall satisfy the intent of this policy.

12.2.3.5 If, by restriction of attainment of reasonable use through the County's land development regulations, it is determined by the County that wetland alteration is unavoidable, mitigation proposals shall be considered, which should include restoration of existing degraded or converted wetlands, or creation of new wetland habitat. Such mitigation activities shall replace like land habitat and function with an intended result of a no net loss of wetlands. Preservation of upland habitat may be considered in certain instances if deemed appropriate but shall be considered in conjunction with mitigating wetland losses. In no case shall mitigation activities degrade critical upland habitat.

12.2.3.6 In lieu of mitigation requirements stated in Policy 12.2.3.5, the County may collect a mitigation fee which will fund an off-site wetlands mitigation bank program. Toward that end, the County shall identify areas which are suitable for such purposes, primarily where important wetland habitats have been converted, and shall direct off-site mitigation efforts to these designated areas, which should be located within the same watershed as where the impacts will occur. To increase the program's effectiveness, the County shall coordinate with and seek the support of regional, state, and federal regulatory agencies as well as the municipalities within the County.

12.2.3.7 The dwelling unit density standard for wetlands in determining overall project densities for the purposes of clustering units shall be one unit per 10 acres of wetland, with the exception of the Forestry and Environmental Systems Corridor special use categories (see Policy 12.2.1.2.) which shall correspond to the minimum lot size for those categories.

12.2.3.8 Volusia County shall require that the most up to date Best Management Practices (BMP's) be used for all silvicultural activities proposed in wetlands. Agricultural operations will continue to be encouraged to be consistent with applicable Natural Resource Conservation Service and Cooperative Extension Service BMP's to ensure wetlands are not adversely impacted by such activities.

Objective

12.2.4 To protect habitats of wildlife species occurring in the County, particularly those which are threatened, endangered, or of special concern, to maintain, and enhance where necessary, existing species population numbers and distributions.

Policies

12.2.4.1 The County's automated ecological community information will be used as base data for determining the presence of listed wildlife species and related habitat. Other information, including field visits will be used to determine the presence of listed wildlife within the County. This information shall help determine type and occurrence of critical wildlife habitat, and boundaries of the NRMA and ESC's.

12.2.4.2 Land development proposals shall continue to be required to protect ecologically viable habitats and prepare a suitable alternative management plan when state or federally listed vegetative and wildlife species occur within project boundaries.

12.2.4.3 The County, under the current protected species policy, shall continue to review projects which may impact critical habitats. The type and occurrence of critical habitats which shall be determined by the County and the appropriate federal (USFWS) and state (FGFWFC, FDEP, ECFRPC) agencies. These development reviews shall address at minimum:

- proper siting of development structures and infrastructure, including clustering of dwelling units away from critical habitats;
- management plans which protect endangered wildlife which utilize critical habitats;
- mitigation plans for critical habitat which is unavoidably altered;
- restrictions of the use of critical habitats to those which are found to be compatible with the requirements of wildlife species which are threatened, endangered, or of special concern.

12.2.4.4 Where feasible, the County shall protect critical habitat through acquisition, establishment of public or private conservation easements, purchase of development rights, or through other available means as deemed appropriate.

12.2.4.5 The County shall continue to implement management plans for: sea turtles and manatees. The County shall continue to expand the management scope of suitable public lands within the County to ensure the long-term vitality of specific listed species including: southern bald eagles, gopher tortoises, red cockaded woodpeckers, black bears, and scrub jays. County land management shall also consider non-listed wildlife populations and continue to explore management techniques to ensure biodiversity of plant and animal species on suitable public lands. At minimum, these management efforts and plans shall:

- provide for the coordination of federal, state, local, and private activities involving protection of the particular species;
- establish public education programs;
- provide for the minimization of activities which directly or indirectly adversely impact the particular species listed above;
- establish management standards for habitat restoration and enhancement, and/or relocation of species where appropriate.

Recreation and Open Space Element

Goal

13.1 Volusia County shall establish a comprehensive parks and recreation system that provides sufficient land, facilities and programs to meet the existing and future recreational needs of the residents of the County.

Objective

13.1.1 Volusia County shall strive to improve public accessibility to existing parks and recreation facilities with the construction of mandatory vehicular access facilities and/or optional bicycle and pedestrian access-ways.

13.1.1.8 Volusia County shall continue to coordinate with the MPO to maintain a County-wide bicycle facilities plan, in order to identify routes for both recreation and alternative modes of transportation.

13.1.1.9 Bicycle facilities requirements (location and dimension) shall comply with or exceed the requirements of the Volusia County land development regulations.

13.1.1.10 When bike paths are incorporated into a park design for local and district parks, they shall not conflict with the usage of jogging, hiking, horse and nature paths or trails.

13.1.1.11 Bicycle parking facilities (bike racks) shall continue to be provided at existing and future park sites.

13.1.1.12 Local and district parks shall be developed with on-site/ off-site pedestrian accessways (sidewalks, pathways, easements or walkways) as required in Volusia County land development regulations. The pedestrian access ways shall be coordinated with the development of subdivisions, commercial centers, community centers, schools, and industrial centers.

Objective

13.1.2 Volusia County shall maintain and continue to improve public access to the coastal beach area through the provision of coastal beach access facilities as provided in the Coastal Management Element, as well as the Beach Management Plan.

Policy

13.1.2.5 When developed, oceanfront parks shall accommodate sufficient parking, beach access facilities and bike facilities to ensure accessibility to the coastal beach.

Objective

13.1.3 Public access facilities for the inland waterways shall be maintained and improved to meet the needs of the population. Inland waterways shall include, but are not limited to, the Halifax River, North Indian River, St. Johns River and Tomoka River, Spruce Creek, Lake George, Lake Monroe, Lake Ashby, Lake Dias, and Lake Beresford which can support public access facilities.

Policies

13.1.3.1 When developed, and where environmentally permissible, inland waterway public access facilities shall include vehicular on-site circulation systems, docking slips, fishing piers and boat ramps. Riverfront parks and lakefront parks shall accommodate inland waterway access facilities if not separately provided as a Special Use Facility.

Objective

13.1.6 Volusia County shall ensure that parks, recreation facilities and open space areas are economically feasible to acquire, develop, operate and maintain through the year 2010 by coordinating and implementing a County-wide park system between the public and private sectors.

Policies

13.1.6.1 Continue to use the Volusia Forever and ECHO Programs as a means of implementing the Recreation and Open Space Element.

13.1.6.2 Periodically solicit funding through the Florida Forever and other Pprograms for acquisition of endangered, environmentally sensitive/significant, and recreational lands.

13.1.6.4 Submit applications to local, state and federal grant programs for the acquisition, planning and development/management of County owned lands. Programs include, but are not limited to:

- Florida Recreation and Development Assistance Program
- Land and Water Conservation Fund Program
- Florida Forever
- Florida Boating Improvement Program
- Save Our Rivers Program (SJRWMD)
- Ponce DeLeon Port Authority
- Florida Inland Navigation District
- Florida Communities Trust Program

13.1.6.5 Acquisition and development of local and district parks shall also be accomplished through the Local and District Parks Impact Fee Ordinance.

13.1.6.8 Volusia County shall consider the option of establishing municipal service taxing districts to finance the acquisition of land, development and maintenance of parks and recreation facilities.

13.1.6.9 The County shall annually investigate and continually review the availability of all revenue sources to supplement the general fund allocations.

13.1.6.10 Land acquisition efforts should be guided, as appropriate to the intended use, by consideration of the ecological, environmental, historical, cultural, and/or recreational merits of the affected area/property.

Goal

13.2 Expand and improve an open space system which utilizes unique natural resources and amenities of botanical, ecological, cultural, and historic significance and which provides recreational opportunities.

Objective

13.2.1 Volusia County shall develop a system of open space through the preservation of significant lands as identified on the Future Land Use Map, and Potential Open Space Areas Map of the Recreation and Open Space Element support document.

Policies

13.2.1.1 Volusia County shall review and if necessary amend the land development regulations to include specific open space definitions and standards to implement the Recreation and Open Space Element. At a minimum the following definitions and criteria shall be applied to protect and provide buffers, greenbelts and recreation within the open space system:

Open space areas shall be identified as Corridor, Pastoral and Utilitarian open spaces as defined below.

- Corridor Open Space - areas through which people and/or animals may travel and which provide linkages between recreational or residential areas. Thoroughfares, scenic roads, abandoned railroads, recreation trails, rivers, creeks and utility easements are to be identified as corridors.
- Pastoral Open Space - areas identified to provide resource-based and useroriented recreation. Federal, State and County parks, forests, archaeological and historic sites or any other areas established for the protection of natural resources shall be considered as pastoral.
- Utilitarian Open Space - areas identified to be of a hazardous condition and threat to public safety, health and welfare. Development for residential, commercial and industrial purposes shall be prohibited. Typical areas shall include floodplains, surface water bodies and wetlands.

13.2.1.2 Utilize innovative techniques to protect identified open space areas. Such techniques could include overlay districts, flood zones, performance standards, or other incentivebased methods.

13.2.1.3 Designated open space areas encompassing natural resource areas, significant environmental features, wildlife habitats, conservation or potential recreation areas shall be protected, but not limited to, buffer zones, deed restrictions, limiting density and intensity of development, conservation easements, acquisition, transfer of development rights, and purchase of development rights or land exchanges.

13.2.1.4 Criteria and standards to be used for reviewing development proposals within existing and proposed open space areas shall be developed by Volusia County. Site specific analysis shall continue to include an Environmental Impact Assessment to be submitted, reviewed and approved prior to the issuance of a development order.

13.2.1.5 Continue to coordinate with local governments, state agencies and other public agencies in developing consistent standards, criteria and land development regulations for the protection of open space areas.

Objective

13.2.2 The County, through programs/processes such as, but not limited to, Volusia Forever and ECHO, shall increase the provision, protection and enhancement of public open space. Provision of open space by private enterprise shall be accomplished through donation or requirements for dedication of open space as specified in the Zoning Ordinance and Land Development Code.

Policies

13.2.2.1 Both public and private provision of open space shall be coordinated in order to establish a land use pattern consistent with the Future Land Use Map.

13.2.2.2 Land or easements suitable for the provision of open space shall continue to be encouraged as donations from public agencies and private enterprises. The location, shape, size and character shall be evaluated for applicability to Volusia County land development regulations.

13.2.2.3 Open Space areas shall be preserved for the following types of development:

- Residential development required to provide park needs as required by the Land Development Code.
- Planned Unit Developments required to provide open space and common open space per Zoning Ordinance.
- Development plans encompassing valuable resource habitats such as but not limited to, environmental corridors as identified in the Conservation and Future

13.2.2.4 Volusia County shall seek other bonding/taxing sources to reactivate the Volusia County Land Acquisition Program to support private organizations to acquire open space areas through cooperative land acquisition efforts, therefore protecting valuable open space as identified on the Potential Open Space Areas Map and Future Land Use Map.

Objective

13.2.3 Provide for recreational corridors to link the County-owned parks as well as other open space/conservation areas.

Policies

13.2.3.1 To the extent possible, Volusia County shall identify and acquire available abandoned railroad right-of-ways with recreational trails potential and which provides linkages to public parks, recreation areas, historic sites; connects or provides access to existing trails and offers the potential for multiple use.

13.2.3.2 Volusia County may designate scenic roadways as provided for by the Scenic Roadways section of the Transportation Element.

13.2.3.3 The County's land development regulations may include standards designed to ensure preservation of the scenic value of designated routes.

13.2.3.4 Volusia County shall develop and promote recreational trails as a part of the County's nature-based tourism package.

13.2.3.5 Wherever possible, the Volusia County Recreational Trail Corridors shall be coordinated with other national level trails such as the East Coast Greenway as well as other state trial systems.

13.2.3.6 Volusia County shall coordinate with utility companies with the potential multi-use concept for open space and recreational trails within utility easements.

13.2.3.7 To the extent practical, utility easements (overhead transmission lines, gas and water) shall be made available for bike path, nature, jogging, horse trail development. This off- road corridor system shall be designed and developed to connect neighborhoods and communities to recreation and open space facilities.

13.2.3.8 Volusia County shall coordinate with State Parks system for potential off-road recreational corridor easements.

13.2.3.9 Volusia County shall coordinate with other local governments for recreational trails within their jurisdictions.

13.2.3.10 Pastoral open space areas shall continue to be protected from incompatible land uses and development by implementing standards and criteria which will preserve the natural character, scenic values and public benefit of these areas.

Objective

13.2.4 Provide for adequate protection of the County's open space/conservation areas.

Policies

13.2.4.1 Volusia County shall request the State of Florida to reactivate the Florida Scenic and Wild Rivers Program in order to petition for the designation of Bulow Creek, Spring Garden Run, Spruce Creek and the Tomoka River as part of the State Scenic and Wild River System. The County's land development regulations may include land use controls, standards and criteria for the protection of the estuarine and shoreline areas adjacent to the designated water bodies.

13.2.4.4 The recreational use of Utilitarian Open Space resource lands adjacent to or a part of floodplains, wetlands, lakes, rivers, streams and forests shall continue to be considered for public access provided that the safety of the public is ensured and the environmental function of these open space areas is not adversely impacted.

13.2.4.5 The development of open space areas for recreational facilities/public access shall be compatible with primary usage (corridor, pastoral, utilitarian) of the natural resource areas, significant environmental or ecological features, critical wildlife habitat or conservation areas. Standards and criteria adopted per Policy **13.2.1.1** shall be enforced to protect or enhance lands adjacent to preserves, refuges and corridors.

13.2.4.6 Open space systems or conservation areas identified for potential outdoor classroom sites or nature study facilities shall be provided with the appropriate access facilities. Facilities shall include but are not limited to: on-site circulation system elements, nature trails, above ground boardwalks and limited passive areas designated for picnicking.

Historic Preservation Element

Goal

17.1 Manage and preserve, where possible, significant historic resources located in unincorporated areas of the County.

Objective

17.1.1 Continue to provide an accurate and comprehensive inventory of those historic resources located in unincorporated areas of the County.

Policies

17.1.1.1 Continue to develop and maintain an automated inventory of all archaeological sites and all buildings and structures built prior to 1945 located in unincorporated Volusia County utilizing, as a minimum, the variables provided by the Florida Site File. Any new information shall be forwarded to the keeper of the Florida Site File, the Florida Department of State, Division of Historical Resources.

17.1.1.2 Continue to maintain, refine, and utilize the archaeological predictive model and archaeological sensitivity map (a facsimile of this map is shown as Figure 17-1) developed by professional archaeologists for Volusia County to identify areas that should be subjected to an archaeological survey when land development is proposed.

17.1.1.3 Volusia County shall refer inquiries regarding the documentation of known paleontological deposits and discovery of additional significant paleontological remains to the Florida Museum of Natural History affiliated with the University of Florida, Gainesville.

Objective

17.1.3 Mitigate the negative and destructive effects of proposed development on significant historic resources in unincorporated areas of Volusia County.

Policies

17.1.3.1 Continue reviewing proposed demolitions of any building or structure built prior to January 1, 1946.

17.1.3.2 Start providing guidelines for new construction in historic neighborhoods, commercial districts, designated historic districts, and other settings so that such construction will not be obtrusive in historic landscapes and contexts. The Secretary of Interior's Standards for Rehabilitation will be used as a basis for these recommendations.

17.1.3.3 Continue Certificate of Appropriateness proceedings for any project that would involve demolition, relocation, and exterior alteration of, or new construction associated with, a historic resource designated under the authority of the Volusia County Historic Preservation Ordinance (Chapter 62, Volusia County Code of Ordinances, April 20, 1995).

17.1.3.4 Continue requiring the issuance of an Excavation Certificate for any earth disturbing activity within the boundary of a designated archaeological site as provided in the Volusia County Historic Preservation Ordinance (Article V, Chapter 62, Volusia County Code of Ordinances, April 20, 1995).

17.1.3.5 Continue to require an archaeological survey for appropriate land development proposals located or partially located in an area of high archaeological potential as identified by the archaeological sensitivity maps (a compilation of these maps is shown in Figure 17-1). If the project area has never been subjected to an archaeological survey using a subsurface sampling strategy, such a survey shall be conducted, prior to application approval, by a qualified survey team. As one of the requirements for plan approval, a mitigation plan must be provided and implemented for any significant historic resource adversely impacted by the project.

Cultural Facilities Element

Goal

18.1 Enrich the quality of life for Volusia's citizens by increasing awareness of cultural opportunities in Volusia County and support those agencies that provide said opportunities.

Objective

18.1.1 Cultural facilities and opportunities shall be available and accessible to 100 percent of the County's population.

Policies

18.1.1.1 The County shall encourage its municipalities and the private sector to support cultural facilities that provide access to the arts in all sections of the County.

Objective

18.1.5 The County shall maintain the viability of cultural facilities and opportunities by assisting the relevant sponsoring cultural organizations through an annual County budget appropriation of one dollar per capita

dispersed as competitive grants to local arts organizations to be used for operating costs and limited capital expenditures.

Policies

18.1.5.1 The County shall help support cultural organizations that demonstrate artistic merit and a history of public support through the percent or number of the public served, amount of private funding, professional management capacity, number of volunteer hours, amount of in-kind (contributed) services and demonstrating a substantial positive economic impact to the County.

Objective

18.1.6 The County shall help support the arts and cultural events in outdoor and indoor public spaces using existing County buildings and public spaces.

18.1.6.5 The County shall continue an "Arts on the Beach" program to assist performing and visual artists.

18.1.6.6 Protection of sensitive environmental areas and aesthetic considerations including, but not limited to the preservation of open space, scenic vistas and unique visual corridors may be included in the development of any cultural facility funded totally or in part using County funds.