

CITY OF CARRABELLE 2020 COMPREHENSIVE PLAN

GOALS, OBJECTIVES AND POLICIES

Prepared By:

WilsonMiller

1441 Maclay Commerce Drive
Suite 101
Tallahassee, Florida 32312

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1. FUTURE LAND USE ELEMENT

GOAL 1

ENSURE THAT THE CHARACTER AND LOCATION OF LAND USES MAXIMIZE THE POTENTIAL FOR ECONOMIC BENEFIT AND THE ENJOYMENT OF NATURAL AND MANMADE RESOURCES BY CITIZENS WHILE MINIMIZING THE THREAT TO HEALTH, SAFETY, WELFARE POSED BY HAZARDS, NUSIANCES, INCOMPATIBLE LAND USES, AND ENVIRONMENTAL DEGRADATION.

1.G.1 OBJECTIVE 1.1, Coordinate Future Land Uses with Natural Features of the Land and the Availability of Facilities and Services

The City shall coordinate future land uses with natural features of the land and the availability of facilities and services. Future growth and development will be managed through the preparation, adoption, implementation, and enforcement of land development regulations

(a) Not later than November 15, 2006, the City of Carrabelle will revise its Comprehensive Plan to update the goals, objectives, policies and future conditions maps. The updated plan shall reflect changes to Chapter 163, Florida Statutes, and Rule 9J-5, Florida Administrative Code, since adoption of the Plan in 1990. This revision will be based on a 2015 planning period, and will utilize current and forecasted conditions to satisfy the data and analysis requirements.

1.G.1 Policy 1.1.1

The Future Land Use Map will be reviewed to insure that the proposed uses, in the various categories, do not conflict with the prevailing natural conditions including:

- a) Soil Conditions: Areas proposed for development shall have soils suitable to support the proposed development.
- b) Topography: Parcels containing areas of excessive topographical relief shall not be reclassified at a higher density. Areas of excessive topographical relief shall be defined as areas where the natural (not man-induced) topography exceeds a 20% slope.
- c) Drainage: Natural drainage features will be protected and preserved to ensure the continuation of their natural function.
- d) Floodplains: Any structural development will have to comply with the City's land development regulations, which regulates construction within flood prone areas.

1.G.1 Policy 1.1.2

The regulation of land uses consistent with the Future Land Use Map shall be accomplished by enforcing the City's land development regulations, which outline permitted uses in accordance with the Comprehensive Plan.

1.G.1 Policy 1.1.3

Land development regulations shall require site plan review to ensure the use of setbacks, buffering, open space, landscaping, and/or creative fencing to provide for harmonious land use transition.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.1.4

All development orders and permits for development and redevelopment shall be issued only if public facilities necessary to maintain adopted level of service standards are available concurrent with the impacts of the development.

1.G.1 Policy 1.1.5

The City shall prohibit land development that does not provide for the management of drainage and stormwater in accordance with the drainage level of service standard and related policies adopted in the Public Facilities section of the Comprehensive Plan.

1.G.1 Policy 1.1.6

Land development regulations shall contain specific and detailed provisions required to implement the adopted Comprehensive Plan and will:

- a) Regulate the subdivision of land by continuing to enforce the land development regulations;
- b) Regulate the use of land consistent with this Element ensuring the compatibility of adjacent land uses by evaluating requests for land use changes through an analysis of adjacent land uses in order to protect the integrity of adjacent land use;
- c) Protect the Conservation lands designated on the Future Land Use Map and in the Conservation Element by not issuing permits for new development; by transferring development rights from Conservation lands; prohibiting expansions of non-conforming uses; and by prohibiting development on adjacent land which could degrade or have a negative impact on preserving the natural resources;
- d) Regulate areas subject to seasonal and periodic flooding and provide for drainage and stormwater management by requiring elevation certifications in compliance with FEMA; by requiring compliance with the City's stormwater management standards; by requiring FDEP stormwater management permits in subdivisions, commercial, and multifamily development; and by requiring site suitable best management stormwater plans in the Critical Shoreline District. Public expenditures for infrastructure shall be limited within the Coastal High Hazard Area.
- e) Protect potable water well fields and aquifer recharge areas by continuing to enforce that section of the land development regulations which designates a protective zone prohibiting development that could contaminate groundwater and aquifer recharge and that are consistent with the policies contained within this Plan;
- f) Regulate signage by continuing to enforce that section of the land development regulations which addresses the permit procedure for signs;
- g) Ensure safe and convenient onsite traffic flow and vehicle parking needs by continuing to enforce that section of the land development regulations which relates to parking requirements; and amending the land development regulations to require site plan review of traffic flow patterns, to provide for ADA-accessible pedestrian walkways, and eliminating unnecessary curb cuts in order to protect motorists and pedestrians; and

FUTURE LAND USE ELEMENT

- h) Provide that development orders and permits shall not be issued which result in a reduction of the levels of service for the effected public facilities below the level of service standards adopted in this plan.

1.G.1 Policy 1.1.7

The Future Land Use Map Series, Maps I-1 through I-16 herein, reflect City policy for managing the allocation of future land use. The *Data and Analysis* document of the Carrabelle 2010 *Comprehensive Plan* supports the Future Land Use Map series. Land use designations on the Future Land Use maps have been allocated pursuant to goals, objectives, and policies stipulated in the Comprehensive Plan, together with the analysis of population, housing and land resources. The process of allocating these land use designations has considered the need to conserve natural resources including wetlands, flood plains, fish and wildlife, consideration of capital improvement needs, and conservation of fiscal resources. The following maps shall be adopted as the Carrabelle Future Land Use Map series:

Map Number and Title
Map I-1a: Existing Land Use Map & Map I-1b: Existing Land Use Map: Public Facilities
Map I-2: Future Land Use Map
Map I-3: Adjacent Land Uses Within One Mile of Carrabelle Map
Map I-4: Historic Resources Map
Map I-5: Potable Water Wells and Wellhead Protection Map
Map I-6: FEMA 100-Year Flood Plain Map
Map I-7: NWI Wetlands Map
Map I-8: FLUCCS Categories of Wetlands Map
Map I-9: Marine Wetlands Map
Map I-10: Stratigraphy Map
Map I-11: Soils Map (Simple)
Map I-12: Soils Map (Detailed)
Map I-13: Soil Erosion Susceptibility Map
Map I-14: Coastal High Hazard Area Map
Map I-15: SLOSH Map
Map I-16: Critical Shoreline District Map
Map I-17: Hurricane Evacuation Zone Map
Map I-18: Carrabelle Redevelopment Area Map

1.G.1 Policy 1.1.8

The Future Land Use Map Series shall designate areas for the following uses:

Land Use Category	Maximum Density/Intensity*
Conservation	N/A
Very Low Density Residential	1du/5ac
Low Density Residential	1du/ac
Residential	Single-Family: <ul style="list-style-type: none"> Central Water & Sewer- 8du/ac Central Water Only- 4du/ac No Central Water or Sewer- 1du/ac Multi-Family: <ul style="list-style-type: none"> Central Water & Sewer- 15du/ac
Mixed Use Commercial	10du/ac; 0.5 FAR; 80% impervious lot coverage
Commercial	0.4 FAR; 80% impervious lot coverage
Industrial	0.2 FAR; 80% impervious lot coverage
Recreational	N/A

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Public Facilities	0.4 FAR; 50% impervious lot coverage
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*Subject to the additional density/intensity requirements of the Coastal High Hazard Area and the Critical Shoreline District, as defined in the City of Carrabelle 2010 Comprehensive Plan and Land Development Regulations

1.G.1 Policy 1.1.9

The standards for densities/intensities of each land use established on the Future Land Use Map are hereby adopted and shall be implemented by land development regulations and shall be consistent with the following standards:

a) Residential: This category includes land used for residential purposes including single-family homes, town homes, duplexes, multifamily structures, mobile homes, condominiums, accessory buildings, and schools. The density allowed in Residential areas depends on the availability of sewer and water.

1. Single-Family Residential:

- a. Where central water and sewer is available, the maximum density allowed is 8 units per acre.
- b. Where only central water is available, the maximum density allowed is 4 units per acre. Additionally, an onsite sewerage disposal system (OSDS) must be utilized.
- c. Where neither central water nor sewer is available, the maximum density allowed is 1 unit per acre

2. Multi-Family Residential:

- a. Restricted to areas where both city water and sewer is available.
- b. The maximum multi-family density allowed is 15 units per acre.

b) Commercial: This category includes land used for retail and wholesale trade, offices, motels, restaurants, automobile service stations, repair facilities, or other uses where goods or services are made available to the general public; light industrial/commercial associated with seafood processing; and schools. The maximum intensity for commercial development shall be 80% impervious lot coverage. Properties shall contain a floor area ratio of 0.4 based on the total land area. One residential structure per existing lot of record may be located in the commercial land provided that the structure follows the guidelines established for residences under the residential land use.

1. The Commercial Future Land Use category shall apply to 45 acres, within an area known as Timber Island, as depicted on the Carrabelle Future Land Use Map and located within the Carrabelle Seafood Commerce Park Development of Regional Impact. The 45 acres of Commercial property shall be subject to not only the provisions described in Future Land Use Element Policy 1.1.5(b), but also the following:

- (1) Permanent residential land use shall be prohibited.
- (2) The development program shall be limited to 14,500 gross square feet of commercial space, 400 temporary lodging units, and 480 wet and dry marina slips.
- (3) The temporary lodging units shall be limited to resort-type facilities such as hotels, motels, or other transient lodging facilities. These facilities shall be centrally managed and operated, with the occupancy and tenure of stay limited to a maximum of four weeks.
- (4) A hurricane preparedness and evacuation plan will be prepared consistent with the provisions of Rule 9J-2.0256(5)(b), F.A.C., and will be placed on file with the City of Carrabelle and

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Franklin County prior to the issuance of the certificate of occupancy for the first habitable dwelling. At a minimum, the hurricane preparedness and evacuation plan shall require: an automated hurricane warning system for the purpose of warning all transient residents of a pending storm; an annual hurricane awareness program and hurricane evacuation plan with mandatory Category 1 hurricane evacuation. However, hurricane evacuation may be ordered for a lesser event at the discretion of the Franklin County Emergency Management Office.

- (5) A stormwater master plan, which complies with the requirements of the City of Carrabelle and the Department of Environmental Protection, will be prepared and approved by the City through the development review process prior to any development of the site.
- (6) Naturally vegetated buffers will be utilized to protect and conserve the natural functions of jurisdictional wetlands and the Carrabelle River. The buffers shall be a minimum of 50 feet in width and landward of the jurisdictional wetland line and the Carrabelle River. No development other than elevated boardwalks and pedestrian walkovers appropriately permitted by regulatory agencies will be allowed within those jurisdictional wetlands and associated wetland buffers located along the western portion of the property. The only allowable development within the other jurisdictional wetlands and associated wetland buffers located along the Carrabelle River in the northern portion of the property shall be a marina, piers, docks or other similar water access structures associated with the marina to the extent such structures may be permitted by the appropriate regulatory agencies.

c) Industrial: This category includes land used for activities primarily connected with manufacturing, assembly, processing, or storage of products. This category of land use shall provide for land suitable for industrial development, which will not detrimentally affect the environment. The maximum intensity for industrial development shall be 80% impervious lot coverage. Properties shall contain a floor area ratio of 0.2 based on the total land area. There shall be no industrial development in wetlands. Prior to development, wetlands shall be accurately identified.

(d) Very Low Density Residential: This category includes land used for low-density residential purposes due to environmental sensitivity and threat of natural disaster destruction. It shall be applied to lands that were previously designated "Agriculture". The maximum density is one dwelling unit per five acres. Permitted uses within this category include single-family homes and accessory structures.

The purpose of this land use category is to balance the protection of environmentally sensitive lands (by providing a buffer to protect large parcels of more environmentally sensitive lands from the encroachment of development), wildlife corridors and transition zones, and areas suitable for re-vegetation, with the protection of the property rights of owners in mind.

No more than one (1) unit shall be established per platted lot or parcel existing as of the effective date of this Comprehensive Plan. Substandard lots less than five (5) acres in size, which are contiguous and in common ownership, shall be assembled in order to meet the density standards of this policy.

Specific Requirements:

- 1. The provision of an enhanced stormwater volume reduction and water quality treatment system by limiting post-development stormwater discharge volumes to be no greater than pre-development stormwater discharge volumes

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2. The use of native vegetation is required for residential lots and common open spaces, Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook*, as produced by Florida's water management districts.
3. Connection to central water and sanitary sewer systems shall be required prior to any development approvals;
4. The preservation of at least 30% of the site as common open space; and
5. The development and implementation of a restoration and management plan for environmentally sensitive lands (e.g., wetlands)

e) Conservation: This category is used for conserving or protecting natural resources or environmental quality for the purposes of flood control, protection of quality or quantity of groundwater or surface water, floodplain management, fisheries management, or protection of vegetative communities or wildlife habitats. This category shall provide for the long-term management and protection of publicly or privately held land for timber harvest, wildlife management, environmental protection, and resource based recreation. Conservation lands in Carrabelle include wetlands, marshlands, flood prone areas, and other areas in which valuable natural resources are found. No development is allowed in Conservation areas, except in accordance with appropriate State and Federal agencies' management plans. No residential density is associated with this category.

f) Recreational: This category shall designate land to be used for recreational facilities. Open space, picnic areas, restroom facilities, boat ramps, parks, and other recreational facilities are permitted use in this category. No residential density is associated with this category.

g) Public Facilities: This category of land use shall provide for the health, safety, and well being of the residents of Carrabelle through adequate provisions of public buildings, educational complexes, and other public facilities. The uses permitted in this category include government offices, schools, water and sewer facilities, medical facilities, and similar uses. Residential uses are prohibited except for security purposes. The maximum intensity for public facilities shall be 80% impervious lot coverage. Properties shall contain a floor area ratio of 0.4 based on the total land area.

h) Low Density Residential: This category includes land used for low-density residential purposes and shall be applied to lands that were previously designated "Agriculture" and "Limited Residential". The maximum density is one dwelling unit per acre, except for lots of record platted prior to the adoption of the original Comprehensive Plan (1992). Permitted uses within this category include single-family homes and accessory structures.

The purpose of this land use category is to encourage infill development within the City Limits, while maximizing the preservation of conservation areas and unique features of the site; encouraging creative design through the use of an overlay for wetland areas in which homes are clustered* into "villages" surrounded by natural open spaces; incorporating trail and pedestrian opportunities; and promoting enhanced street systems resulting in reduced infrastructure and impervious surfaces.

Specific Requirements:

- a) The provision of an enhanced stormwater volume reduction and water quality treatment system by limiting post-development stormwater discharge volumes to be no greater than pre-development stormwater discharge volumes;

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- b) The use of native vegetation is required for residential lots and common open spaces. Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook*, as produced by Florida's water management districts.
- c) Connection to central water and sanitary sewer systems shall be required;
- d) The preservation of at least 30% of the site as common open space;
- e) The development and implementation of a restoration and management plan for environmentally sensitive lands (e.g., wetlands); and
- f) The Transfer of Development Rights program shall be the required method for increasing density within this land use category in order to encourage infill development and workforce attainable housing within the City Limits

**The term 'clustered' shall be defined to mean that the built area of a development is well defined and compact, thereby enabling the creation of contiguous expanses of open space and the protection of environmentally sensitive areas. A "clustered subdivision" shall contain a minimum of 30% open space over the total net buildable area. Development within a clustered subdivision shall be clustered away from environmentally sensitive areas on the site and away from adjacent public conservation land. Uses such as golf courses will not be computed as open space.*

(i) **Mixed Use Commercial:** This category includes land used for an integrated mix of uses. Development will be designed to encourage the use of bicycle and pedestrian access among the uses. The uses may include a range of residential unit types; hotel, motel, and other temporary lodging units; neighborhood and community-scale commercial and retail; recreational uses; public uses, such as schools, government offices and services, and religious institutions; marinas and water related facilities; and entertainment facilities. Development shall be clustered to the maximum extent practicable to provide open space and to protect environmentally sensitive areas.

- 1. **Density:** Properties shall contain no more than 10 dwellings per acre based on the total land area.
- 2. **Intensity:** The maximum intensity for Mixed Use Commercial development shall be 80% impervious lot coverage. Properties shall contain a floor area ratio of 0.5 based on the total land area.
- 3. **Percentage Distribution of Mixed Uses:** At least three of the uses listed in the Intent section shall be developed within the overall parent parcel of land that is assigned this category. One land use shall be a residential use and one land use shall be a non-residential use, neither of which may be less than 10% of the total land area. All of the land uses do not have to be developed at the same time, nor is one land use a prerequisite to another land use. For the purposes of this section, "properties" refers to the overall parent parcel of land that is assigned the Mixed Use Commercial future land use category and not individual lots within the parent parcel of land.
- 4. **Specific Restrictions:**
 - a) The stormwater management system will be designed to be as natural as possible, subject to approval by governmental agencies with jurisdiction;

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- b) The use of native vegetation is required for residential lots and common open spaces. Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook* as produced by Florida's water management districts; and
- c) Connection to central water and sanitary sewer systems shall be required prior to any development approvals

1.G.1 Policy 1.1.10

Land development regulations shall continue to be enforced by the City Commission, which address:

- a) The location, density, and intensity of land uses in accordance with the Future Land Use Map; and
- b) The policies and descriptions of types, sizes, densities and intensities of land uses contained in this Element.

1.G.1 OBJECTIVE 1.2, Redevelopment and Renewal

The City shall continue to pursue the redevelopment and renewal of any blighted areas that are identified by applying for Housing and Economic Development Grants

1.G.1 Policy 1.2.1

The City Commission shall authorize further study of existing blighted areas as described in the Housing Element to support future Community Development Block Grant (CDBG) applications.

1.G.1 Policy 1.2.2

The City shall pursue funding sources to address deficient housing conditions as defined in the Housing Element of this Plan.

1.G.1 Policy 1.2.3

The City shall enforce the adopted building code in order to promote the rehabilitation, demolition, or removal of dilapidated and unsafe buildings in the City.

1.G.1 Policy 1.2.4

The City shall continue to support the redevelopment and renewal of blighted areas, particularly within the Carrabelle Redevelopment Area (CRA), as shown in the Future Land Use Map series.

1.G.1 Policy 1.2.5

The City will direct development and redevelopment efforts to the urban redevelopment area designated in the comprehensive plan, pursuant to Section 163.3164, Florida Statutes, by offering incentives to property owners and business owners and directing public land acquisition funds and infrastructure funding to this area.

1.G.1 OBJECTIVE 1.3, Eliminate or Reduce Inconsistent Land Uses

The City shall encourage the elimination or reduction of land uses, which are inconsistent with the Comprehensive Plan.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.3.1

Expansion or replacement of land uses that are inconsistent with the Future Land Use Map shall be prohibited.

1.G.1 OBJECTIVE 1.4, Protect Natural and Historic Resources

Based on the adopted land development regulations, the City shall ensure that the natural and historic resources of Carrabelle are protected

1.G.1 Policy 1.4.1

The Wellfield Protection Ordinance area adopted by the City of Carrabelle consists of two zones requiring different levels of protection:

- (1) **Primary Protection Zone:** The innermost zone surrounding the wellhead that requires the strictest restrictions. Within the Primary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 200 feet of a public wellfield. The following uses are prohibited within the Primary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities;
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities; and
 - e. Septic tanks
- (2) **Secondary Protection Zone:** The zone surrounding the Primary Protection Zone. Within the Secondary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 1,000 feet of a public wellfield. The following uses are prohibited within the Secondary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities; and
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities

1.G.1 Policy 1.4.2

The City shall continue to enforce the standards adopted in its land development regulations, which require that:

- a) Site plans for new development identify the location and extent of wetlands located on and adjacent to the property;
- b) Site plans shall identify the location, extent, and setbacks from the waters and wetlands of the State and Carrabelle in conformance with the Critical Shoreline District requirements, as defined within the land development regulations.

FUTURE LAND USE ELEMENT

- c) Subdivision and commercial site plans comply with Carrabelle stormwater management requirements, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs), and provide FDEP approved stormwater management permits to guarantee that normal flows and quality of water will be assured to maintain wetlands;
- d) Alterations of wetlands shall not be allowed, except when no alternative exists;
- e) Altered wetlands shall be restored or mitigated in concert with FDEP, and the Estuarine Reserve at a 2:1 ratio to mitigate wetland destruction. Alteration shall only occur as a last resort,
- f) All approved mitigation shall be required to demonstrate, through appropriate monitoring and reporting by the project's developer, at least an 85% planting survival rate for wetland areas created/augmented during mitigation for a period of at least two years for herbaceous wetland communities and for at least five years for forested wetland communities; and
- g) The wetlands map should be considered a generalized wetland map and a site consideration for development.

1.G.1 Policy 1.4.3

The City shall coordinate with appropriate agencies to ensure protection of threatened and endangered species.

1.G.1 Policy 1.4.4

The City shall submit applications for State and/or Federal funding to complete a comprehensive survey of Carrabelle's historic resources.

1.G.1 Policy 1.4.5

The City, along with local civic clubs and interested citizens, shall apply for appropriate grant funding to restore and maintain identified, locally significant, and historical structures, where possible.

1.G.1 Policy 1.4.6

The City, in conjunction with interested private groups and State agencies, shall complete a comprehensive survey of historic resources, including historically significant structures and existing cemeteries, by December 2007.

1.G.1 Policy 1.4.7

All applicable provisions of the Comprehensive Plan shall be updated to include the findings of the historical resources survey.

1.G.1 Policy 1.4.8

The City shall take measures to have historically significant structures placed on the National Register of Historic Places and shall assist in their rehabilitation and adaptive reuse through technical assistance.

1.G.1 Policy 1.4.9

The City shall pursue federal, state, and/or local funding to repair and maintain existing cemeteries.

1.G.1 Policy 1.4.10

The City shall pursue federal, state, and/or local funding for the acquisition of additional cemetery lands.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.4.11

The City shall coordinate any identified historic resources with economic, educational, and tourist strategies.

1.G.1 OBJECTIVE 1.5, Coordinate with Franklin County Regarding Hurricane Evacuation

The City of Carrabelle shall coordinate with Franklin County in the safe evacuation of the coastal population in accordance with the Apalachee Regional Planning Council's *Evacuation Transportation Analysis (August 2004)* through the development of an interlocal agreement by December 2007.

1.G.1 Policy 1.5.1

Carrabelle shall limit the density of new residential development within the Coastal High Hazard Area to a maximum of two dwelling units per gross acre.

1.G.1 Policy 1.5.2

It shall be the policy of Carrabelle to require that all land development applications within the Coastal High Hazard Area be planned and obtain approval pursuant to a site plan review process to ensure that development is compatible with site characteristics. Applications will be reviewed according to pertinent sections of the National Flood Insurance Program and will be reviewed for compliance with all other applicable flood control regulations, including the Federal Emergency Management Administration /National Flood Insurance Program and the City of Carrabelle's Flood Hazard Prevention Ordinance #233.

1.G.1 Policy 1.5.3

The City shall require that commercial redevelopment activities within the FEMA Velocity Zone of the Coastal High Hazard Area be limited to the density/intensity in existence for the development site prior to the effective date of the Comprehensive Plan. All such redevelopment activities shall also be subject to compliance with other applicable goals, objectives, policies, and development regulations.

1.G.1 Policy 1.5.4

The City shall prohibit the redevelopment and rebuilding in the Coastal High Hazard Area by limiting funding for public infrastructure and through land development regulations, which limit substantial improvements to nonconforming structures in accordance with FEMA Policies.

1.G.1 Policy 1.5.5

The City shall prohibit the approval of new development orders for mobile home projects within the Coastal High Hazard Area if the project is within a FEMA rated V-zone.

1.G.1 Policy 1.5.6

The City shall prohibit the siting of new acute care medical facilities within the Coastal High Hazard Area. There are no acute care medical facilities currently located within the Coastal High Hazard Area.

1.G.1 Policy 1.5.7

The City shall identify inland structures, which can be used as temporary housing for evacuated population.

1.G.1 OBJECTIVE 1.6, Discourage Proliferation of Urban Sprawl

FUTURE LAND USE ELEMENT

The City shall discourage the proliferation of urban sprawl through adoption and implementation of the Future Land Use Map and land development regulations.

1.G.1 Policy 1.6.1

In considering new development, the City shall require the availability of essential public facilities and services to support the development. At a minimum, the levels of service standards adopted in each element of this plan shall be maintained.

1.G.1 Policy 1.6.2

The City shall require new developments planned for outlying, unserved areas to pay the total costs of supplying necessary services to the proposed developments.

1.G.1 Policy 1.6.3

The City shall adopt policies that encourage infill in already developed areas and that encourage the redevelopment and renewal of blighted areas.

1.G.1 Policy 1.6.4

During the review of map and plan amendments, the City shall consider the urban sprawl factors enunciated in Rule 9J-5.006(5)(g), Florida Administrative Code, in order to determine whether the plan or plan amendment:

1. Promotes, allows or designates for development substantial areas of the jurisdiction to develop as low-intensity, low-density, or single-use development or uses in excess of demonstrated need;
2. Promotes, allows or designates significant amounts of urban development to occur in rural areas at substantial distances from existing urban areas while leaping over undeveloped lands which are available and suitable for development;
3. Promotes, allows or designates urban development in radial, strip, isolated or ribbon patterns generally emanating from existing urban developments;
4. As a result of premature or poorly planned conversion of rural land to other uses, fails adequately to protect and conserve natural resources, such as wetlands, floodplains, native vegetation, environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, rivers, shorelines, beaches, bays, estuarine systems, and other significant natural systems;
5. Fails adequately to protect adjacent agricultural areas and activities, including silviculture, and including active agricultural and silvicultural activities as well as passive agricultural activities and dormant, unique and prime farmlands and soils;
6. Fails to maximize use of existing public facilities and services;
7. Fails to maximize use of future public facilities and services;
8. Allows for land use patterns or timing which disproportionately increase the cost in time, money and energy, of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater management, law enforcement, education, health care, fire and emergency response, and general government;
9. Fails to provide a clear separation between rural and urban uses;
10. Discourages or inhibits infill development or the redevelopment of existing neighborhoods and communities;
11. Fails to encourage an attractive and functional mix of uses;
12. Results in poor accessibility among linked or related land uses; and
13. Results in the loss of significant amounts of functional open space.

FUTURE LAND USE ELEMENT

As part of the City's review, the City shall also consider the requirements of 9J-5.006(5)(l) which recognizes innovative and flexible strategies as a counter to the proliferation of urban sprawl and includes planning strategies and techniques such as urban villages, new towns, satellite communities, area-based allocations, clustering and open space provisions, mixed-use development and sector planning that allow the conversion of rural and agricultural lands to other uses while protecting environmentally sensitive areas, maintaining the economic viability of agricultural and other predominantly rural land uses, and providing for the cost-efficient delivery of public facilities and services.

1.G.1 OBJECTIVE 1.7, Ensure Availability of Suitable Land for Utility Facilities

The City shall ensure the availability of suitable land for utility facilities necessary to support proposed development through land development regulations.

1.G.1 Policy 1.7.1

The City shall continue to enforce its land development regulations which require the developer to submit site plans which reflect that adequate sites, corridors, right of ways and easements, or access for necessary utility facilities are available to serve the development.

1.G.1 Policy 1.7.2

Public utilities needed to provide essential service to existing and future land uses in the City of Carrabelle shall be permitted in all of the land use classifications established by this Plan. Public utilities include all utilities (gas, water, sewer, electrical, telephone, etc.), whether publicly or privately owned.

1.G.1 Policy 1.7.3

The City shall require that public utilities be adequately buffered from any adjacent residential uses.

1.G.1 OBJECTIVE 1.8, Encourage the Use of Innovative Land Development Regulations

The City shall encourage the use of innovative land development regulations such as mixed-use developments, cluster developments, and impact fees.

1.G.1 Policy 1.8.1

The City shall provide for mixed use urban areas through the land development regulations and the Future Land Use Map.

1.G.1 Policy 1.8.2

The City shall continue to enforce its land development regulations, which allow the clustering of structures away from environmentally sensitive land and native vegetative communities.

1.G.1 Policy 1.8.3

By December 2007, the City shall evaluate the possibility of adopting an Impact Fee Ordinance into its land development regulations in order to help finance the construction of new public facilities or the expansion of existing public facilities necessitated by new development.

1.G.1 Policy 1.8.4

By December 2007, the City shall develop a density transfer mechanism within the land development regulations which allows density transfers to cluster developments in order to: limit the amount of land

FUTURE LAND USE ELEMENT

required for infrastructure; encourage the development of affordable housing; provide open space; and protect environmentally sensitive land.

1.G.1 OBJECTIVE 1.9, Protect the Natural Functions of the 100-Year Floodplain

The City shall protect the natural functions of the 100-year floodplain in order to protect and preserve the value and function of floodplains from encroachment by development.

1.G.1 Policy 1.9.1

The City shall continue to enforce the Carrabelle Flood Hazard Prevention Ordinance within its land development regulations, which includes limitations on development and density, which requires all development within the City's areas of special flood hazard to submit a certificate of elevation in accordance with Federal Flood Hazard Regulations; or, for commercial structures, provide engineer-certified documentation for flood proofing.

1.G.1 Policy 1.9.2

The City shall cooperate with the Federal Emergency Management Administration to control and monitor development within the floodplain.

1.G.1 Policy 1.9.3

The City shall adopt and enforce new cost effective programs for minimizing flood damage. Such programs may include modification in construction setback requirements or other site design techniques, as well as upgraded building and construction techniques to protect against flood hazards.

1.G.1 OBJECTIVE 1.10, Public School Siting

The City shall coordinate with the Franklin County School Board concerning the provision of schools to support the existing and projected population.

1.G.1 Policy 1.10.1

The City shall evaluate the impact of proposed residential developments on school facilities to provide for and locate schools in a coordinated manner ensuring that the planning, construction, and opening of educational facilities are coordinated in time and location, concurrent with both need and necessary services and infrastructure, and to ensure compatibility with the Comprehensive Plan.

1.G.1 Policy 1.10.2

The City shall continue to permit school facilities to be located within the Very Low Density Residential, Low Density Residential, Residential, Commercial, Mixed Use Commercial, and Public Facilities land use categories.

1.G.1 Policy 1.10.3

The City shall coordinate with the Franklin County School Board for the proposed location of future school facilities.

1.G.1 Policy 1.10.4

The City shall utilize the Interlocal Agreement Steering Committee meetings as the mechanism for coordinating the school collocation process with the Franklin County School Board.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.10.5

The City will encourage the collocation of public libraries, parks and community centers with public schools to the extent practical and financially feasible.

1.G.1 Policy 1.10.6

The City shall advise the Franklin County School Board of a proposed public school site's consistency with the Carrabelle Comprehensive Plan and land development regulations, including the availability of necessary public infrastructure to support the development of the site.

1.G.1 Policy 1.10.7

The City shall provide the Franklin County School Board with the opportunity to comment on comprehensive plan amendments, rezonings, and other land use decisions, which may be projected to impact on the public schools facilities plan.

1.G.1 Policy 1.10.8

By December 2007, the City shall incorporate provisions in the land development regulations, which provides for safe pedestrian and bicycle access to schools.

1.G.1 Policy 1.10.9

The City shall coordinate with Franklin County and the Franklin County School Board regarding emergency preparedness issues which may include consideration of:

- a) Design and/or retrofit of public schools as emergency shelters for non-storm events and/or host shelters during non-risk events only. Emergency shelters will not be open for tropical storm events or greater within Franklin County;
- b) Enhancing public awareness of evacuation zones, evacuation routes, and shelter locations; and
- c) Designation of sites other than public schools as long term shelters, to allow schools to resume normal operations following emergency events.

1.G.1 Policy 1.10.10

The City shall coordinate with the Franklin County School Board regarding the utilization of the Carrabelle High School site if there are plans to relocate the school.

1.G.1 OBJECTIVE 1.11, Affordable Housing

The City shall continue to implement and enforce innovative land development techniques and programs to promote safe and decent affordable housing for existing and future residents to support growing affordable housing needs and ensure the continued viability of low-income housing.

1.G.1 Policy 1.11.1

By December 2006, the City shall appoint an Affordable Housing Committee, whose goal will be to evaluate affordable housing mechanisms and make implementation recommendations to the City Commission. Affordable housing mechanisms that shall be evaluated include inclusionary zoning, community land trusts, density bonus programs, and impact fee waiver programs.

1.G.1 Policy 1.11.2

By December 2007, the City shall consider the adoption and implementation of an inclusionary zoning ordinance, which as a condition of approval requires residential developments above a certain size to

FUTURE LAND USE ELEMENT

include a specified number of affordable units or a donation of land and/or housing units to a housing trust fund.

1.G.1 Policy 1.11.3

By December 2007, the City shall consider creating a Carrabelle Community Land Trust, the goal of which is to create an inventory of developable and buildable land for workforce and affordable housing to ensure a perpetual inventory of workforce affordable housing.

1.G.1 Policy 1.11.4

By December 2007, the City shall consider the adoption and implementation of a density bonus program, which rewards builders who agree to build a certain number of affordable units or contribute money to a housing trust fund by authorizing them to construct more units than otherwise would be allowed.

1.G.1 Policy 1.11.5

By December 2007, the City shall consider the adoption and implementation of an impact fee waiver program, by which impact fees are waived based on the condition that the developer commits to building affordable housing units.

1.G.1 Policy 1.11.6

The Affordable Housing Committee shall also apply for federal, state, and/or local funding for site acquisition and improvement for very low-, low-, and moderate-income housing. This committee also shall seek assistance from the Florida Department of Children and Families in determining the need for group homes and foster care facilities.

1.G.1 Policy 1.11.7

By December 2007, the City shall develop a density transfer mechanism within the land development regulations which allows density transfers to cluster developments in order to encourage the development of affordable housing. A density transfer mechanism allows development rights to be transferred to locations where they could be better utilized.

1.G.1 Policy 1.11.8

The City shall strive to integrate affordable housing throughout the existing housing stock by encouraging urban infill.

1.G.1 OBJECTIVE 1.12, Coordinate Future Land Use Element with Airport Master Plan

The Carrabelle-Thompson Airport Master Plan and future expansion plans shall be coordinated with the Future Land Use Element to minimize airport impacts to adjacent land uses and to conservation resources in a manner that also protects the integrity of airport operations and safety.

1.G.1 Policy 1.12.1

By December 2007, the City shall update its Future Land Use Map series and Traffic Circulation Map series and the Official Zoning Map to reflect the updated Airport Layout Plan, which is currently being conducted by a private consultant. The map series shall delineate all Runway Protection Zones (RPZ) established for the Carrabelle-Thompson Airport. These clear zones shall be at minimum consistent with requirements set forth by the Federal Aviation Administration. Development and land use activities within a RPZ shall be consistent with regulations established by the Federal Aviation Administration.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.12.2

By December 2007, the City shall update its Future Land Use Element and land development regulations to reflect the updated Airport Layout Plan, which is currently being conducted by a private consultant. The Future Land Use Element and land development regulations shall be updated to ensure that future expansion of airport property and runways shall be focused away from residential areas in order to minimize airport impacts on nearby neighborhoods.

1.G.1 Policy 1.12.3

By December 2007, the City shall enter into a joint planning agreement with Franklin County to ensure that lands annexed near or adjacent to the Carrabelle-Thompson Airport shall be assigned land use designations that are compatible with the Airport Master Plan.

1.G.1 Policy 1.12.4

The City Planning and Zoning Advisory Board shall coordinate with Airport staff regarding development applications, zoning changes, and land use amendment petitions proposed for property adjacent to or near the Carrabelle-Thompson Airport.

1.G.1 Policy 1.12.5

By December 2007, the City shall adopt in its land development regulations airport zoning regulations to address height, noise, electronic interference, illumination, clear zones and land requirements. Such regulations shall be consistent with the Federal Aviation Administration regulations and the Airport Master Plan. The City shall coordinate with the Airport Authority regarding noise complaints.

1.G.1 OBJECTIVE 1.13, Economic Development-Utilization of Natural Resources

The utilization of natural resources is an integral component of the local economy, particularly those that are water-dependent and water-related. The ecology of Carrabelle's natural areas can support these activities if conducted in a non-destructive and environmentally responsible manner.

1.G.1 Policy 1.13.1

The City shall support and encourage the utilization of its natural resources in a non-destructive and environmentally responsible manner to promote economic development activity.

1.G.1 Policy 1.13.2

The City shall enforce the policies set forth in the Coastal Management and Conservation Elements of this Plan to conserve and protect those natural resources that form the basis of water-related and water-dependent businesses and activities in Carrabelle.

1.G.1 Policy 1.13.3

The City shall coordinate with the appropriate local, state, and federal agencies for the use of public lands in promoting all water-related and water-dependent businesses and activities, including eco-tourism, in the City of Carrabelle.

1.G.1 Policy 1.13.4

The City shall consider ecotourism-related partnerships with the managing agencies of public lands and the private sector.

1.G.1 Policy 1.13.5

FUTURE LAND USE ELEMENT

The City will explore the availability of grants or matching fund programs for the promotion, creation, enhancement, or expansion of water-dependent and water-related businesses and activities.

1.G.1 OBJECTIVE 1.14, Economic Development-Ensure an Adequate Supply of Industrial Land

The City shall ensure an adequate supply of land designated for industrial use on the Future Land Use Map (FLUM).

1.G.1 Policy 1.14.1

The City will designate land for industrial uses on the FLUM. General criteria for the designation of industrial land uses on the FLUM include:

1. Existing industrial or commerce parks;
2. Availability of public or private utilities;
3. Proximity to major highway access and/or rail access;
4. Potential to create nuisances such as fumes, noise, odor, dust, traffic, etc.;
5. For water-dependent industry, access to deepwater channels, and;
6. Minimal impact on locally significant environmental resources.

1.G.1 Policy 1.14.2

Where possible, areas adjacent to industrial areas will not be designated for residential use on the FLUM unless such residential use is ancillary to the industrial area.

1.G.1 Policy 1.14.3

New industrial growth shall be encouraged to use existing or underutilized industrial areas unless circumstances exist that would preclude such location.

1.G.1 Policy 1.14.4

The City shall coordinate with Franklin County regarding the expansion of industrial uses on adjacent County lands, particularly those lands surrounding Lake Morality Road.

1.G.1 OBJECTIVE 1.15, Economic Development-Pursue a Diverse Economic Environment

In an effort to diversify the City's economy the City shall create an economic environment that promotes the formation and expansion of a variety of small businesses

1.G.1 Policy 1.15.1

The City shall work with the Carrabelle Chamber of Commerce, the Apalachicola Bay Chamber of Commerce, and the Franklin County Tourist Development Council, toward enhancing economic development in Carrabelle.

1.G.1 Policy 1.15.2

The City shall pursue and maintain effective public/private sector partnerships to enhance economic development opportunities in Carrabelle.

1.G.1 Policy 1.15.3

The City shall continue to apply for Community Development Block Grants to assist with economic development projects in the Carrabelle Redevelopment Area.

FUTURE LAND USE ELEMENT

1.G.1 Policy 1.15.4

The City shall investigate the use of incentives to promote infill development and redevelopment, as well as business growth, within Carrabelle.

1.G.1 Policy 1.15.5

By December 2007, the City shall review and update as necessary its land development regulations for site design standards for mixed-use areas to ensure quality development promoting pedestrian orientation, connectivity and sense of place.

2. PUBLIC FACILITIES ELEMENT

GOAL 1

THE CITY SHALL ENSURE THE AVAILABILITY OF NEEDED PUBLIC FACILITIES IN A MANNER THAT PROTECTS INVESTMENTS IN EXISTING FACILITIES AND PROMOTES ORDERLY, COMPACT GROWTH.

2.G.1 OBJECTIVE 1.1, Ensure Availability of Public Facilities

The City shall require that proposed land uses be adequately served by requisite public facilities, including water and wastewater services, adequate stormwater management, solid waste disposal, and hazardous waste management. The subdivision and site plan review processes shall provide a unified system for maximizing use of existing public facilities and for coordinating the efficient location, timing, phasing, and scale of public and private development. For example, in order to abate urban sprawl and maximize use of existing infrastructure all new development shall be required to hook up to the existing central water and wastewater system.

The City shall continue to enforce its adopted land development regulations which include performance standards requiring that requisite public facilities be provided concurrent with the impacts of new development. The City shall enforce performance standards ensuring that the location, scale, timing and design of development shall be coordinated with public facilities and services in order to prevent the proliferation of urban sprawl and achieve cost effective land development patterns. Urban sprawl shall be further abated through the following performance standards, which shall:

- a. Direct future development only to those areas where the provision of public facilities necessary to meet levels of service standards is available concurrent with the impacts of the development;
- b. Maximize use of existing central potable water and wastewater facilities by requiring that all new development hook up to the City's existing central systems;
- c. Conserve wetlands, natural drainage corridors, and other environmentally sensitive areas; and
- d. Provide density and intensity thresholds to encourage infill development and more efficiently utilize the existing infrastructure.

2.G.1 Policy 1.1.1

The City shall continue to enforce its concurrency management system, as adopted in its land development regulations. The City's concurrency management system requires that at the time a development permit is issued, adequate facility capacity is available or will be available concurrent with the impacts of proposed development. The City shall monitor and evaluate the system to ensure effective implementation. Also, the concurrency management system ensures that existing and planned public facilities are used to their maximum feasible extent in order to: achieve economy of scale; promote compact growth; and prevent urban sprawl.

2.G.1 Policy 1.1.2

All improvements for replacement, expansion or increase in capacity of facilities shall be compatible with the adopted level of service standards for the facilities. Issuance of development orders or permits shall be conditioned upon demonstrated compliance with applicable federal, state, and local permit requirements for potable water, wastewater, drainage, and solid waste facilities.

PUBLIC FACILITIES ELEMENT

2.G.1 Policy 1.1.3

The City shall require decisions concerning potable water and wastewater system needs, plans, and the location and timing of improvements shall be consistent with land use and conservation resource management policies stipulated in this Comprehensive Plan.

2.G.1 OBJECTIVE 1.2, Develop and Maintain Five-Year Schedule of Capital Improvements

The City shall develop and maintain a five-year schedule of capital improvement needs for public facilities and shall annually update the schedule as stipulated in the Capital Improvements Element. During the process of programming and budgeting for capital outlays, the City shall investigate new ways to finance public facilities and services, including impact fees.

2.G.1 Policy 1.2.1

The City Commission shall annually evaluate and rank capital improvement projects proposed for inclusion in the five-year schedule of capital improvement needs.

2.G.1 Policy 1.2.2

Proposed capital improvement projects shall be evaluated and ranked in order of priority according to the following guidelines and weights:

	Guidelines*--	Weight
1	Whether the project: <ul style="list-style-type: none"> • Increases efficiency of use of existing facilities and furthers the redevelopment of areas with existing infrastructure; • Promotes infill development; • Prevents or reduces future improvement costs; or • Provides services to developed areas lacking service 	50%
2	Whether the project is needed to: <ul style="list-style-type: none"> • Protect public health and safety; • Fulfill the City's legal commitment to provide facilities and services; or • Preserve or achieve full use of existing facilities 	25%
3	Whether the project: <ul style="list-style-type: none"> • Represents a logical extension of facilities and services within a designated urban service area 	25%
* The applicable plans of State agencies and the Northwest Florida Water Management District shall also be part of the evaluation criteria for all capital improvement projects.		

2.G.1 OBJECTIVE 1.3, On-Site Wastewater Treatment Systems

The City shall assist in ensuring implementation of State regulations imposing mandated standards for inspections, operation, and maintenance of on-site wastewater treatment systems. The City shall require that residents connect to the public wastewater system as the system becomes available.

PUBLIC FACILITIES ELEMENT

2.G.1 Policy 1.3.1

The City shall require that all proposed development which impacts an existing septic tank or generates need for a new septic tank be required to provide evidence of approval by the Franklin County Public Health Department prior to receiving a development order or permit from the City. Any such approval by the City shall be conditioned upon the applicant's compliance with Franklin County requirements for ongoing facility maintenance and operation.

2.G.1 Policy 1.3.2

Issuance of development orders or permits shall be conditioned upon demonstration of compliance with applicable federal, State, and local permit requirements for on-site wastewater treatment systems. The City shall regulate the location, timing, and scale of development in order to assure that new development shall be effectively served by wastewater services. System reviews shall be coordinated with the Florida Department of Environmental Protection (FDEP) in order to promote best management practices and compliance with relevant State permitting procedures. Similarly, the City shall discourage extensive use of septic tanks and wastewater drain fields on areas with characteristics or conditions unsuited for their adaptation.

2.G.1 Policy 1.3.3

The City shall coordinate with appropriate federal, State, and County agencies and amend local ordinances as may be required to assure that issuance of permits for replacement or expansion of existing on-site wastewater treatment systems is conditioned upon compliance with current regulatory requirements and water quality standards.

2.G.1 Policy 1.3.4

The City shall require all owners and users of onsite sewage disposal systems in Carrabelle to connect to a central sewer system within 180 days of notice of availability of such a system pursuant to s. 380.0555(11)(b), F.S.

2.G.1 Policy 1.3.5

The City shall seek grant funding or obtain loans to obtain the services and equipment necessary to connect structures to sewer lines, which are too deep to connect customers utilizing equipment currently owned by the City.

GOAL 2

ADEQUATE PUBLIC FACILITIES SHALL BE PROVIDED IN THE MANNER THAT CORRECTS EXISTING FACILITY DEFICIENCIES, PROTECTS WATER QUALITY, AND PROMOTES COMPACT GROWTH.

SANITARY SEWER SYSTEM

2.G.2 OBJECTIVE 1.1, Sanitary Sewer Level of Service Standard

The City shall achieve and maintain the adopted level of service standards for sanitary sewer facilities.

2.G.2 Policy 1.1.1

The City hereby adopts 180 gallons per day as the level of service for wastewater treatment.

PUBLIC FACILITIES ELEMENT

2.G.2 Policy 1.1.2

The City shall track existing and committed flows to the sewage treatment plant to ensure that capacity is available at the adopted level of service standard.

2.G.2 OBJECTIVE 1.2, Ensure Adequate Capacity

The City shall address coordinating the extension of, or increase in, the capacity of facilities to meet future needs.

2.G.2 Policy 1.2.1

The City shall evaluate the sanitary sewer system on an annual basis and shall upgrade, expand, or replace its sewage facilities as determined by such evaluation to accommodate population demand and ensure operational efficiency.

2.G.2 Policy 1.2.2

All extensions of the sewer system shall be constructed in conformance with Chapter 17-6, F.A.C., as it may be revised and any applicable standards for facilities, which are to be operated and maintained by the City.

2.G.2 Policy 1.2.3

Average peak flow design capacity for the City collection system shall be as specified in Chapter 17-6, F.A.C., as amended or any applicable standards for facilities, which are to be operated and maintained by the City.

2.G.2 Policy 1.2.4

Average flow design capacity for the wastewater treatment system shall be as specified in the operating permit issued by the Florida Department of Environmental Regulation.

2.G.2 Policy 1.2.5

As of 2006, the City completed an expansion to its Wastewater Treatment Plant and an upgrade to Advanced Wastewater Treatment levels for a total treatment capacity of 1.2 million gallons per day.

2.G.2 Policy 1.2.6

As of 2006, the City completed the first phase of the reuse disposal system.

2.G.2 OBJECTIVE 1.3, Maintain and Operate Sanitary Sewer System in Efficient and Cost-Effective Manner

The City shall maintain and operate the sanitary sewer system in an efficient and cost-effective manner

2.G.2 Policy 1.3.1

The City shall continue to enforce standards adopted in its land development regulations which require that developers provide sewer collection lines constructed to City standards as part of proposed new developments and that such lines be connected to the City's wastewater treatment system.

SOLID WASTE DISPOSAL

2.G.2 OBJECTIVE 1.4, Solid Waste Disposal Level of Service Standard

PUBLIC FACILITIES ELEMENT

The City shall achieve and maintain the adopted level of service standards for sanitary sewer facilities.

2.G Policy 1.4.1

The City hereby adopts the level of service standard of 5 pounds of solid waste per capital per day.

2.G Policy 1.4.2

The City shall utilize the level of service standard to evaluate facility capacity for issuance of Development Permits. The level of service shall be applied as part of the development review and approval process to each application for development approval to determine whether adequate facility capacity exists to serve the proposed development concurrent with the impacts of such development.

2.G.2 OBJECTIVE 1.5, Eliminate Solid Waste Disposal Activities that Adversely Impact Natural Systems

The City shall curb illegal dumping of solid waste, as well as disposal activities, that adversely impact natural systems.

2.G.2 Policy 1.5.1

By 2007, the City shall adopt an ordinance in its land development regulations that requires all property owners to participate in the City's Mandatory Garbage Collection Program.

2.G.2 Policy 1.5.2

The City shall increase public awareness of recycling needs and programs through such techniques as public meetings, advertisements, elementary schools, library and other public building displays, and soliciting assistance from local churches and civic groups.

2.G.2 Policy 1.5.3

The City shall, in cooperation with Franklin County, continue to serve as a recycling center.

2.G.2 Policy 1.5.4

The City shall disseminate information regarding hazardous waste generators, as well as inform residents of Franklin County's annual Amnesty Days to encourage recycling of hazardous wastes and other hard to dispose of materials.

2.G.2 Policy 1.5.5

The City, in conjunction with the County, shall have Amnesty Days to encourage recycling of hazardous wastes and other hard to dispose of materials.

2.G.2 Policy 1.5.6

The City shall identify all unauthorized dumps and, in cooperation with FDEP, develop closure plans for such dumps.

2.G.2 Policy 1.5.7

The City shall enforce those local ordinances, which prohibit the discharge of petroleum and lead-based fuels and solvents from boat maintenance within the Carrabelle River adjacent to the City limits.

2.G.2 Policy 1.5.8

The City shall routinely inspect industrial land uses to verify that hazardous chemicals are contained and that all FDEP permits are approved prior to issuing local permits.

PUBLIC FACILITIES ELEMENT

POTABLE WATER SYSTEM

2.G.2 OBJECTIVE 1.6, Potable Water Level of Service Standard

The City shall achieve and maintain the adopted level of service standards for the potable water system.

2.G.2 Policy 1.6.1

The City hereby adopts 220 gallons per day as the level of service for potable water.

2.G.2 OBJECTIVE 1.7, Ensure Adequate Capacity

The City shall address coordinating the extension of, or increase in, the capacity of facilities to meet future needs.

2.G.2 Policy 1.7.1

The City shall evaluate the potable water system on an annual basis and shall upgrade, expand, or replace its water facilities as determined by such evaluation to accommodate population demand and ensure operational efficiency.

2.G.2 Policy 1.7.2

The City shall coordinate with Franklin County, the City of Apalachicola, and the Northwest Florida Water Management to evaluate potable water sources for Carrabelle and to develop strategies and a program to better measure and reduce existing and future consumption rates in relationship to service populations and seasonal fluctuations.

2.G.2 Policy 1.7.3

By December 2007, the City shall adopt a water supply plan that shall consider the Northwest Florida Water Management District's most recent *District Water Management Plan*. The City's plan must be consistent with the Northwest Florida Water Management District's most recent *District Water Management Plan* and include a work plan covering at least a ten-year planning period for building water supply facilities that are identified as necessary to serve existing and new development and for which the local government is responsible.

2.G.2 OBJECTIVE 1.8, Maintain and Operate Potable Water System in Efficient and Cost-Effective Manner

The City shall maintain and operate the potable water system in an efficient and cost-effective manner

2.G.2 Policy 1.8.1

The City shall continue to enforce standards adopted in its land development regulations that require that developers provide connections to the City's potable water system constructed to City standards as part of proposed new developments.

2.G.2 OBJECTIVE 1.9, Conserve Potable Water Resources

By December 2007, the City of Carrabelle shall enact a plan for conserving potable water resources. At a minimum, this plan shall encourage xeriscaping and water re-use.

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2.G.2 Policy 1.9.1

The City shall require through its land development regulations that Xeriscape principles be used for all new development and redevelopment projects. Native vegetation is preferred. If native vegetation is not used, then drought tolerant, low water dependent vegetation from *Waterwise Florida Landscape* should be used. Xeriscape principles and native vegetation can be identified from *Waterwise Florida Landscape*, as produced by Florida's water management districts.

2.G.2 Policy 1.9.2

The City shall adopt a water conservation plan by 2007 which shall be consistent with the emergency water shortage contingency plans developed by Northwest Florida Water Management District and which shall apply to all water system users.

2.G.2 Policy 1.9.3

Proposed development, which requires large water withdrawals of more than 100,000 gallons per day from the aquifers will be submitted to the Northwest Florida Water Management District for review prior to development approval.

2.G.2 Policy 1.9.4

The City shall encourage water conservation by educating potable water customers through pamphlets explaining water conservation measures

2.G.2 Policy 1.9.5

The City shall permit, through the land development regulations, the use of private well systems or reused water for the purpose of irrigation.

2.G.2 Policy 1.9.6

The City shall require water-conserving plumbing fixtures in all new development, redevelopment, or replacement of existing fixtures.

2.G.2 OBJECTIVE 1.10, Potable Water Wellfield Protection

The City shall protect the potable water supply of its citizens through the continued enforcement of the adopted Wellfield Protection Ordinance in its land development regulations. All development in the City shall comply with the City's Wellfield Protection Ordinance and must be reviewed by the City Planning and Zoning Commission to ensure compliance.

2.G.2 Policy 1.10.1

The Wellfield Protection Ordinance area adopted by the City of Carrabelle consists of two zones requiring different levels of protection:

- (1) Primary Protection Zone: The innermost zone surrounding the wellhead that requires the strictest restrictions. Within the Primary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 200 feet of a public wellfield. The following uses are prohibited within the Primary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities;

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- d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities; and
- e. Septic tanks

(2) Secondary Protection Zone: The zone surrounding the Primary Protection Zone. Within the Secondary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 1,000 feet of a public wellfield. The following uses are prohibited within the Secondary Protection Zone:

- a. New sanitary landfills;
- b. The use, handling, productions, and storage of hazardous substances;
- c. Feedlots or other concentrated animal facilities; and
- d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities

DRAINAGE SYSTEM

2.G.2 OBJECTIVE 1.11, Drainage System Level of Service Standard

The City shall achieve and maintain the following water quality level of service standards for drainage/stormwater facilities.

2.G.2 Policy 1.11.1

The City hereby adopts the following level of service standard for drainage/stormwater facilities:

The facilities shall accommodate the 25-year, 24-hour storm duration with the runoff from the first 2.25 of rainfall retained, and the facilities shall be designed in accordance with the specifications described in Chapter 62-25, F.A.C. so that the receiving water is not degraded and complies with water quality standards established in Chapter 17-302, F.A.C. There shall be no exception to the application of Chapter 62-25, F.A.C.

STORMWATER MANAGEMENT

2.G.2 OBJECTIVE 1.12, Develop Citywide Stormwater Management Plan

In conjunction with continuing to enforce its existing land development regulations, the City shall develop a Stormwater Management Plan. This management plan shall address existing and future stormwater management needs.

2.G.2 Policy 1.12.1

A Stormwater Management Plan shall be developed and implemented based upon the data and analysis and recommendations contained within the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*, which are currently being prepared by a private engineering company for the City of Carrabelle and will be completed by July 2006.

2.G.2 Policy 1.12.2

By December 2006, the City shall amend the Comprehensive Plan to include the findings and recommendations of the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*. The Stormwater Management Plan shall determine the need for and establish priorities for drainage facilities replacement, correcting existing deficiencies, and future drainage needs based upon an adopted level of

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service standard. The City shall prioritize the identified drainage needs and maintain a five-year schedule for construction, to be updated annually in conformance with the review process of the Capital Improvements Element of this plan.

2.G.2 Policy 1.12.3

By December 2007, the City shall initiate the implementation of its Stormwater Management Plan.

GOAL 3

THE FUNCTIONS OF NATURAL GROUNDWATER AQUIFER RECHARGE AND DRAINAGE AREAS WITHIN THE CITY WILL BE PROTECTED AND MAINTAINED.

2.G.3 OBJECTIVE 1.1, Protect and Maintain Prime Groundwater Aquifer Recharge Areas

By December 2007, the City shall adopt performance criteria in its land development regulations to ensure the effective protection and maintenance of prime groundwater aquifer recharge areas within the City, as identified by the Northwest Florida Water Management District. As of 2005, the Northwest Florida Water Management District has identified no such areas

2.G.3 Policy 1.1.1

By December 2007, the City shall adopt land development regulations which shall limit the amount of impervious surface on lots in prime aquifer recharge areas, as identified by the Northwest Florida Water Management District.

2.G.3 Policy 1.1.2

The City shall continue to enforce its land development regulations requiring retention of stormwater runoff so that the amount of run-off from a site after development does not exceed the amount of runoff occurring before development. The purpose of this is to maximize groundwater recharge.

3. HOUSING ELEMENT

GOAL 1

THE CITY SHALL PROVIDE SAFE, DECENT HOUSING TO MEET THE NEEDS OF THE EXISTING AND FUTURE POPULATION OF THE CITY, INCLUDING VERY LOW-, LOW- AND MODERATE-INCOME HOUSEHOLDS, THE ELDERLY, AND DISABLED CITIZENS.

3.G.1 OBJECTIVE 1.1, Create and Preserve Affordable Housing

The City shall create and preserve affordable housing for all current and anticipated future residents of Carrabelle, and households with special housing.

3.G.1 Policy 1.1.1

By December 2007, the City shall review its land development regulations and the permitting process for the purpose of eliminating excess requirements, and amending or adding other requirements in order to increase private sector participation in meeting the housing needs, while continuing to ensure the health, welfare and safety of the residents.

3.G.1 Policy 1.1.2

The City shall provide information, technical assistance, and incentives to the private sector to maintain a housing production capacity sufficient to meet the City's current and future housing needs

3.G.1 Policy 1.1.3

Through its land use and zoning maps, the City shall ensure that there is adequate land available to develop the supply of housing necessary to meet current and future housing needs.

3.G.1 Policy 1.1.4

The City shall develop private industry/governmental partnerships in the provision of housing and increase developer incentives to pursue affordable housing production.

3.G.1 OBJECTIVE 1.2, Reduce and Eliminate Substandard Housing Conditions

The City shall reduce and eliminate substandard housing conditions by implementing conservation, rehabilitation, or demolition programs to extend the useful life of the existing housing stock and stabilize or improve residential neighborhoods.

3.G.1 Policy 1.2.1

The City shall adopt the following definitions of substandard and dilapidated to be used in future evaluations of housing needs:

- a) Housing units, including mobile homes, shall be considered substandard if any one of the following conditions exists: the lack of one complete bathroom; the lack of one complete kitchen; or at least one structural building code violation
- b) A housing unit (or mobile home) shall be considered dilapidated if a cost estimate of repairs needed to bring it into conformance with the definition of standard exceeds the cost estimate of replacing the unit.

HOUSING ELEMENT

3.G.1 Policy 1.2.2

During each annual funding cycle, the City should develop a housing rehabilitation program and submit an application under the Florida Small Cities Community Development Block Grant (CDBG) Program.

3.G.1 Policy 1.2.3

The City shall apply for and utilize Federal, State, and/or local funds for the rehabilitation of substandard units and the demolition of dilapidated units, including mobile homes.

3.G.1 Policy 1.2.4

The City shall schedule and concentrate public infrastructure and supporting facilities and services to upgrade the quality of existing neighborhoods.

3.G.1 Policy 1.2.5

By December 2007, the City shall adopt and enforce through its land development regulations a Minimum Housing Code Ordinance that meets the criteria of the Standard Building Code's Minimum Housing Code Standards.

3.G.1 Policy 1.2.6

By December 2007, the City shall adopt and enforce through its land development regulations an Abandoned Property Ordinance, Litter Ordinance, etc., to maintain the safety and aesthetics of residential areas.

3.G.1 Policy 1.2.7

By December 2007, the City shall formalize a coordinated code enforcement function within the City government and evaluate the feasibility of creating a City position for a Housing Rehabilitation Officer to assist in code enforcement, rehabilitation work write-ups, inspections and housing referrals.

3.G.1 Policy 1.2.8

The City shall encourage individual homeowners to increase private reinvestment in housing by providing information and technical assistance regarding available programs and money for home improvement, rehabilitation, and weatherization.

3.G.1 OBJECTIVE 1.3, Pursue Adequate Sites and Distribution of Affordable Housing

The City will pursue adequate sites and distribution of housing for very-low, low-, and moderate income, households in order to alleviate present needs for affordable housing and to meet future needs for affordable housing.

3.G.1 Policy 1.3.1

By December 2006, the City shall appoint an Affordable Housing Committee, whose goal will be to evaluate affordable housing mechanisms and make implementation recommendations to the City Commission. Affordable housing mechanisms that shall be evaluated include inclusionary zoning, community land trusts, density bonus programs, and impact fee waiver programs.

3.G.1 Policy 1.3.2

By December 2007, the City shall consider the adoption and implementation of an inclusionary zoning ordinance, which as a condition of approval requires residential developments above a certain size to include a specified number of affordable units or a donation of land and/or housing units to a housing trust fund.

HOUSING ELEMENT

3.G.1 Policy 1.3.3

By December 2007, the City shall consider creating a Carrabelle Community Land Trust, the goal of which is to create an inventory of developable and buildable land for workforce and affordable housing to ensure a perpetual inventory of workforce affordable housing.

3.G.1 Policy 1.3.4

By December 2007, the City shall consider the adoption and implementation of a density bonus program, which rewards builders who agree to build a certain number of affordable units or contribute money to a housing trust fund by authorizing them to construct more units than otherwise would be allowed.

3.G.1 Policy 1.3.5

By December 2007, the City shall consider the adoption and implementation of an impact fee waiver program, by which impact fees are waived based on the condition that the developer commits to building affordable housing units.

3.G.1 Policy 1.3.6

The Affordable Housing Committee shall also apply for federal, state, and/or local funding for site acquisition and improvement for very low-, low-, and moderate-income housing. This committee also shall seek assistance from the Florida Department of Children and Families in determining the need for group homes and foster care facilities.

3.G.1 Policy 1.3.7

By December 2007, the City shall develop a density transfer mechanism within the land development regulations which allows density transfers to cluster developments in order to encourage the development of affordable housing. A density transfer mechanism allows development rights to be transferred to locations where they could be better utilized.

3.G.1 Policy 1.3.8

The City shall strive to integrate affordable housing throughout the existing housing stock by encouraging urban infill.

3.G.1 OBJECTIVE 1.4, Pursue Adequate Sites and Distribution for Mobile and Manufactured Homes

The City will pursue adequate sites for mobile and manufactured homes in order to alleviate present affordable housing needs and to meet future affordable housing needs.

3.G.1 Policy 1.4.1

The City shall continue to enforce its land development regulations, which designate permitted use categories for mobile home parks and mobile home subdivisions sufficient to meet the future land requirements for mobile homes.

3.G.1 Policy 1.4.2

The City shall continue to enforce its land development regulations, which provide for development standards and requires the availability of adequate supporting infrastructure for mobile home parks.

3.G.1 OBJECTIVE 1.5, Group Homes and Foster Care Facilities

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The City will pursue adequate sites in residential areas or areas of residential character for group homes and foster care facilities licensed or funded by the Florida Department of Children and Family Services.

3.G.1 Policy 1.5.1

The City shall continue to enforce its land development regulations, which allow group homes and foster care facilities to be located in all residential districts.

3.G.1 Policy 1.5.2

The City shall ensure that supporting infrastructure and public facilities necessary to the support and encouragement of independent living for the clients of relevant programs is provided.

3.G.1 OBJECTIVE 1.6, Identify, Preserve, and Protect Historic Resources

Historic resources, including historically significant housing, in Carrabelle shall be identified, preserved, and protected.

3.G.1 Policy 1.6.1

The City shall submit applications for State and/or Federal funding to complete a comprehensive survey of Carrabelle's historic resources.

3.G.1 Policy 1.6.2

The City, along with local civic clubs and interested citizens, shall apply for appropriate grant funding to restore and maintain identified, locally significant, and historical structures, where possible.

3.G.1 Policy 1.6.3

The City, in conjunction with interested private groups and State agencies, shall complete a comprehensive survey of historic resources, including historically significant housing, by December 2007.

3.G.1 Policy 1.6.4

All applicable provisions of the Comprehensive Plan shall be updated to include the findings of the historical resources survey.

3.G.1 Policy 1.6.5

The City shall take measures to have historically significant housing placed on the National Register of Historic Places and shall assist in their rehabilitation and adaptive reuse through technical assistance.

3.G.1 Policy 1.6.6

The City will assist in the rehabilitation and adaptive reuse of historically significant housing through technical assistance and economic assistance such as State and Federal grant programs and transfer of development rights.

3.G.1 Policy 1.6.7

The City shall coordinate any identified historic resources with economic, educational, and tourist strategies.

HOUSING ELEMENT

3.G.1 OBJECTIVE 1.7, Relocation Housing

The City will provide relocation housing assistance in a uniform and equitable manner for those persons displaced as a result of any Federal, State, or local program.

3.G.1 Policy 1.7.1

The City shall provide relocation housing for any households that are displaced as a result of government-funded programs administered by the City. The relocation housing shall be comparable or better than the housing the household was forced to vacate.

3.G.1 OBJECTIVE 1.8, Eliminate Housing Discrimination

The City shall pursue the prevention of discrimination in housing based on age, race, sex, religion, national origin, or physical disability.

3.G.1 Policy 1.8.1

By December 2007, the Planning and Zoning Advisory Board shall recommend a Fair Housing Ordinance into the City's land development regulations in order to ensure equal access to housing.

3.G.1 Policy 1.8.2

The City shall continue to inform businesses and governmental agencies involved in the financing or leasing of housing of the need to prohibit discriminatory practices within their housing delivery system.

4. TRAFFIC CIRCULATION ELEMENT

GOAL 1

A SAFE AND CONVENIENT TRAFFIC CIRCULATION SYSTEM, WHICH PROVIDES FOR THE EFFICIENT MOVEMENT OF PEOPLE AND GOODS WITHIN AND THROUGH THE CITY OF CARRABELLE SHALL BE AVAILABLE FOR ALL RESIDENTS AND VISITORS.

4.G.1 OBJECTIVE 1.1, Provide a Safe, Convenient, and Efficient Multi-Modal Transportation System

The City of Carrabelle shall provide for a transportation system that emphasizes safe, convenient, and efficient movement of motorized and non-motorized vehicles, as well as pedestrians, within Carrabelle through the use of management systems as described in the below policies

4.G.1 Policy 1.1.1

Pursuant to Rule 9J-5.019(5), the City of Carrabelle Comprehensive Plan Traffic Circulation Element hereby includes the Future Transportation Map Series, as follows:

Title	Map #
Transportation Facilities Map	Map II-1
Functional Classification Map	Map II-2
Maintenance Responsibility Map	Map II-3
Average Annual Daily Trips Map	Map II-4
Average Annual Daily Trips Map-Projected 2012	Map II-5
Road Status Map	Map II-6

4.G.1 Policy 1.1.2

Proposed roadway maintenance and improvements shall be evaluated and ranked in order of priority according to the following guidelines:

- a) Whether the repair or improvement is required to protect public health and safety or to preserve or achieve full use of existing facilities;
- b) Whether the repair or improvement increases efficiency of use of existing facilities, prevents or reduces future improvement costs, or provides services to developed areas lacking full service; and
- c) Whether the repair or improvement represents a logical extension of facilities and services within a designated service area.

4.G.1 Policy 1.1.3

The City shall annually evaluate and prioritize roadways for maintenance and paving projects.

4.G.1 Policy 1.1.4

The City shall defer any new roadway projects to those projects required to address existing deficiencies, especially where there is potential for high accident frequency, such as the intersections at Highway 98 and:

- a) River Road (County Road 379);
- b) Ryan Drive (County Road 67-A);

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- c) Timber Island Road (County Road 376);
- d) Airport Road; and
- e) SE Avenue A, County Road 67, and Marine Street

4.G.1 Policy 1.1.5

The City shall continue to control the connections and access points of new roads and driveways to existing roadways by enforcing its land development regulations, which require that:

- a) Land located adjacent to U.S. Highway 98 and State Road 67 shall not be subdivided unless direct access to the State Highway is by way of a connection that meets the requirements of the Florida Department of Transportation's Access Management Rule (Rule 14-97, F.A.C.)
- b) Lots that cannot meet the access standards shall have access by one of the following methods: platted side streets, frontage streets, combined parking lots, shared drives, or the provision of access by easements.

4.G.1 Policy 1.1.6

No applicant shall be denied development approval for the sole reason that the lot cannot meet the requirements of the preceding policies. To provide access, a temporary access permit shall be issued provided that the landowner's site plan provides for the eventual connection to an access on an adjoining property, and that the owners agree, with suitable legal documents, to close temporary access when connection to adjoining properties is feasible. Temporary access will only be permitted as a last resort and shall be construed to mean no more than one year.

4.G.1 Policy 1.1.7

By December 2006, the City shall adopt a methodology for assessing proportionate fair-share mitigation options for transportation facilities, as well as a Fair-Share Ordinance that will implement this methodology.

4.G.1 Policy 1.1.8

The City shall evaluate local traffic patterns and encourage residents to utilize streets other than U.S. Highway 98 to facilitate local through-traffic. The City shall coordinate these alternate routes with its sidewalk and bike plan, which will be prepared by December 2007.

4.G.1 OBJECTIVE 1.2, Level of Service Standards

The City shall achieve and maintain the adopted level of service standards for traffic circulation.

4.G.1 Policy 1.2.1

The City hereby adopts a peak hour Level of Service (LOS) standard "C" as the minimum LOS standard for all State roads, principal arterials, and all other roadways in the City.

4.G.1 OBJECTIVE 1.3, Coordinate Transportation System with Future Land Use Map Series

The City shall coordinate the transportation system with the Future Land Use Map Series and ensure that existing and proposed population densities, housing and employment patterns, land uses, and all other short and long term development plans are consistent with the transportation modes and services proposed.

TRAFFIC CIRCULATION ELEMENT

4.G.1 Policy 1.3.1

The City shall continually monitor and evaluate the impacts of existing and proposed future land use development on the transportation system in order to achieve integrated management of the land use decisions and traffic circulation impacts.

4.G.1 Policy 1.3.2

The City shall continue to enforce the standards adopted in its land development regulations, which provide parking strategies that emphasize adequate, convenient, and safe on- and off-site motorized and non-motorized vehicle parking for all new developments.

4.G.1 Policy 1.3.3

The City shall continue to enforce the standards adopted in its land development regulations that require specific roadway standards concurrent with subdivision development.

4.G.1 Policy 1.3.4

By December 2007, the City shall adopt in its land development regulations design criteria for landscaping and signs to protect the natural environment along new roadways and implement a program to landscape and maintain existing roadways.

4.G.1 OBJECTIVE 1.4, Intergovernmental Coordination

The City shall coordinate traffic circulation system expansion with the plans and programs of Franklin County, the Apalachee Regional Planning Council, and the Florida Department of Transportation (FDOT).

4.G.1 Policy 1.4.1

The City shall continue to coordinate with the Apalachee Regional Planning Council (ARPC) and shall avail itself to the data, analysis, programs, and policies the ARPC generates regarding traffic circulation.

4.G.1 Policy 1.4.2

The City shall review subsequent versions of the *FDOT Five-Year Transportation Plan* to ensure consistency with the Traffic Circulation Element.

4.G.1 Policy 1.4.3

The City shall coordinate with FDOT and adjacent landowners to address existing deficiencies, especially where there is potential for high accident frequency, such as the intersection of Airport Road and Highway 98.

4.G.2 Policy 1.4.4

The City shall coordinate with FDOT and Franklin County in evaluating major evacuation routes and determining where deficiencies occur and where operational improvements can be made to maintain or reduce hurricane evacuation times.

4.G.1 Policy 1.4.5

The City shall coordinate with the FDOT and Franklin County regarding the possibility of relocating the truck route (67-A).

TRAFFIC CIRCULATION ELEMENT

4.G.1 OBJECTIVE 1.5, Protect Right-of-Ways

The City of Carrabelle shall protect existing and future right-of-way from building encroachment.

4.G.1 Policy 1.5.1

The City shall protect existing and future rights-of-way by continuing to enforce its land development regulations that require a minimum right-of-way setback of sixty (60) feet.

4.G.1 OBJECTIVE 1.6, Bicycle and Pedestrian Ways

The City shall analyze the feasibility for bicycle and pedestrian ways in planning for transportation facilities.

4.G.1 Policy 1.6.1

The City shall provide or require the provision of non-motorized transportation facilities to link residential areas with recreational and commercial areas in a safe manner, in part requiring the construction of sidewalks, bike lanes, installation of signage, and striping of roadways so as to accommodate non-motorized transportation.

4.G.1 Policy 1.6.2

By December 2007, the City shall prepare a plan for developing bicycle and pedestrian ways that connect residential areas to recreational areas and major activity centers. The City shall identify roadway frontage for which sidewalks should be installed to provide a citywide network for pedestrian traffic. All sidewalks along main thoroughways shall be ADA-approved. The plan shall include programs for implementation and anticipated funding sources.

4.G.1 Policy 1.6.3

For roadway frontage identified for inclusion in the sidewalk system, developers shall be required to install sidewalks as part of any new development.

4.G.1 Policy 1.6.4

The City shall request that FDOT install sidewalks as part of any major state highway widening or road improvement.

4.G.1 Policy 1.6.5

The City shall provide land use and other strategies to promote the use of bicycle and pedestrian movement within the land development regulations by December 2007.

4.G.1 OBJECTIVE 1.7, Coordinate Traffic Circulation Element with Airport Master Plan

The Carrabelle-Thompson Airport Master Plan shall be coordinated and consistent with the Traffic Circulation Element to ensure efficient integration and minimize traffic impacts on Carrabelle's surface transportation system.

4.G.1 Policy 1.7.1

The City shall ensure that coordination occurs between the Airport Master Plan and any proposed future transportation improvements.

TRAFFIC CIRCULATION ELEMENT

4.G.1 Policy 1.7.2

Service roads on airport property shall be used to the greatest extent possible to capture internal airport impacts to adjacent land uses and to conserve resources in a manner that also protects the integrity of airport operations and safety.

4.G.1 OBJECTIVE 1.8, Coordinate Airport Master Plan with Future Land Use and Conservation Elements

The Carrabelle-Thompson Airport Master Plan and future expansion plans shall be coordinated with the Future Land Use and Conservation Elements to minimize airport impacts to adjacent land uses and to conservation resources in a manner that also protects the integrity of airport operations and safety.

4.G.1 Policy 1.8.1

By December 2007, the City shall update its Future Land Use Map Series Future Traffic Circulation Map series, and the Official Zoning Map to reflect the updated Airport Layout Plan, which is currently being conducted by a private consultant. The map series shall delineate all Runway Protection Zones (RPZ) established for the Carrabelle-Thompson Airport. These clear zones shall be at minimum consistent with requirements set forth by the Federal Aviation Administration. Development and land use activities within a RPZ shall be consistent with regulations established by the Federal Aviation Administration.

4.G.1 Policy 1.8.2

By December 2007, the City shall update its Future Land Use Element and land development regulations to reflect the updated Airport Layout Plan, which is currently being conducted by a private consultant. The Future Land Use Element and land development regulations shall be updated to ensure that future expansion of airport property and runways shall be focused away from residential areas in order to minimize airport impacts on nearby neighborhoods.

4.G.1 Policy 1.8.3

By December 2007, the City shall enter into a joint planning agreement with Franklin County to ensure that lands annexed near or adjacent to the Carrabelle-Thompson Airport shall be assigned land use designations that are compatible with the Airport Master Plan.

4.G.1 Policy 1.8.4

The City Planning and Zoning Advisory Board shall coordinate with Airport staff regarding development applications, zoning changes, and land use amendment petitions proposed for property adjacent to or near the Carrabelle-Thompson Airport.

4.G.1 Policy 1.8.5

The Airport Master Plan and proposed expansion plans shall be coordinated with the Conservation Element. Expansion and operation plans shall minimize impacts to environmental resources consistent with policies set forth within the Comprehensive Plan.

4.G.1 Policy 1.8.6

By December 2007, the City shall adopt in its land development regulations airport zoning regulations to address height, noise, electronic interference, illumination, clear zones and land requirements. Such regulations shall be consistent with the Federal Aviation Administration regulations and the Airport Master Plan. The City shall coordinate with the Airport Authority regarding noise complaints.

5. RECREATION AND OPEN SPACE ELEMENT

GOAL 1

THE CITY OF CARRABELLE WILL ENSURE ADEQUATE RECREATIONAL FACILITIES FOR ALL SEGMENTS OF THE POPULATION, INCLUDING THOSE WITH SPECIAL NEEDS.

5.G.1 OBJECTIVE 1.1, Level of Service Standards

The City will continue to provide a system of parks and recreational facilities, which meet the demands of the population as determined by the adopted minimum levels of service.

5.G.1 Policy 1.1.1

The following level of service standards are adopted:

Facility	Unit of Measure	Standard
Basketball Court	1 court	Per 1,500 persons
Baseball/Softball Field	1 field	Per 1,500 persons
Boat Ramp	2 lanes	Per 1,500 persons
Camping	1 acre	Per 1,500 persons
Community Building	1 building (12,000 square feet minimum)	Per 1,500 persons
Fishing Pier	800 linear feet (minimum)	Per 5,000 persons
Football/Soccer Field	1 field	Per 4,000 persons
Playground	1 acre	Per 1,500 persons
Community Swimming Pool	1 pool (4,860 square feet minimum)	Per 8,700 persons
Tennis Court	1 court	Per 1,500 persons
Hiking Trail	1 mile	Per 1,500 persons
Open Space	1 acre	Per 1,000 persons

5.G.1 Policy 1.1.2

The City shall work to establish a City park facility to allow residents and visitors alike, including those with special needs, an opportunity to enjoy and have access to the benefits of recreational facilities such as: a canoe/kayak/small boat launch and exit points, picnicking areas, overnight camping, educational trails and kiosks.

5.G.1 Policy 1.1.3

The City shall pursue state or federal grant funds in providing recreation sites and facilities and, in particular, to develop 900 feet of public waterfront property adjacent to the Carrabelle River into a public marina.

5.G.1 Policy 1.1.4

The City shall require that developers of large-scale, residential development projects provide acreage for recreation site(s), or a sum of money sufficient for the City to provide recreation sites.

5.G.1 Policy 1.1.5

The City shall strive to restore or enhance degraded natural areas, such as the restoration of natural hydrology, or the removal of non-native vegetation within City-owned resource-based recreational parks and facilities.

5.G .1 OBJECTIVE 1.2, Open Space

Lands designated as open space provided by the City will be protected from incompatible adjacent land uses and will remain functionally intact Lands designated as open space provided by other public and private entities will also be protected from incompatible adjacent land uses

5.G.1 Policy 1.2.1

The City shall adopt, by December 2007, land development regulations that will include specific open space definitions and standards addressing protection of open space and natural vegetation, landscaping, and signage.

5.G.1 Policy 1.2.2

The City shall adopt, by December 2007, incentives to encourage the provision of open space areas within future developed areas.

5.G.1 Policy 1.2.3

By December 2007, the City shall develop and adopt criteria to be used in the review of all proposals for development in or adjacent to existing open space.

5.G.1 Policy 1.2.4

The City shall pursue grants or other funding sources to obtain additional open space in conjunction with the protection and conservation of wetlands and in particular, grant funds for the conservation and preservation of the tidal pool located adjacent to County Road 30-A, east of 12th Street (also known as Frog Pond).

5.G.1 Policy 1.2.5

The City will pursue the utilization of lands acquired for public works projects (e.g., stormwater management facilities) as recreation or open space sites.

5.G.1 Policy 1.2.6

The City will coordinate with public utilities (such as electrical, gas, and telephone) and state agencies (such as FDOT, FDEP, and NFWFMD) regarding the use of their properties or easements for open space and recreational purposes such as walking and biking trails.

5.G.1 Policy 1.2.7

The City shall develop a master plan, including conceptual greenway maps, which include proposed new recreational trail systems and conservation greenways to link existing and new open space and outdoor recreation areas. Land acquisition efforts will focus on establishing these new links and enhancing existing greenways and recreation trail systems, including the acquisition of areas for destination areas and trailheads, including parking areas.

5.G.1 Policy 1.2.8

The City shall coordinate with private property owners to acquire open space areas that will serve to enhance greenways and recreation trail systems, including destination areas, trailheads, and parking areas.

RECREATION AND OPEN SPACE ELEMENT

5.G.1 OBJECTIVE 1.3, Accessibility for Automobiles, Bicycles, Pedestrians, and Mobility Assistive Devices

All public recreation facilities shall be accessible by automobiles, bicycles, pedestrians, and mobility assistive devices.

5.G.1 Policy 1.3.1

The City shall maintain or improve existing levels of shoreline access, including those beach access routes and beach access facilities required to be identified in the Coastal Management Element, and access to waterways required to be shown on the Future Land Use Map Series, by not abandoning any existing access routes or points.

5.G.1 Policy 1.3.2

The Planning and Zoning Advisory Review Board will review, evaluate, and develop criteria for meeting the needs of access to public recreational facilities by all people of Carrabelle, including those with special access needs. The City Commission will pursue funding sources.

5.G.1 Policy 1.3.3

The City has numerous streams and rivers, wetlands and estuarine features and shall support the development, enhancement and maintenance of public access areas to its river and stream resources.

5.G.1 Policy 1.3.4

The City shall encourage the establishment of recreation trails to increase, where feasible, opportunities for biking, walking, and other forms of outdoor recreation.

5.G.1 Policy 1.3.5

By December 2007, the City shall prepare a plan for developing bicycle and pedestrian ways that will connect residential areas to recreational areas and the downtown area. The plan shall include programs for implementation and anticipated funding sources.

5.G.1 Policy 1.3.6

The City shall pursue grants to implement a plan for developing bicycle and pedestrian ways that will connect residential areas to recreational areas and the downtown area.

5.G.1 Policy 1.3.7

Development or redevelopment of the riverfront and parks shall provide linkage to multi-modal transportation facilities, as appropriate, and shall accommodate bicycle facilities, sufficient parking, and access facilities, including those for individuals with disabilities.

5.G.1 Policy 1.3.8

The City will provide adequate parking for waterfront recreation areas and designated public waterfront access sites through improvement or construction of parking areas, as feasible.

5.G.1 Policy 1.3.9

The City shall pursue state or federal grant funds to improve selected street-ends for use as dedicated public waterfront access points and will clearly mark such points as waterfront access.

RECREATION AND OPEN SPACE ELEMENT

5.G.1 OBJECTIVE 1.4, Intergovernmental Coordination

The City shall continue to improve and coordinate efforts with all levels of government and with the private sector to provide recreational opportunities.

5.G.1 Policy 1.4.1

The City shall participate with the other local governments, the state and federal government, and private nonprofit groups to assist and partner in the development of a system of greenway, parks, canoe/kayak/small boat launch and exit points, picnicking, camping and trails.

5.G.1 Policy 1.4.2

The City shall strive to support regional greenways and Florida trail and trail extension development such as the Gopher, Frog and Alligator Trail (GFA) and seek the support of the FDEP Office of Greenways and Trails, the Florida Trail Association, and other federal, state or nonprofit organizations.

5.G.1 Policy 1.4.3

The City shall coordinate with public utilities (such as electrical, gas, and telephone) and state agencies (such as FDOT, FDEP, and NFWFMD) regarding the use of their properties or easements for open space and recreation purposes, such as walking and biking trails.

5.G.1 Policy 1.4.4

The City shall coordinate with Franklin County and the Franklin County School Board in order to support efforts to acquire a swimming pool.

6. INTERGOVERNMENTAL COORDINATION ELEMENT

GOAL 1

THE CITY OF CARRABELLE SHALL ESTABLISH AND MAINTAIN AN EFFICIENT, EFFECTIVE AND CONVENIENT PROGRAM TO ADDRESS MULTI-JURISDICTIONAL, COMPREHENSIVE-PLANNING ISSUES FOR THE PURPOSE OF:

- ACHIEVING THE GOALS AND OBJECTIVES OF THE CARRABELLE COMPREHENSIVE PLAN;
- SUPPORTING THE ACHIEVEMENT OF THE GOALS AND OBJECTIVES OF THE APALACHEE REGIONAL COMPREHENSIVE POLICY PLAN AND THE STATE COMPREHENSIVE PLAN; AND
- RESOLVING INCOMPATIBLE GOALS, OBJECTIVES, POLICIES, AND DEVELOPMENT IN THE CARRABELLE COMPREHENSIVE PLAN WITH UNITS OF LOCAL GOVERNMENT PROVIDING SERVICES BUT NOT HAVING REGULATORY AUTHORITY OVER THE USE OF THE LAND; WITH THE COMPREHENSIVE PLAN OF FRANKLIN COUNTY; AND WITH THE PLANS AND PROGRAMS OF REGIONAL, STATE, AND FEDERAL AGENCIES.

6.G.1 OBJECTIVE 1.1, Existing and Future Coordination Mechanisms

For coordination with Franklin County, the City of Carrabelle shall maintain existing mechanisms that are effective; shall enhance or revise existing mechanisms that are ineffective; or shall establish new mechanisms for issues not effectively addressed by existing mechanisms.

6.G.1 Policy 1.1.1

The City shall maintain the following existing mechanisms, which are effective, through continuance of the existing understandings:

- a) City of Carrabelle and Franklin County recreation participation understanding;
- b) Municipal Service Benefit Districts for the Countywide provision of fire protection services; and the
- c) City of Carrabelle and Franklin County mosquito control understanding

6.G.1 Policy 1.1.2

By December 2007, the City shall enter into a joint planning agreement with Franklin County to ensure that lands annexed near or adjacent to the Carrabelle-Thompson Airport shall be assigned land use designations that are compatible with the Airport Master Plan.

6.G .1 Policy 1.1.3

The City shall establish the following new mechanisms for issues not addressed by existing mechanisms.

- a) Land Use Amendments and Zoning Changes: The City shall seek to establish an intergovernmental committee to coordinate zoning and land use changes along City/County boundaries. The purpose will be the maintenance of compatible land development.
- b) Affordable Housing Strategy: The City shall establish an Affordable Housing Committee to pursue grant funds from state and federal agencies to provide more standard, affordable housing units. This committee also shall seek assistance from the Florida Department of Children and Families in determining the need for group homes and foster care facilities.

INTERGOVERNMENTAL COORDINATION ELEMENT

- c) Use of the Franklin Correctional Institution's resources: The City shall seek to enter into a joint agreement with the Florida Department of Corrections regarding the use of the Franklin Correctional Institution's resources, including its greenhouse and manual labor.

6.G.1 OBJECTIVE 1.2, Ensure Coordination of Level of Service Standards

The City shall continue to ensure the coordination of establishing, implementing and modifying level of service standards for shared facilities with state, regional and local entities.

6.G.1 Policy 1.2.1

Carrabelle shall seek consistency in level of service standards among other entities and the adopted level of service standards in the Carrabelle Comprehensive Plan.

6.G.1 Policy 1.2.2

Prior to any comprehensive plan amendments that involve changing the level of service standards, the City shall send those proposed amendments to the Apalachee Regional Planning Council to assure that the proposed changes do not represent an impact to the region or state.

6.G.1 OBJECTIVE 1.3, Ensure Coordination of Carrabelle Comprehensive Plan with other Units of Government and Comprehensive Plan of Franklin County

The City shall coordinate its Comprehensive Plan with the plans of other units of government providing services but not having regulatory authority over the use of land, and with the Comprehensive Plan of Franklin County/

6.G.1 Policy 1.3.1

The City shall notify the appropriate units of government in writing before any comprehensive plan or plan amendment is adopted that creates an impact not previously reviewed.

6.G.1 Policy 1.3.2

At the request of the affected unit of government, the Mayor, or the Mayor's designee, will coordinate the establishment of a temporary task forces to further analyze the issue and provide a recommendation to the affected governing body.

6.G.1 Policy 1.3.3

The task force will focus on specific issues and will be composed of all affected parties requesting participation.

6.G.1 Policy 1.3.4

The task force will seek to resolve issues by first analyzing the issue in an objective fashion and then developing solutions.

6.G.1 Policy 1.3.5

If appropriate, the task force shall make a recommendation regarding the establishment of a permanent Citizen's Advisory Board or ad hoc committee for special issues, which require on-going coordination and management.

INTERGOVERNMENTAL COORDINATION ELEMENT

6.G.1 Policy 1.3.6

The respective governing bodies shall decide on the recommendations provided by the task force, advisory board, or ad hoc committee within a reasonable length of time after the recommendations have been made.

6.G.1 Policy 1.3.7

Upon agreement with the entities on resolution of an issue, the Carrabelle Board of City Commissioners shall adopt or approve the agreement. The Carrabelle Comprehensive Plan shall be amended if necessary.

6.G.1 Policy 1.3.8

If the recommendation is rejected, the City of Carrabelle, at the discretion of the Board of City Commissioners, shall seek more formal means of resolution.

6.G.1 Policy 1.3.9

The Board of City Commissioners shall seek to establish a task force to analyze the permitting process of lands under multi-governmental jurisdiction. The focus of the task force shall be lands adjacent to wetlands and waterways with the intent to improve the permitting process. Membership of the task force shall be limited to the affected regulatory agencies.

6.G.1 OBJECTIVE 1.4, Ensure Impacts of Development Proposed in Carrabelle Comprehensive Plan are Coordinated with Development in Franklin County, Apalachee Region, and State

The City shall ensure that the impacts of development proposed in the Carrabelle Comprehensive Plan are coordinated with the development in Franklin County, the Apalachee Region, and the State.

6.G.1 Policy 1.4.1

The City shall coordinate as needed with Franklin County on the management of development along the Carrabelle River and St. George Sound

6.G.1 Policy 1.4.2

The City, as part of the development review process, shall review the relationship of proposed development to the existing comprehensive plans of adjacent local governments.

6.G.1 Policy 1.4.3

The City, as part of the Comprehensive Plan amendment process, shall coordinate amendments with the Apalachee Regional Comprehensive Policy Plan and State Comprehensive Plan.

6.G.1 OBJECTIVE 1.5, Conflict Resolution

The City shall adopt alternative policies to address special issues or issues which have not been resolved through other mechanisms.

6.G.1 Policy 1.5.1

The City of Carrabelle shall seek resolution of conflicts with other local governments by using the Apalachee Regional Planning Council mediation process.

INTERGOVERNMENTAL COORDINATION ELEMENT

6.G.1 Policy 1.5.2

The City of Carrabelle shall seek to develop mechanisms to resolve disputes with state agencies.

6.G.1 Policy 1.5.3

If any mechanism fails to effectively address issues significant to the City of Carrabelle, revision of the mechanism shall be pursued.

6.G.1 Policy 1.5.4

The City shall coordinate either through correspondence or meeting as necessary with state agencies and the Apalachee Regional Planning Council to assure that the mandates as established elsewhere in the comprehensive plan are implemented consistent with all state environmental regulations and are consistent with the regional and state comprehensive plan.

6.G.1 OBJECTIVE 1.6, Public School Siting

The City shall establish a process of coordination and collaboration with the Franklin County School Board regarding the planning and siting of public school facilities in coordination with planned infrastructure and public facilities.

6.G.1 Policy 1.6.1

The City shall coordinate with the Franklin County School Board for the proposed location of future school facilities.

6.G.1 Policy 1.6.2

The City shall provide the Franklin County School District with its Comprehensive Plan, along with population projections, to facilitate development of school enrollment projections and shall annually update this information.

6.G.1 Policy 1.6.3

The City will encourage the collocation of public libraries, parks and community centers with public schools to the extent practical and financially feasible.

6.G.1 Policy 1.6.4

The City shall advise the Franklin County School Board of a proposed public school site's consistency with the Carrabelle Comprehensive Plan and land development regulations, including the availability of necessary public infrastructure to support the development of the site.

6.G.1 Policy 1.6.5

The City shall provide the Franklin County School Board with the opportunity to comment on comprehensive plan amendments, rezonings, and other land use decisions that may be projected to impact on the public schools facilities plan.

6.G.1 Policy 1.6.6

The City shall coordinate with Franklin County and the Franklin County School Board regarding emergency preparedness issues which may include consideration of:

- a. Design and/or retrofit of public schools as emergency shelters for non-storm events and/or host shelters during non-risk events only. Emergency shelters will not be open for tropical storm events or greater within Franklin County;

INTERGOVERNMENTAL COORDINATION ELEMENT

- b. Enhancing public awareness of evacuation zones, evacuation routes, and shelter locations; and
- c. Designation of sites other than public schools as long term shelters, to allow schools to resume normal operations following emergency events.

6.G.1 Policy 1.6.7

The City shall utilize the Interlocal Agreement Steering Committee meetings as the mechanism for coordinating the school collocation process with the Franklin County School Board.

6.G.1 Policy 1.6.8

The City shall coordinate with the Franklin County School Board regarding the utilization of the Carrabelle High School site if there are plans to relocate the school.

7. COASTAL MANAGEMENT ELEMENT

GOAL 1

BALANCING GROWTH AND COASTAL RESOURCES - THE NATURAL AND HISTORIC RESOURCES OF THE COASTAL AREA SHALL BE PRESERVED, PROTECTED OR ENHANCED AS THE DEVELOPMENT PROPOSED IN THE FUTURE LAND USE ELEMENT OCCURS.

7.G.1 OBJECTIVE 1.1, Protect and Conserve Wetlands

The wetlands of Carrabelle shall continue to be conserved and protected such that no net loss (after mitigation) shall occur

7.G.1 Policy 1.1.1

The City will prohibit dredge and fill of the wetlands without prior approval of State and Federal officials and then only after a mitigation agreement is finalized

7.G.1 Policy 1.1.2

The City shall continue to enforce the standards adopted in its land development regulations, which require that:

- a. Site plans for new development identify the location and extent of wetlands located on and adjacent to the property;
- b. Site plans shall identify the location, extent, and setbacks from the waters and wetlands of the State and Carrabelle in conformance with the Critical Shoreline District requirements, as defined within the land development regulations.
- c. Subdivision and commercial site plans comply with Carrabelle stormwater management requirements, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs) and provide FDEP approved stormwater management permits to guarantee that normal flows and quality of water will be assured to maintain wetlands;
- d. The City shall continue to enforce the Critical Shoreline Section of the land development regulations, which prohibits impervious surfaces and structures other than decks, docks, and dune walkovers within 20 feet of wetlands or waters of the state. Development adjacent to wetland areas shall provide a minimum 20-foot buffer.
- e. Alterations of wetlands shall not be allowed, except when no alternative exists;
- f. Altered wetlands shall be restored or mitigated in concert with FDEP, and the Estuarine Reserve at a 2:1 ratio to mitigate wetland destruction. Alteration shall only occur as a last resort,
- g. All approved mitigation shall be required to demonstrate, through appropriate monitoring and reporting by the project's developer, at least an 85% planting survival rate for wetland areas created/augmented during mitigation for a period of at least two years for herbaceous wetland communities and for at least five years for forested wetland communities; and
- h. The wetlands map should be considered a generalized wetland map and a site consideration for development.

7.G.1 Policy 1.1.3

No new subdivision will be approved unless all of the lots proposed for development contain uplands large enough to contain the proposed activity and all required buffers and preservation areas.

COASTAL MANAGEMENT ELEMENT

7.G.1 Policy 1.1.4

No habitable or impervious development shall occur within 50 feet of the mean high water line of the waters of the state in areas designated "V" on the FEMA FIRM panels unless located within the Commercial Fishing District C-2, which is water-front dependent. All new development within 150 feet of waters or wetlands of the state shall be required to obtain a FDEP stormwater permit or letter of exemption. All development shall require a stormwater plan be approved by the City Commission or its designee, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs). Docks, pervious walkways and elevated walkways may be permitted to allow access to the water.

7.G.1 Policy 1.1.5

Pilings, not fill, shall be used to elevate structures in native vegetation areas.

7.G.1 OBJECTIVE 1.2, Protect and Conserve Natural Resources

The City will support the conservation and protection of native vegetation, ecological communities, fish and wildlife habitat to the extent that the City will prohibit the unmitigated destruction of the City's natural resources.

7.G.1 Policy 1.2.1

No habitable development shall occur within 50 feet of the mean high water line of the waters of the state in areas designated "V" on the FEMA FIRM panels. No impervious surfaces shall be allowed within 20 feet of the waters or wetlands of the State, except for water dependent structures. Docks, pervious walkways, and elevated walkways may be permitted to allow access to the water.

7.G.1 Policy 1.2.2

The City will develop and enforce site plan review criteria by December 2007 which will provide for an appropriate set back from nesting areas or habitat used by threatened or endangered species. The criteria will be developed in conjunction with the Game and Fresh Water Fish Commission and the Apalachicola National Estuarine Research Reserve.

7.G.1 Policy 1.2.3

The City shall require individuals seeking permits for erosion control devices to first plant native vegetation to control erosion. Should the survival rate be inadequate to control erosion, the individual shall be required to provide documentation proving a hardship of the land and obtain a variance from the Board of Adjustment. Reduction of side setbacks may be provided as a compensatory measure.

7.G.1 Policy 1.2.4

The City shall prohibit the use of habitat destroying vertical seawalls, without riprap reinforcement along the waterfront.

7.G.1 Policy 1.2.5

The City shall, through the reduction of setback requirements, encourage the use of natural vegetation fencing over rigid man made fence construction.

7.G.1 Policy 1.2.6

The City shall prohibit the alteration, other than approved maintenance, of mosquito ditches.

7.G.1 Policy 1.2.7

COASTAL MANAGEMENT ELEMENT

The City will provide a Critical Shoreline development brochure to applicants developing within the Critical Shoreline District by December 2007. The brochure will describe stormwater management techniques and the use of native vegetation to control erosion and treat stormwater.

7.G.1 Policy 1.2.8

The City will cooperate, whenever possible, with the Apalachicola National Estuarine Research Reserve in their efforts to maintain a comprehensive inventory of ecological communities which shall include species, population, habitat conditions, occurrences and alterations.

7.G.1 Policy 1.2.9

Development shall not be permitted which will significantly damage or destroy the habitat of species listed as endangered or threatened as specified in the "Official Lists of Endangered Fauna and Flora of Florida", published by the Florida Game and Fresh Water Fish Commission.

7.G.1 Policy 1.2.10

The developer of any areas identified as containing wildlife habitat shall be responsible for the conduct of an analysis to determine the value and extent of such habitat. The term 'wildlife habitat' shall be defined as areas containing undisturbed, naturally occurring vegetation in uplands and wetlands, specifically including saltwater marsh and tidal areas. This habitat analysis shall form the basis of habitat conservation and preservation measures to be established either as a condition of development approval or in an enforceable development agreement, pursuant to section 163.3220-3243, F.S

7.G.1 OBJECTIVE 1.3, Maintain Estuarine Water Quality

The City shall continue to maintain the estuarine water quality surrounding Carrabelle's coastal resources such that there shall be no loss of any approved shellfish harvesting classifications

7.G.1 Policy 1.3.1

The City shall require all owners and users of onsite sewage disposal systems in Carrabelle to connect to a central sewer system within 180 days of notice of availability of such a system pursuant to s. 380.0555 (11)(b), F.S.

7.G.1 Policy 1.3.2

The City shall enforce its land development regulations, which requires developers of new subdivisions to connect to a public wastewater system and provide sewers to each lot in the subdivision.

7.G.1 Policy 1.3.3

The City shall adopt and enforce the Critical Shoreline Ordinance Section of its land development regulations, which prohibits habitable development within 50 feet of the mean high water line of the waters of the state in areas designated "V" on the FEMA FIRM panels. No impervious surfaces shall be allowed within 20 feet of the waters or wetlands of the state, except for water dependent uses located in the Commercial Fishing District. Docks, pervious walkways, and elevated walkways may be permitted to allow access to the water. All new development within 150 feet of waters or wetlands of the state shall be required to obtain a FDEP stormwater permit or letter of exemption prior to obtaining a local building permit. All new development within this district shall install a site suitable stormwater management system and obtain approval by the City or its designee. All development shall require a stormwater plan be approved by the City Commission or its designee, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs).

COASTAL MANAGEMENT ELEMENT

7.G.1 Policy 1.3.4

Parcels with more than one residential that are planned for redevelopment are required to meet current stormwater standards.

7.G.1 OBJECTIVE 1.4, Maintain and Improve Water Quality

The FDEP water classification of Carrabelle River and St. George Sound will not be degraded and measures will continue to be taken to improve the water quality

7.G.1 Policy 1.4.1

No new untreated point sources and untreated nonpoint sources shall be permitted to discharge into the Carrabelle River, St. George Sound or into ditches and canals that flow into the above named waterbodies. All new development shall be required to obtain a stormwater permit from FDEP prior to receiving a development permit. All development shall require a stormwater plan be approved by the City Commission or its designee, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs).

7.G.1 Policy 1.4.2

By December 2007, the City shall submit a petition to the Florida Department of Environmental Protection, in accordance with Chapter 120 of the Florida Statutes, to seek "Outstanding Florida Water" (OFW) designations for the Crooked River, New River, Carrabelle River, and St. George Sound in order to protect and maintain water quality.

7.G.1 Policy 1.4.3

In order to reduce the impact of effluent from sewage treatment plants on the Sound, sewage treatment facilities with a history of treatment standards violations shall have highest priority in connecting to new or improved facilities.

7.G.1 Policy 1.4.4

New boat basins shall be prohibited, marinas and other multi-slip docking facilities shall use docks extending out to water no less than four feet deep at mean low tide, and dredging for marinas or multi-slip docking facilities shall be restricted to limited channels for launching boats.

7.G.1 Policy 1.4.5

Dredging at the mouth of the Carrabelle River shall be prohibited, unless a detailed study of contaminants in the sediments is performed and adequate safeguards to prevent release of any contaminants are provided. All contaminated dredged materials shall be disposed of at safe upland sites.

7.G.1 Policy 1.4.6

Structures, which constrict water circulation in St. George Sound, shall be prohibited.

7.G.1 Policy 1.4.7

In order to reduce non-point source pollutant loadings and improve the functioning of the County's drainage system, dumping of debris of any kind, including yard clippings and trimmings, into drainage ditches and stormwater control structures is prohibited. The City shall utilize fines and initiate a public information program to help discourage future illegal dumping in drainage facilities.

COASTAL MANAGEMENT ELEMENT

7.G.1 Policy 1.4.8

The City shall establish periodic inspection requirements for stormwater control structures to ensure their proper functioning and maintenance.

7.G.1 Policy 1.4.9

Parcels with more than one residential that are planned for redevelopment are required to meet current stormwater standards.

7.G.1 Policy 1.4.10

The following requirements shall apply within the 150-foot Critical Shoreline District:

- a. No habitable or impervious development shall occur within 50 feet of the mean high water line of the waters of the state in areas designated "V" on the FEMA FIRM panels unless located within the Commercial Fishing District C-2, which is waterfront dependent;
- b. Reasonable access to the water shall apply;
- c. Dredge-and-fill activities shall be prohibited except for maintenance dredging and when no other alternative exists;
- d. Septic tanks and drainfields, percolation ponds, or polishing ponds shall be set back 150-feet from the shoreline;
- e. Aerobic treatment units may be allowed within 75 feet of mean high water or jurisdictional wetlands;
- f. Impervious surfaces and lot coverage within the Critical Shoreline shall be limited to 20 percent;
- g. All new development shall be required to obtain a FDEP stormwater permit or letter of exemption;
- h. Residential development shall require a stormwater plan be approved by the City Commission or its designee, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs); and
- i. Docks, pervious walkways and elevated walkways may be permitted to allow access to the water.

7.G.1 OBJECTIVE 1.5, Adopt Citywide Stormwater Management Plan

By December 2006, the City shall adopt a Stormwater Management Plan.

7.G.1 Policy 1.5.1

A Stormwater Management Plan shall be developed and implemented based upon the data and analysis and recommendations contained within the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*, which are currently being prepared by a private engineering company for the City of Carrabelle and will be completed by July 2006.

7.G.1 Policy 1.5.2

By December 2006, the City shall amend the Comprehensive Plan to include the findings and recommendations of the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*. The Stormwater Management Plan shall determine the need for and establish priorities for drainage facilities replacement, correcting existing deficiencies, and future drainage needs based upon an adopted level of service standard. The City shall prioritize the identified drainage needs and maintain a five-year schedule for construction, to be updated annually in conformance with the review process of the Capital Improvements Element of this plan.

7.G.1 Policy 1.5.3

By December 2007, the City shall initiate the implementation of its Stormwater Management Plan

COASTAL MANAGEMENT ELEMENT

7.G.1 Policy 1.5.4

The City shall continue to enforce the Carrabelle Flood Hazard Prevention Ordinance within its land development regulations, which includes development and density limitations that requires all development within the City's areas of special flood hazard to submit a certificate of elevation in accordance with Federal Flood Hazard Regulations; or, for commercial structures, provide engineer-certified documentation for flood proofing.

7.G.1 Policy 1.5.5

The City shall maintain its drainage facilities through regular cleaning and debris removal.

7.G.1 Policy 1.5.6

The City shall apply annually for grants available through FDEP, FDCA, EPA and the Northwest Florida Water Management District for the repair and construction of new drainage facilities within the City.

7.G.1 OBJECTIVE 1.6, Utilize Land Use Criteria That Gives Priority to Siting and Development of Water-Dependent Uses

The City shall continue to utilize land use standards that give priority to the siting and development of water-dependent uses within the coastal area, as compared with other shoreline uses.

7.G.1 Policy 1.6.1

It shall be the policy of the City to utilize the following priority list in reviewing applications for shoreline uses, so as to provide increased priority for water-dependent uses. Uses listed first shall generally be given the highest priority of all uses that may be proposed along the shoreline, with other uses listed in the order of declining priority. Uses listed under (6) shall be given the least preference for location along the shoreline.

1. Water-dependent uses such as fish, and shellfish production;
2. Water-dependent recreation and commercial uses such as ports, marina-type uses, and navigation;
3. Water-related uses such as certain utilities and commercial;
4. Water-enhanced uses such as certain recreational and commercial uses;
5. Non-water dependent or related activities such as residential uses; and
6. Non-water dependent and non-water enhanced uses, which result in an irretrievable commitment of coastal resources.

7.G.1 OBJECTIVE 1.7, Prohibit Water-Dependent or Water-Related Land Uses That Degrade Water Quality

The City shall prohibit any water dependent or water related land use, which will lower the water quality standards below State water quality standards for the River and Bay.

7.G.1 Policy 1.7.1

The City shall continue to enforce its land development regulations which require sewage pump out facilities for all new marina facilities along the riverfront. By 2007, the City shall adopt land development regulations to require existing marinas to install such facilities.

COASTAL MANAGEMENT ELEMENT

7.G.1 Policy 1.7.2

The City shall provide sewage pump out facilities at all City-owned and maintained marinas.

7.G.1 Policy 1.7.3

New marinas and multi-slip docking facilities shall conform to the following criteria:

- a) Public use marinas shall be allowed only in commercial zoned districts;
- b) Non-public use marinas or multi-slip docking facilities shall be allowed only in medium density residential zoned districts and then only if use of docking facilities are limited to use by residents;
- c) Marinas and multi-slip docking facilities must provide one vehicular parking space per slip, as enforced within the land development regulations;
- d) All parking, dry storage, and non-water dependent facilities must be built on existing uplands and shall provide a stormwater management plan;
- e) Marinas and multi-slip docking facilities shall prepare hurricane plans, that shall be reviewed by the Planning and Zoning Advisory Board and approved by the County Emergency Management Director and the Planning Director, which describe measures to be taken to minimize damage to marina sites, neighboring properties, and the environment;
- f) Marina or multi-slip docking facilities shall comply with the other policies of this Plan;
- g) Marinas or multi-slip docking facilities shall not disturb or destroy wetlands or grass beds. In the event that no alternative exists, the developer shall develop a mitigation plan coordinated and approved by the Army Corps of Engineers, the Department of Environmental Protection, and the Apalachicola National Estuarine Research Reserve;
- h) Dry-slip use shall be maximized in order to minimize impacts on water quality, and minimize the extent of disturbance of the estuary;
- i) Fueling facilities associated with marinas shall be designed to contain spills from on-land equipment and shall be prepared to contain spills in the water and shall submit documentation outlining pollution control procedures, as well as designate an individual responsible for coordination with the Franklin County First Responders;
- j) New marinas and multi-slip docking facilities housing boats shall provide garbage pick up and post signs prohibiting littering;
- k) Shall contain sewer and bilge pump out facilities and shall accept used oil;
- l) Dredging of previously un-dredged natural water bodies shall be prohibited; and
- m) Maintenance dredging shall be allowed only if it serves to benefit the public as a whole

7.G.1 Policy 1.7.4

By December 2007, the City shall adopt land development regulations which require all existing and new marinas with fueling facilities to be designed to contain spills from on-land equipment; to be prepared to contain spills in the water; to submit documentation outlining pollution control procedures, as well as designate an individual responsible for coordination with the Franklin County First Responders; and to meet any other specific containment/emergency plans as required by the state.

7.G.1 OBJECTIVE 1.8, Protect Sand Dunes

The City shall continue to enforce its adopted land development regulations, which provide for the protection of sand dunes.

7.G.1 Policy 1.8.1

The City shall enforce its land development regulations that require a topographic survey for new construction to verify the presence of sand dunes. Site alteration shall be limited to the footprint of the

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house and shall be constructed on pilings to allow for the natural fluctuation of sand dunes.

GOAL 2

PEOPLE AND PROPERTY IN CARRABELLE WILL BE PROTECTED FROM THE EFFECTS OF HURRICANE STORM DAMAGE.

7.G.2 OBJECTIVE 1.1, Restrict Development and Public Funding of Facilities in Coast High Hazard Area

The City shall continue to enforce its land development regulations, which restrict development within the Coastal High Hazard Area and restrict public funding for facilities within the Coastal High Hazard Area

7.G.2 Policy 1.1.1

The Coastal High Hazard Area for the City of Carrabelle is defined as the evacuation zone for a Category 1 hurricane as established in the Apalachee Regional Planning Council's *Evacuation Transportation Analysis (August 2004)* and also includes the following:

- a) Areas west of 12th Street West, as identified on the SLOSH Map (see Map I-15 of the Future Land Use Map series);
- b) Areas waterward of County Road 379 (River Road);
- c) Areas waterward of County Road 30-A (Gulf Avenue and Marine Street); and
- d) Areas waterward of U.S Highway 98 (beginning where U.S. Highway 98 intersects with County Road 30-A along the Carrabelle River)

The Coastal High Hazard Area for the City of Carrabelle is also illustrated in Map I-14 of the Future Land Use Map series, included within Appendix A of the data and analysis.

7.G.2 Policy 1.1.2

City-funded public structures shall not be built in the Coastal High Hazard Area, unless the structure is for public access or resource restoration.

7.G.2 Policy 1.1.3

The City shall limit the expenditure of City funds for infrastructure within the Coastal High Hazard Area (CHHA).

7.G.2 Policy 1.1.4

The City's Flood Hazard Prevention Ordinance shall reference the building elevations of the Flood Insurance Rate Maps and the building requirements of the National Flood Insurance Program; provide for detention of rain from a 25-year, 24-hour rainfall event; and restricts discharge of rainwater into ditches which may flood evacuation routes.

7.G.2 Policy 1.1.5

The City shall adopt into its land development regulations the most recent amendments to the 1985 edition of the Southern Standard Building Code by December 2007.

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7.G.2 OBJECTIVE 1.2, Limit Density and Intensity in Coastal High Hazard Area

In order to mitigate the impact of natural hazards within the Coastal High Hazard Area, the City shall limit density and intensity within the Coastal High Hazard Area and direct it outside of the Coastal High Hazard Area.

7.G.2 Policy 1.2.1

Carrabelle shall limit the density of new residential development within the Coastal High Hazard Area to a maximum of two dwelling units per gross acre.

7.G.2 Policy 1.2.2

It shall be the policy of Carrabelle to require that all land development applications within the Coastal High Hazard Area be planned and obtain approval pursuant to a site plan review process to ensure that development is compatible with site characteristics. Applications will be reviewed according to pertinent sections of the National Flood Insurance Program and will be reviewed for compliance with all other applicable flood control regulations.

7.G.2 Policy 1.2.3

The City shall require that commercial redevelopment activities within the FEMA Velocity Zone of the Coastal High Hazard Area be limited to the density/intensity in existence for the development site prior to the effective date of the Comprehensive Plan. All such redevelopment activities shall also be subject to compliance with other applicable goals, objectives, policies, and development regulations.

7.G.2 Policy 1.2.4

By December 2007, the City shall develop a density transfer mechanism within the land development regulations which allows density transfers to cluster developments in order to: limit the amount of land required for infrastructure; provide open space; and protect environmentally sensitive land. Density will be based upon zoning district and the amount of developable land.

7.G.2 Policy 1.2.5

The City shall prohibit the approval of new development orders for mobile home projects within the Coastal High Hazard Area if the project is within a FEMA rated V-zone.

7.G.2 Policy 1.2.6

The City shall prohibit the siting of new acute care medical facilities within the Coastal High Hazard Area. There are no acute care medical facilities currently located within the Coastal High Hazard Area.

7.G.2 OBJECTIVE 1.3, Hurricane Evacuation Clearance Times

The City shall conduct its hurricane evacuation procedures to ensure that City-wide evacuation clearance times do not exceed 12 hours for Tropical Storms and Category 1, 2, 3, 4, and 5 Hurricanes.

7.G.2 Policy 1.3.1

The City shall encourage all persons living within the City Limits to evacuate in the event of a Tropical Storm or Category 1 hurricane. In addition, the City has established a Hurricane Evacuation Zone in order to identify, notify, and facilitate the timely evacuation of those persons living within the higher flood risk areas of the City. The Hurricane Evacuation Zone encompasses the following:

- a) Areas waterward of County Road 379 (River Road);
- b) Areas waterward of County Road 67-A (Ryan Drive); and

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c) Areas south of U.S. Highway 98

The Hurricane Evacuation Zone for the City of Carrabelle is also illustrated in Map I-17 of the Future Land Use Map series, included within Appendix A of the data and analysis.

7.G.2 Policy 1.3.2

The City shall coordinate with the Franklin County Emergency Management Director to encourage City residents to evacuate Carrabelle northbound, via County Road 67-A in the event of a Tropical Storm or Category 1 hurricane in order to avoid traffic congestion in Wakulla County.

7.G.2 Policy 1.3.3

In order to prevent unnecessary evacuees crowding roads and shelters, the City shall, through coordination with the Franklin County Emergency Management Director, prior to hurricane season, notify the public of their need to evacuate at various threat levels.

7.G.2 Policy 1.3.4

New or replacement bridges spanning the Intracoastal Waterway shall not be drawbridges.

7.G.2 Policy 1.3.5

The City shall coordinate with the County in implementing this hurricane evacuation plan.

7.G.2 Policy 1.3.6

All future improvements to the evacuation routes shall include remedies for flooding problems.

7.G.2 Policy 1.3.7

The City, through the Franklin County Emergency Management Director, shall coordinate with inland neighboring counties to provide for adequate evacuation shelter space.

7.G.2 Policy 1.3.8

The City shall coordinate with Franklin County and FDOT in evaluating major evacuation routes and determining where deficiencies occur and where operational improvements can be made to maintain or reduce hurricane evacuation times.

7.G.2 OBJECTIVE 1.4, Post-Disaster Response and Hazard Mitigation

By December 2007, the City shall adopt a Hazard Mitigation Element that shall include post-disaster response and cleanup assistance procedure for redevelopment permitting and hazard mitigation measures.

7.G.2 Policy 1.4.1

The City shall amend where necessary the natural disaster preparedness technical data, as well as the goals, objectives and policies of the Coastal Management Element to be consistent with an updated version of the Regional Planning Council's Hurricane Preparedness Plan when it becomes available.

7.G.2 Policy 1.4.2

The City shall work with the Franklin County Emergency Management Director to coordinate with the County's Comprehensive Emergency Management Plan to comply with the policies under this objective, and shall contain step-by-step details for post-disaster recovery operations.

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7.G.2 Policy 1.4.3

The City shall coordinate with Franklin County in formulating a Local Mitigation Strategy.

7.G.2 Policy 1.4.4

After a hurricane but prior to re-entry of the population into evacuated areas, the City shall cooperate with Franklin County regarding recovery efforts. In addition, the City Commission shall meet to hear preliminary damage assessments; appoint a Recovery Task Force within the City; and consider a temporary moratorium on building activities not necessary for the City's public health, safety, and welfare. The Recovery Task Force shall include the City Administrator, Public Works Director, and other members as directed by the City Commission. The departments whose directors sit on the Task Force shall provide staff. The Task Force shall be terminated after implementing its responsibility under 7.G.2 Policy 1.4.5.

7.G.2 Policy 1.4.5

The City shall prioritize immediate repair and cleanup actions and permitting activities following a natural disaster. Immediate repair and cleanup actions needed to protect the public health and safety will be given first priority. Those priorities may include repairs to potable water, wastewater, and power facilities; removal of debris; stabilization or removal of structures about to collapse; and minimal repairs to make dwellings habitable. These actions shall receive first priority in permitting decisions. Long-term redevelopment activities shall be postponed until the Recovery Task Force has completed its tasks.

7.G.2 Policy 1.4.6

The Recovery Task Force shall propose comprehensive plan amendments to City officials that reflect the recommendations in any interagency hazard mitigation reports or other reports prepared pursuant to Section 406 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act

7.G.2 Policy 1.4.7

In coastal areas needing redevelopment after a disaster, structures which were nonconforming in terms of flood elevation and which suffered damage in excess of fifty percent of their appraised value shall not be allowed to rebuild except in compliance with land use and in accordance with FEMA requirements.

7.G.2 Policy 1.4.8

The City shall coordinate with the County to develop and adopt prior to the 2007 hurricane season a formal decision making process to evaluate options for damaged public facilities in the Coastal High Hazard Area including abandonment, repair in place, relocation, and reconstruction with structural modifications. This process shall consider these options in light of factors such as cost to construct, cost to maintain, recurring damage, impacts on land use, impacts on the environment, and public safety.

7.G.2 Policy 1.4.9

On an annual basis, the City shall work with the County in updating the Local Mitigation Strategy to identify structures in the Coastal High Hazard Area, inventory their assessed value, judge the utility of the land for public access and make recommendations for acquisition when post-disaster opportunities arise and include the aforesaid recommendations within the updated Local Mitigation Strategy.

7.G.2 OBJECTIVE 1.5, Increase Public Access to Coastal Resources

The City shall increase the amount of public access to coastal resources consistent with estimated public needs.

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7.G.2 Policy 1.5.1

Existing access for the public to the Carrabelle River and St. George Sound shall be maintained by new development. New riverfront development shall show on their site plans existing riverfront access ways, and the proposed development shall continue that access way, relocate it on the site with approval of the City Commission, or donate it to the City.

7.G.2 Policy 1.5.2

All public access facilities shall be accessible to a State County or City road and include parking facilities as feasible.

7.G.2 Policy 1.5.3

The City shall accept donations of shoreline lands suitable for use as public access facilities.

7.G.2 Policy 1.5.4

The City shall pursue grants to improve public waterfront access points.

7.G.2 OBJECTIVE 1.6, Identify, Protect, and Preserve Historic Resources

By December 2007, the City will identify all historic resources within the coastal planning area and establish development standards for the protection, preservation, and sensitive reuse of historic resources throughout the City.

7.G.2 Policy 1.6.1

By December 2007, the City shall identify historically significant buildings and shall develop land development regulations that require that additions and renovations be in keeping with the character of the building. Permits for demolition will require that a hardship be demonstrated and approved by the Board of Adjustment.

7.G.2 Policy 1.6.2

By December 2007, the City shall adopt standards in its land development regulations which:

- a) Require historic and archaeological sites to be incorporated into required setbacks, buffer strips, or open spaces; and
- b) Establish waivers for non-safety related setback requirements and site planning requirements in order to accommodate historic structures or sites within a proposed development.

7.G.2 Policy 1.6.3

As an alternative to preserving historic or archaeological sites, the owner may allow excavation of the site by the Division of Historic Resources or their approved alternate prior to development. If the site is first scientifically excavated, then development may proceed without preserving the site.

7.G.2 Policy 1.6.4

The City shall accept donations of historic or archaeological sites.

7.G.2 OBJECTIVE 1.7

Maintaining Scenic routes. By December 2007, the City will attempt to establish a scenic road program in order to help preserve the area's natural beauty.

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7.G.2 Policy 1.7.1

By December 2007, the City shall propose 30-A (Gulf Avenue), for designation as a scenic corridor under the Florida Scenic Highways Program.

7.G.2 Policy 1.7.2

The City shall pursue grants to include bike and pedestrian ways along scenic roads, such as proposed scenic corridor 30-A (Gulf Avenue).

7.G.2 Policy 1.7.3

Properties between designated scenic roads and wetlands or open water shall be zoned the lowest density allowed for their respective future land use categories.

7.G.2 Policy 1.7.4

Site plan requirements for areas between designated scenic roads and wetlands or open water shall require the use of native vegetation in landscaping, separation of buildings by at least 50 feet along the axis of the road, and the avoidance of walls, fencing, and/or landscaping that would obstruct views of wetlands or open water.

GOAL 3

PUBLIC FACILITIES SHALL BE ADEQUATE AND AVAILABLE TO SERVE THE RESIDENTS AND VISITORS TO THE CITY'S COASTAL AREA.

7.G.3 OBJECTIVE 1.1, Level of Service Standards

The level of service standards adopted elsewhere in this Comprehensive Plan for facilities in the coastal planning area and the additional standards under this Objective shall be applied whenever development orders or permits are requested. The evacuation times established by 7.G.2 OBJECTIVE 1.3 shall also be considered levels of service standards for roads.

7.G.3 Policy 1.1.1

Service areas shall be established for water, sewer, roads, and bridge facilities. Development within these service areas shall be limited to the capacity of the respective facilities to supply the appropriate service as established by the level of service standard adopted in this Comprehensive Plan. Funding for such facilities will be phased to coincide with the impacts generated by development or redevelopment.

7.G.3 OBJECTIVE 1.2, Timing and Funding

All public facilities shall be available at least by the time they are needed to serve new development.

7.G.3 Policy 1.2.1

Developments, which would impact existing facilities, shall pay for such impacts or shall provide their own facilities prior to construction.

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GOAL 4

COASTAL RESOURCE MANAGEMENT WILL ADDRESS NATURAL SYSTEMS ON A SYSTEMWIDE BASIS REGARDLESS OF POLITICAL BOUNDARIES.

7.G.4 OBJECTIVE 1.1, Intergovernmental Coordination

By December 2007, an intergovernmental coordination program shall be established in order to manage coastal resources affecting or affected by governments other than the City and the County.

7.G.4 Policy 1.1.1

The City shall review the Comprehensive Plan of the County to determine consistency.

7.G.4 Policy 1.1.2

The City shall develop joint planning and management programs with the County for hurricane evacuation, provision of public access, provision of infrastructure, providing water dependent use sites, controlling stormwater, reducing wastewater treatment plant discharges, protection of living marine resources, and reduction of exposure to natural hazards.

7.G.4 Policy 1.1.3

The City shall continue to cooperate with the County to combat non-point source pollution in the Apalachicola Bay basin.

7.G.4 Policy 1.1.4

The City shall forward copies of development proposals within the coastal planning area to the County for review and comment.

7.G.4 Policy 1.1.5

Prior to the adoption of any land development regulations developed pursuant to 163.3202, F.S., the City shall review and incorporate, where appropriate, policies recommended in the Apalachicola Bay Aquatic Preserve Management Plan, the Apalachicola National Estuarine Research Reserve *Management Plan*, the Northwest Florida Water Management District's *Surface Water and Improvement Management Plan* and *Lower Apalachicola River: Environmentally Endangered Lands Management Plan*.

8. CONSERVATION ELEMENT

GOAL 1

CONSERVE AND PROTECT ENVIRONMENTAL RESOURCES SUCH AS SCENIC AREAS, WILDLIFE, CLEAN AIR AND WATER TO MAINTAIN A DESIRABLE QUALITY OF LIFE.

8.G.1 OBJECTIVE 1.1, Maintain Ambient Air Quality Standards

Carrabelle shall maintain ambient air quality standards that are equal to or more stringent than the state and federal National Ambient Air Quality Standards (NAAQs).

8.G.1 Policy 1.1.1

Industrial land uses shall be located where they minimize the impact on current air quality standards. No local development permit shall be issued for construction prior to an approved permit being issued in compliance with Chapter 17-2, F.A.C.

8.G.1 Policy 1.1.2

The City shall condition all commercial new construction development approval to implement best management practices for reduction of erosion, fugitive dust, and air emissions related to the construction of the development.

8.G.1 OBJECTIVE 1.2, Protect Water Quality

The City shall protect the quality of water on the Carrabelle River and St. George Sound to the extent that all waters maintain existing classifications for water quality as established by the Florida Department of Environmental Protection and shall enforce its land development regulations which prohibit development which would result in the water quality of St. George Sound, Carrabelle River and aquifers being degraded below the current classification. All development shall comply with Carrabelle stormwater management requirements, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs).

8.G.1 Policy 1.2.1

By 2007, the City shall establish and maintain adequate docking facilities complete with bilge pumpout facilities at all City-owned wharfages.

8.G.1 Policy 1.2.2

By 2007, all waterfront properties will be serviced by an adequate central sewer system.

8.G.1 Policy 1.2.3

No new untreated point sources and untreated nonpoint sources shall be permitted to discharge into St. George Sound, Carrabelle River and into ditches or canals that flow into the above named water bodies. All commercial and industrial development shall be required to obtain a stormwater permit from FDEP prior to receiving a development permit. All development shall comply with Carrabelle stormwater management requirements in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs).

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8.G.1 Policy 1.2.4

In order to protect water supplies and the quality of estuarine waters, the City shall by 2007 identify and begin enforcement action to correct faulty onsite sewer treatment systems. No new septic tank-drainfields shall be allowed in the Critical Shoreline District. When sewer becomes available, all owners and users of onsite sewage disposal systems in Carrabelle are required to connect to a central sewer system within 180 days of notice of availability of such a system pursuant to s. 380.0555(11)(b), F.S.

8.G.1 Policy 1.2.5

Parcels with more than one residential that are planned for redevelopment are required to meet current stormwater standards.

8.G.1 OBJECTIVE 1.3, Evaluate and Identify Sources of Stormwater Pollution

The City shall evaluate and identify possible sources of stormwater pollution.

8.G.1 Policy 1.3.1

A Stormwater Management Plan shall be developed and implemented based upon the data and analysis and recommendations contained within the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*, which are currently being prepared by a private engineering company for the City of Carrabelle and will be completed by July 2006.

8.G.1 Policy 1.3.2

By December 2006, the City shall amend the Comprehensive Plan to include the findings and recommendations of the *Stormwater Management Needs Assessment* and *Stormwater Master Plan*. The Stormwater Management Plan shall determine the need for and establish priorities for drainage facilities replacement, correcting existing deficiencies, and future drainage needs based upon an adopted level of service standard. The City shall prioritize the identified drainage needs and maintain a five-year schedule for construction, to be updated annually in conformance with the review process of the Capital Improvements Element of this plan.

8.G.1 Policy 1.3.3

By December 2007, the City shall initiate the implementation of its Stormwater Management Plan.

8.G.1 OBJECTIVE 1.4, Conserve Potable Water Resources

The City shall, by 2007, adopt mechanisms to conserve current and projected water sources within Carrabelle.

8.G.1 Policy 1.4.1

Proposed developments that require large water withdrawals of more than 100,000 gallons per day from the aquifers will be submitted to the Northwest Florida Water Management District for review prior to development approval.

8.G.1 Policy 1.4.2

The City shall encourage water conservation by educating potable water customers through pamphlets explaining water conservation measures

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8.G.1 Policy 1.4.3

The City shall require through its land development regulations that xeriscape principles be used for all new development and redevelopment projects. Native vegetation is preferred. If native vegetation is not used, then drought tolerant, low water dependent vegetation from *Waterwise Florida Landscape* should be used. Xeriscape principles and native vegetation can be identified from *Waterwise Florida Landscape*, as produced by Florida's water management districts.

8.G.1 Policy 1.4.4

The City shall adopt a water conservation plan by December 2007 which shall be consistent with the emergency water shortage contingency plans developed by the Northwest Florida Water Management District and which shall apply to all water system users.

8.G.1 Policy 1.4.5

The City shall permit, through the land development regulations, the use of private well systems or reused water for the purpose of irrigation.

8.G.1 Policy 1.4.6

The City shall require water-conserving plumbing fixtures in all new development, redevelopment, or replacement of existing fixtures.

8.G.1 OBJECTIVE 1.5, Protect and Maintain Prime Groundwater Aquifer Recharge Areas

By December 2007, the City shall adopt performance criteria in its land development regulations to ensure the effective protection and maintenance of prime groundwater aquifer recharge areas within the City, as identified by the Northwest Florida Water Management District. As of 2005, the Northwest Florida Water Management District has identified no such areas.

8.G.1 Policy 1.5.1

By December 2007, the City shall adopt land development regulations which shall limit the amount of impervious surface on lots in prime aquifer recharge areas, as identified by the Northwest Florida Water Management District.

8.G.1 Policy 1.5.2

The City shall continue to enforce its land development regulations requiring retention of stormwater runoff so that the amount of run-off from a site after development does not exceed the amount of runoff occurring before development. The purpose of this is to maximize groundwater recharge.

8.G.1 OBJECTIVE 1.6, Potable Water Wellfield Protection

The City shall continue to protect its quantity and quality of water through the continued enforcement of the adopted Wellfield Protection Ordinance in its land development regulations. All development in the City shall comply with the City's Wellfield Protection Ordinance and must be reviewed by the City Planning and Zoning Commission to ensure compliance.

8.G.1 Policy 1.6.1

The Wellfield Protection Ordinance area adopted by the City of Carrabelle consists of two zones requiring different levels of protection:

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1. Primary Protection Zone: The innermost zone surrounding the wellhead that requires the strictest restrictions. Within the Primary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 200 feet of a public wellfield. The following uses are prohibited within the Primary Protection Zone:

- a. New sanitary landfills;
- b. The use, handling, productions, and storage of hazardous substances;
- c. Feedlots or other concentrated animal facilities;
- d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities; and
- e. Septic tanks

2. Secondary Protection Zone: The zone surrounding the Primary Protection Zone. Within the Secondary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 1,000 feet of a public wellfield. The following uses are prohibited within the Secondary Protection Zone:

- a. New sanitary landfills;
- b. The use, handling, productions, and storage of hazardous substances;
- c. Feedlots or other concentrated animal facilities; and
- d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities

8.G.1 OBJECTIVE 1.7, Protect and Conserve Soil Resources

The City shall, through its land use regulations, protect and conserve soil resources by controlling the encroachment of urbanization on land poorly suited for structural development.

8.G.1 Policy 1.7.1

The City's site plan review process shall be amended to take into consideration natural constraints such as flood hazard, wetlands, soil suitability and aquifer recharge potential, and development shall be restricted depending upon the severity of those constraints.

8.G.1 OBJECTIVE 1.8, Protect and Conserve Wetlands

The wetlands of Carrabelle shall continue to be conserved and protected such that no net loss (after mitigation) shall occur

8.G.1 Policy 1.8.1

The City will prohibit dredge and fill of the wetlands without prior approval of State and Federal officials and then only after a mitigation agreement is finalized.

8.G.1 Policy 1.8.2

The City shall continue to enforce the standards adopted in its land development regulations, which require that:

- a) Site plans for new development identify the location and extent of wetlands located on and adjacent to the property;

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- b) Site plans shall identify the location, extent, and setbacks from the waters and wetlands of the State and Carrabelle in conformance with the Critical Shoreline District requirements, as defined within the land development regulations;
- c) Subdivision and commercial site plans comply with Carrabelle stormwater management requirements, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs) and provide FDEP approved stormwater management permits to guarantee that normal flows and quality of water will be assured to maintain wetlands;
- d) The City shall continue to enforce the Critical Shoreline Section of the land development regulations, which prohibits impervious surfaces and structures other than decks, docks, and dune walkovers within 20 feet of wetlands or waters of the state. Development adjacent to wetland areas shall provide a minimum 20-foot buffer;
- e) Alterations of wetlands shall not be allowed, except when no alternative exists;
- f) Altered wetlands shall be restored or mitigated in concert with FDEP, and the Estuarine Reserve at a 2:1 ratio to mitigate wetland destruction. Alteration shall only occur as a last resort,
- g) All approved mitigation shall be required to demonstrate, through appropriate monitoring and reporting by the project's developer, at least an 85% planting survival rate for wetland areas created/augmented during mitigation for a period of at least two years for herbaceous wetland communities and for at least five years for forested wetland communities; and
- h) The wetlands map should be considered a generalized wetland map and a site consideration for development

8.G.1 Policy 1.8.3

Carrabelle shall oppose through formal resolution further depositing of dredge material in the floodplain of the Carrabelle River, other than approved spoil sites.

8.G.1 Policy 1.8.4

The City shall cooperate with the FDEP and the Army Corps of Engineers to improve compliance with the dredge and fill state-permitting process and to protect and conserve water quality by minimizing dredging to the extent possible.

8.G.1 Policy 1.8.5

No new development will be approved unless all of the lots proposed for development contain uplands large enough to contain the proposed activity and all required setbacks, buffers and preservation areas.

8.G.1 Policy 1.8.6

No habitable development shall occur within 50 feet of the mean high water line of the waters of the State in areas designated "V" on the FEMA FIRM panels. No impervious surfaces shall be allowed within 20 feet of the waters or wetlands of the State, except for water dependent structures. Docks, pervious walkways, and elevated walkways may be permitted to allow access to the water.

8.G.1 Policy 1.8.7

Pilings, not fill, shall be used to elevate structures in velocity-rated flood zones.

8.G.1 Policy 1.8.8

Unique native vegetative communities will be protected by enforcing land development regulations which require site plan review to indicate native vegetative communities and which prohibit the alteration of native vegetative communities by more than twenty percent.

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8.G.1 OBJECTIVE 1.9, Protect and Conserve Natural Resources

The City will continue to support the conservation and protection of native vegetation, ecological communities, and fish and wildlife habitat to the extent that the City will prohibit the unmitigated destruction of the City's natural resources.

8.G.1 Policy 1.9.1

The City shall enforce its land development regulations that allow the clustering of structures away from environmentally sensitive land and ecological communities.

8.G.1 Policy 1.9.2

The City's land development regulations shall prohibit development within 20 feet of FDEP wetland jurisdictional species, and shall require a 20 feet buffer zone between developments adjacent to sensitive wetland areas and shall prohibit destruction of wetland vegetation without mitigation. Mitigation shall be coordinated with the FDEP and the Apalachicola National Estuarine Research Reserve and shall be attempted as a last resort. Density transfers and clustering shall be awarded as an incentive to locate development away from sensitive areas.

8.G.1 Policy 1.9.3

The City shall enforce its land development regulations that require individuals seeking permits for erosion control devices to first plant native vegetation to control erosion. Should the survival rate be inadequate to control erosion, the individual shall be required to provide documentation proving a hardship of the land and obtain a variance from the Board of Adjustment. Reduction of side setbacks will be provided as a compensatory measure.

8.G.1 Policy 1.9.4

The City shall enforce its land development regulations that prohibit the use of habitat destroying vertical seawalls, without rip-rap reinforcement along the waterward side of the revetment. The City's land development regulations also require that all rip rap be placed at a gradual slope and natural vegetation planted as a component of the site suitable stormwater management plan which is required for all Critical Shoreline development.

8.G.1 Policy 1.9.5

The City shall, through the reduction of setback requirements, encourage the use of natural vegetation fencing over rigid man-made fence construction.

8.G.1 Policy 1.9.6

The City shall prohibit the alteration, other than approved maintenance, of mosquito ditches.

8.G.1 Policy 1.9.7

The City shall include the U.S. Forestry Service and Florida Department of Environmental Protection in the review process of all land development regulations adjacent to natural reservations to ensure that the existing reservations are protected.

8.G.1 Policy 1.9.8

The City shall include the County in the review process of all land use amendments and all land development regulations adjacent to County jurisdictional land to ensure that unique vegetative ecological

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communities, fish, and wildlife habitat are appropriately conserved and protected countywide and to take action to mitigate any adverse effects.

8.G.1 Policy 1.9.9

Conservation lands as designated in the Future Land Use Element and jurisdictional wetlands as identified on a map within the Conservation Element shall be considered environmentally sensitive land and shall be protected as such.

8.G.1 Policy 1.9.10

The City shall enforce its land development regulations that require site plan review to indicate native vegetative communities and shall encourage the clustering of developments in order to protect native vegetative communities.

8.G.1 Policy 1.9.11

The City will cooperate, whenever possible, with the Apalachicola National Estuarine Research Reserve in their efforts to maintain a comprehensive inventory of ecological communities including species, population, and habitat conditions, occurrences and alterations.

8.G.1 Policy 1.9.12

Development shall not be permitted which will significantly damage or destroy the habitat of species listed as endangered or threatened as specified in the "Official Lists of Endangered Fauna and Flora of Florida", published by the Florida Game and Fresh Water Fish Commission.

8.G.1 Policy 1.9.13

The City shall participate in intergovernmental activities to appropriately conserve and manage native vegetation and viable wildlife habitat.

8.G.1 Policy 1.9.14

The developer of any areas identified as containing wildlife habitat shall be responsible for the conduct of an analysis to determine the value and extent of such habitat. The term 'wildlife habitat' shall be defined as areas containing undisturbed, naturally occurring vegetation in uplands and wetlands, specifically including saltwater marsh and tidal areas. This habitat analysis shall form the basis of habitat conservation and preservation measures to be established either as a condition of development approval or in an enforceable development agreement, pursuant to section 163.3220-3243, F.S.=

8.G.1 OBJECTIVE 1.10, Maintain Estuarine Water Quality Surrounding Coastal Resources

The City shall maintain the estuarine water quality surrounding Carrabelle's coastal resources such that there shall be no loss of any approved shellfish harvesting classifications

8.G.1 Policy 1.10.1

The City shall require all owners and users of onsite sewage disposal systems in Carrabelle to connect to a central sewer system within 180 days of notice of availability of such a system pursuant to s. 380.0555(11)(b), F.S.

8.G.1 Policy 1.10.2

The City shall, through enforcement of its land development regulations, require developers of new subdivisions to connect to a public wastewater system and provide sewers to each lot in the subdivision.

CONSERVATION ELEMENT

8.G.1 Policy 1.10.3

The City shall adopt and enforce the Critical Shoreline Ordinance Section of its land development regulations, which prohibits habitable development within 50 feet of the mean high water line of the waters of the state in areas designated "V" on the FEMA FIRM panels. No impervious surfaces shall be allowed within 20 feet of the waters or wetlands of the state, except for water dependent uses located in the Commercial Fishing District. Docks, pervious walkways, and elevated walkways may be permitted to allow access to the water. All new development within 150 feet of waters or wetlands of the state shall be required to obtain a FDEP stormwater permit or letter of exemption prior to obtaining a local building permit. All new development within this district shall install a site suitable stormwater management system and obtain approval by the City or its designee. All development shall comply with Carrabelle stormwater management requirements, in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs).

8.G.1 Policy 1.10.4

Parcels with more than one residential that are planned for redevelopment are required to meet current stormwater standards.

8.G.1 OBJECTIVE 1.11, Develop and Implement a Hazardous Waste Management Program

By 2007, the City will develop and implement a hazardous waste management program to protect natural resources.

8.G.1 Policy 1.11.1

The City, in conjunction with the County, shall have Amnesty Days to encourage recycling of hazardous wastes and other hard to dispose of materials.

8.G.1 Policy 1.11.2

The City shall identify all unauthorized dumps and, in cooperation with the FDEP, develop closure plans for such dumps.

8.G.1 Policy 1.11.3

The City shall enforce those local ordinances that prohibit the discharge of petroleum and lead-based fuels and solvents from boat maintenance within the Carrabelle River adjacent to the City limits.

8.G.1 Policy 1.11.4

The City shall routinely inspect industrial land uses to verify that hazardous chemicals are contained and that all FDEP permits are approved prior to issuing local permits.

8.G.1 OBJECTIVE 1.12, Protect the Natural Functions of the 100-Year Floodplain

The City shall protect the natural functions of the 100-year floodplain so that the flood carrying and flood storage capacity are maintained.

8.G.1 Policy 1.12.1

The City shall continue to enforce the Flood Damage Prevention Ordinance within its land development regulations and shall cooperate with the Federal Emergency Management Administration to control and monitor development within the floodplain.

CONSERVATION ELEMENT

8.G.1 OBJECTIVE 1.13, Coordinate Airport Master Plan with Conservation Element

The Carrabelle-Thompson Airport Master Plan and future expansion plans shall be coordinated with the Element to minimize airport impacts to adjacent land uses and to conserve resources in a manner that also protects the integrity of airport operations and safety.

8.G.1 Policy 1.13.1

The Airport Master Plan and proposed expansion plans shall be coordinated with the Conservation Element. Expansion and operation plans shall minimize impacts to environmental resources consistent with policies set forth within the Comprehensive Plan.

8.G.1 Policy 1.13.2

By December 2007, the City shall adopt in its land development regulations airport zoning regulations to address height, noise, electronic interference, illumination, clear zones and land requirements. Such regulations shall be consistent with the Federal Aviation Administration regulations and the Airport Master Plan. The City shall coordinate with the Airport Authority regarding noise complaints.

8.G.1 OBJECTIVE 1.14, Regulate Mining Activities

Mining activities shall be regulated within the City of Carrabelle since the City's natural systems could potentially receive irretrievable losses from the impacts of unregulated mining operations.

8.G.1 Policy 1.14.1

The City shall restrict mining activities based on the irretrievable losses that such intense activities may potentially impose on the City's ecosystem. By December 2007, the City's land development regulations shall require that all mining and resource extraction including, but not limited to, sand and peat excavation shall be conducted according to an excavation and reclamation plan approved by the City. Because of the high potential for surface and groundwater contamination associated with mining and extraction activities, a horizontal impervious layer (possibly including a portion of the extracted resource) shall, if feasible, be left undisturbed and unpenetrated beneath all excavated areas. The amount and location of the impervious layer to remain intact, if any, will be determined by soil surveys prior to excavation. The City shall enforce a regulatory program including procedures for managing preparation and review of the excavation and reclamation plan. The regulatory program shall be designed to preserve natural resources such as wetlands, wellfields, and recharge areas, and mining shall be prohibited within these areas. Where mining is permitted, the regulatory program shall require restoration of sites and revegetation. The City must review and approve predevelopment plans. Prior to mining and excavation, such plans must provide for the following:

1. Quantity of material to be mined or extracted;
2. Scaled plans and drawings that indicate area and dimensions of proposed mining;
3. Time frame, dates and phasing of each increment of mining or extraction activity;

CONSERVATION ELEMENT

4. Soil survey prepared by a geotechnical engineer registered in the State of Florida depicting the feasibility of retaining an impervious layer of material and amount and location of such impervious layer;
5. Restoration and reclamation plan including scaled drawings and plans that indicate restored elevations, restoration materials, landscape, revegetation, structures and uses after mining or each phase or increment thereof has been completed; and
6. Setbacks, buffers, fencing, landscaping and other methods of protecting adjacent land from adverse impact of proposed mining activities.

8.G.1 Policy 1.14.2

The City shall require that mining sites, including borrow pits, undergo reclamation. The City shall require restoration and reclamation plans including scaled drawings and plans that indicate restored elevations, restoration materials, landscape, revegetation, structures and uses after mining or each phase or increment thereof that has been completed.

9. CAPITAL IMPROVEMENTS ELEMENT

GOAL 1

THE CITY SHALL UNDERTAKE ACTIONS NECESSARY TO ADEQUATELY PROVIDE NEEDED PUBLIC FACILITIES TO ALL RESIDENTS WITHIN ITS JURISDICTION IN A MANNER WHICH PROTECTS INVESTMENTS IN EXISTING FACILITIES, MAXIMIZES THE USE OF EXISTING FACILITIES, AND PROMOTES ORDERLY COMPACT URBAN GROWTH. THESE ACTIONS SHOULD ALSO PROVIDE FOR A HEALTHY ENVIRONMENT WITH FACILITIES FOR RECREATION AND PLAY AS WELL AS AN ECONOMIC ENVIRONMENT FOR FINANCIAL WELLBEING AND GROWTH.

9.G.1 OBJECTIVE 1.1, Correct Existing Deficiencies, Accommodate Desired Future Growth, and Replace Worn-Out or Obsolete Facilities

Capital improvements will be provided for purposes of correcting existing deficiencies, accommodating desired future growth, and replacing worn-out or obsolete facilities, as indicated in the five-year schedule of capital improvements contained within this Element.

9.G.1 Policy 1.1.1

The City shall include within the five-year schedule of capital improvements all capital improvements which are identified in any of the respective Elements of the City's Comprehensive Plan that are determined to be \$25,000 or greater. Capital improvements with costs of less than \$25,000 shall be addressed in the City's annual budget.

9.G.1 Policy 1.1.2

In allocating priorities for scheduling and funding capital improvement needs, the City shall assign highest priority to capital improvement projects in the five-year schedule of capital improvements that are designed to correct existing deficiencies.

9.G.1 Policy 1.1.3

Table 9-1, Five-Year Capital Improvements Program, contained herein, establishes the estimated projected cost and potential revenue sources for each of the Capital Improvement needs identified within the respective Comprehensive Plan Elements. These programs are scheduled in order to ensure that the goals, objectives, and policies established in the Capital Improvements Element are met.

9.G.1 Policy 1.1.4

Proposed capital improvement projects shall be evaluated and ranked in order of priority according to the following guidelines and weights:

	Guidelines*--	Weight
1	Whether the project: <ul style="list-style-type: none">Increases efficiency of use of existing facilities and furthers the redevelopment of areas with existing infrastructure;Promotes infill development;Prevents or reduces future improvement costs; orProvides services to developed areas lacking service	50%
2	Whether the project is needed to:	25%

CAPITAL IMPROVEMENTS ELEMENT

	<ul style="list-style-type: none"> • Protect public health and safety; • Fulfill the City's legal commitment to provide facilities and services; or • Preserve or achieve full use of existing facilities 	
3	Whether the project: <ul style="list-style-type: none"> • Represents a logical extension of facilities and services within a designated urban service area 	25%
* The applicable plans of State agencies and the Northwest Florida Water Management District shall also be part of the evaluation criteria for all capital improvement projects.		

9.G.1 OBJECTIVE 1.2, Limit Public Expenditures That Subsidize Development in Coastal High Hazard Area

Public expenditures that subsidize development in the Coastal High Hazard Area shall be limited to maintaining the existing service capacity, except for recreational facilities.

9.G.1 Policy 1.2.1

The City shall not utilize public funds for infrastructure expansion or improvements in the Coastal High Hazard Area and FEMA/NFIP V-zone unless such funds are necessary to:

- a) Maintain the existing service;
- b) Restore and/or enhance natural resources; or
- c) Provide for needs of water-dependent uses.

9.G.1 OBJECTIVE 1.3, Ensure That Future Development Will Bear a Proportionate Cost of Facility Improvements

Future development will bear a proportionate cost of facility improvements necessitated by the development in order to maintain the City's adopted Level of Service standards.

9.G.1 Policy 1.3.1

By December 2006, the City shall adopt a methodology for assessing proportionate fair-share mitigation options for transportation facilities, as well as a Fair-Share Ordinance that will implement this methodology.

9.G.1 Policy 1.3.2

The City shall strictly enforce the provisions adopted in its land development regulations which require developers to pay fair share fees for new capital facilities or expansion of existing facilities necessitated by the development in order to maintain the City's adopted level of service standards. Fees shall not exceed a pro rata share of the reasonably anticipated costs of such improvements.

9.G.1 Policy 1.3.3

The City shall not annex additional property for development unless the developer agrees to bear 100% of the required infrastructure costs necessitated by the development in order to maintain the City's adopted Level of Service standards. Furthermore, the developer must provide irrevocable credit for 125% of all costs upfront.

CAPITAL IMPROVEMENTS ELEMENT

9.G.1 Policy 1.3.4

By December 2007, the City shall evaluate the possibility of adopting an Impact Fee Ordinance into its land development regulations in order to help finance the construction of new public facilities or the expansion of existing public facilities necessitated by new development.

9.G.1 OBJECTIVE 1.4, Ensure Availability of Funds for Needed Capital Improvements

The City will manage its fiscal resources so that funds are available for needed capital improvements for approved development orders and for future development and redevelopment.

9.G.1 Policy 1.4.1

Prior to the issuance of development orders, the City shall provide for all public facilities needed to serve developments for which development orders were previously issued.

9.G.1 Policy 1.4.2

By December 2007, the City shall establish a fiscal resources management plan to ensure that the timely provision of public facilities is available to all existing residential dwelling units within the City Limits.

9.G.1 Policy 1.4.3

Efforts shall be made to secure grants or private funds whenever available to finance the provision of capital improvements.

9.G.1 Policy 1.4.4

The City shall develop and expand when necessary any legally available non-ad valorem revenue sources sufficient enough to fund the adopted level of service standards. Cost recovery fees (user charges), where appropriate, shall be reviewed to offset the cost of providing specific services.

9.G.1 Policy 1.4.5

If the utilization of debt as a means of financing new, additions to, or the rehabilitation of, public facilities is necessary, the City shall use long-term debt financing only for capital improvements that provide long-term benefits to the community. The City shall ensure that long-term debt is soundly financed by:

- a) Conservatively projecting the revenue sources that will be utilized to pay the debt; and
- b) Financing the improvement over a period not greater than the useful life of the improvement

9.G.1 Policy 1.4.6

The City, as part of the Comprehensive Plan and the Capital Improvements Element, shall annually adopt a five-year capital improvements program that identifies the capital needs of the community and supports the adopted minimum levels of service.

9.G.1 Policy 1.4.7

The Capital Improvements Element shall be updated annually through the five-year capital improvements program and adopted as part of the annual budget process, as long as the five-year capital improvements program supports and furthers the minimum levels of service contained in the Plan.

9.G.1 Policy 1.4.8

The City shall adopt the following Concurrency Management System guidelines:

CAPITAL IMPROVEMENTS ELEMENT

CONCURRENCY MANAGEMENT SYSTEM

Chapter 9J-5, F.A.C., required the adoption of the concurrency management system to ensure that facilities and services needed to support development are available concurrent with the impacts of such development. This concurrency management system is designed to ensure that prior to the issuance of the development order and development permit, the adopted level of service standards required by the comprehensive plan will be maintained.

The City has adopted policies within this Plan, which establish level of service standards for public facilities. The concurrency management system in turn provides a mechanism for which the City can ensure the maintenance of the standards concurrent with the impacts of development.

The minimum requirements for concurrency within this management system are as follows:

1. For roads, potable water, sewer, solid waste, drainage, recreation and open space, and schools, provisions shall ensure that:
 - a. The necessary facilities and services are in place at the time a development permit is issued; or
 - b. A development permit is issued subject to the condition that the necessary facilities and services will be in place when the impacts of the development occur (prior to the issuance of a building permit); or
 - c. The necessary facilities are under construction at the time a permit is issued; or
 - d. The necessary facilities and services are guaranteed in an enforceable development agreement that includes the provisions of Chapter 9J-5.005(2) (a) (1-3), F.A.C., as amended. An enforceable development agreement may include, but is not limited to development agreements pursuant to Chapter 163.3220, F.S., as amended, or an agreement or development order issued pursuant to Chapter 390, F.S. The necessary facilities and services must be in place when the impacts of development occur (prior to the issuance of a building permit).

These minimum requirements shall be ensured as follows:

1. **Building Permits.** The issuance of a building permit has more of an immediate impact on level of services than other types of development orders. Therefore, building permits shall be issued only when the necessary facilities and services are in place. The determination of the existence of the necessary facilities and services in place shall be made by using the estimates made by the City or its designee as part of the monitoring and evaluation of the Capital Improvements Element. Prior to the issuance of a building permit, the City or its designee shall determine whether the necessary facilities and services are in place.
2. **Other types of Development Orders.** Other types of development orders include, but are not limited to approval of subdivision, re-zoning, special permits and site plan approval. These other types of development orders have less immediate impact on facilities and services than the issuance of a building permit. Therefore, subject to the City or its designee determining that the necessary services and facilities are in place and are maintaining the adopted level of service, the following concurrency management requirement shall apply for the issuance of such development orders:

CAPITAL IMPROVEMENTS ELEMENT

- a) Provisions shall be included within the development order which shall require the construction of additional public facility capacity, where facilities, due to the impacts of the development, do not meet the adopted level of services; or
- b) Provisions shall be included within the development order which shall require that the necessary share of public facilities is constructed by the developer and at the developer's expense, or by the public or private entity having jurisdictional authority over the facility to the level of service identified so that the necessary services and facilities will be in place when the impacts of development occur (prior to the issuance of a building permit).

In such cases where there are competing applications for public facility capacity, the following order of priority shall apply:

- 1. Issuance of a building permit based upon previously approved development orders permitting redevelopment.
- 2. Issuance of a building permit based upon previously approved development orders permitting new development.
- 3. Issuance of new development orders permitting redevelopment.
- 4. Issuance of new development orders permitting new development.

In conclusion, the following conditions apply to the City's concurrency management system:

- 1. Amendments to the Comprehensive Plan can be made twice each year and as otherwise permitted as small-scale developments. In addition, changes can be made to the Capital Improvements Element by ordinance if the changes are limited to the technical matters listed in Chapter 163, Part II, F.S.
- 2. No development order shall be issued which would require the City Commission to delay or suspend construction of any of the capital improvements contained in the five-year schedule of capital improvements.
- 3. If by issuance of a development order a substitution of a comparable project on the five -year schedule of capital improvements is proposed, the applicant may request the City to consider an amendment to the five-year schedule of capital improvements in one of the twice-annual amendment reviews.
- 4. The result of any development not meeting adopted level of service standards for public facilities shall be the cessation of the affected development or the reduction of the standard for level of services (which requires an amendment to the plan).

9.G.1 OBJECTIVE 1.5, Level of Service Standards

Issuance of development orders and permits will be based upon coordination of the development requirements included in this Plan, the land development regulations of the City of Carrabelle, and the availability of necessary public facilities needed to support such development at the time needed.

CAPITAL IMPROVEMENTS ELEMENT

9.G.1 Policy 1.5.1

The City shall use the following level of service (LOS) standards in reviewing the impacts of new development and redevelopment upon public facility provision:

Public Facility	Level of Service (LOS)		
Potable Water	220 gallons per day		
Sanitary Sewer	180 gallons per day		
Solid Waste	5.0 pounds per capita per day		
Arterial, Collector, and State roads	LOS C		
Drainage/Stormwater	The facilities shall accommodate the 25-year, 24-hour storm duration with the runoff from the first 2.25 inches of rainfall retained, and the facilities shall be designed in accordance with the specifications described in Chapter 65-25, F.A.C. so that the receiving water is not degraded and complies with water quality standards established in Chapter 17-302, F.A.C. There shall be no exception to the application of Chapter 65-25, F.A.C.		
Recreation	Facility	Unit of Measure	Standard
	Basketball Court	1 court	Per 1,500 persons
	Baseball/Softball Field	1 field	Per 1,500 persons
	Boat Ramp	2 lanes	Per 1,500 persons
	Camping	1 acre	Per 1,500 persons
	Community Building	1 building (12,000 square feet minimum)	Per 1,500 persons
	Fishing Pier	800 linear feet (minimum)	Per 5,000 persons
	Football/Soccer Field	1 field	Per 4,000 persons
	Playground	1 acre	Per 1,500 persons
	Community Swimming Pool	1 pool (4,860 square feet minimum)	Per 8,700 persons
	Tennis Court	1 court	Per 1,500 persons
	Hiking Trail	1 mile	Per 1,500 persons
	Open Space	1 acre	Per 1,000 persons

9.G.1 Policy 1.5.2

The City shall enforce the provisions adopted in its land development regulations to ensure that, at the time a development permit is issued, adequate facility capacity is available, or will be available, to serve the development.

9.G.1 Policy 1.5.3

Proposed plan amendments and requests for new development or redevelopment shall be evaluated according to the following guidelines as to whether the proposed action would:

- a) Contribute to a condition of public hazard as described in the Public Facilities Element or Coastal Management Element.
- b) Exacerbate any existing condition of public facility capacity deficits, as described in the Traffic Circulation Element; Public Facilities Element; and Recreation and Open Space Element;
- c) Generate public facility demands that may be accommodated by capacity increases planned in the five-year schedule of capital improvements;

CAPITAL IMPROVEMENTS ELEMENT

- d) Conform with future land uses as shown on the Future Land Use Map of the Future Land Use Element, and service areas as described in the Public Facilities Element;
- e) If public facilities are developer-provided, accommodate public facility demands based upon adopted level of service standards;
- f) If public facilities are provided, in part or whole, by the City, demonstrate financial feasibility, subject to this Element; and
- g) Affect State agencies' and water management districts' facilities plans. Coordination with affected agencies will be made in all such situations.

9.G.1 Policy 1.5.4

The City hereby adopts the following Five-Year Schedule of Capital Improvements (2005-2010):

Type/Location of Project	Cost (\$)	Revenue Source			Consistent with Other Elements
		Grantor/Funding Source	SRF Loan Amount (\$)	Grant Amount (\$)	
Sanitary Sewer					
Vacuum Sewer Original	3,973,063.00	FDEP/TF	3,973,063.00	3,377,103.55	Yes
Vacuum Sewer Phase II	955,844.30	FDEP/TF	955,844.30	812,467.66	Yes
Hwy. 98 Force Mains	2,114,232.00	FDEP/TF	2,114,232.00	1,797,097.20	Yes
WWTP Storage Tanks	2,112,190.00	FDEP/TF	2,112,190.00	1,795,361.50	Yes
WWTP Equipment	8,350,244.00	FDEP/TF	8,350,244.00	7,097,707.40	Yes
Three Rivers Rd. Gravity	653,467.00	FDEP/TF	653,467.00	555,446.95	Yes
Timber Island	2,263,511.00	FDEP/TF	2,263,511.00	1,923,984.35	Yes
West Gravity	2,222,092.00	FDEP/TF	2,222,092.00	1,888,778.20	Yes
Pipe Procurement	283,629.50	FDEP/ FDOC	283,629.50	82,692.18*	Yes
Lake Morality Force Mains	539,257.00	FDEP/ FDOC	539,257.00	157,220.38*	Yes
FCI Master LS	20,000.00	FDEP/ FDOC	20,000.00	5,831.00*	Yes
FCI Reuse Tank	100,000.00	FDEP/ FDOC	\$100,000.00	0.00	Yes
FCI Master LS	551,370.00	FDEP/ FDOC	551,370.00	0.00	Yes
Potable Water					
County Rd. 67 Water Main	135,943.00	DOC	0.00	0.00	Yes
FCI Elevated Tank	338,400.00	DOC	0.00	0.00	Yes
FCI Well Pump	107,354.00	DOC	0.00	0.00	Yes
FCI Raw Water Piping	100,242.00	DOC	0.00	0.00	Yes
Renovation of Water Tower I	217,00.00	TF	0.00	0.00	Yes

Acronyms: FDEP=FL Dept. of Environmental Protection; FDOC=FL Dept. of Corrections; TF=Tap Fees

Source: Baskerville Donovan, Inc. (2005); City of Carrabelle (2005)

*FDEP allowed eligibility up to 34.3% for the loan program and 85% of that amount for the grant program

10. DEFINITIONS

DEFINITIONS: The definitions found in Chapter 163, Part II, F.S., Rule 9J-5, F.A.C., and Chapter 509.242, F.S. are hereby adopted by reference.

11. GENERAL MONITORING AND REVIEW CRITERIA

This section stipulates procedures for implementing the required procedures for monitoring, updating and evaluating the Comprehensive Plan every five years pursuant to Section 163.3191, F.S., and Section 9J-5.005(7), F.A.C.

Role of the Planning and Zoning Advisory Board in Plan Evaluation and Updates: The Planning and Zoning Advisory Board shall monitor and oversee the effectiveness and status of the Comprehensive Plan and recommend to the City Commission, which is the designated Local Planning Agency pursuant to 163.3174, F.S., such changes in the Comprehensive Plan as may from time to time be required.

1. **General Procedures:** The monitoring and evaluation of the Comprehensive Plan shall be a continuous and ongoing process. The Planning and Zoning Advisory Board shall prepare periodic reports on the Comprehensive Plan. These reports shall be sent to the City Commission at least once every five (5) years after the adoption of the Comprehensive Plan or Element or portion thereof. The preparation of the Evaluation and Appraisal Report (EAR) shall comply with the procedures and contents set forth in Section 163.3191, F.S., and Section 9J-5.005(7), F.A.C.
2. **Citizen Participation:** The process of Comprehensive Plan evaluation and update shall include a public hearing before the Planning and Zoning Advisory Board and the City Commission, respectively, prior to adopting the final report. The public hearing shall be duly noticed and citizen input shall be encouraged.

Criteria for Continuing Evaluation of Comprehensive Plan Elements: In evaluating each Element of the Comprehensive Plan, the Planning and Zoning Advisory Board shall use the following general criteria as well as any more specific criteria contained in respective elements of the Plan.

1. **Review Impact of Changing Conditions.** Update appropriate baseline data and review evolving issues, including major shifts in the magnitude, distribution, and/or characteristics of the:
 - a) Housing supply and demand
 - b) Land use
 - c) Natural resources
 - d) Public facilities
 - e) Transportation system
 - f) Park and recreation system
 - g) Fiscal management resources

These changing issues and shifts in conditions may serve as indicators of needed change in public policy included in the Comprehensive Plan. The policy implications of such changes shall be evaluated on a continuing basis. The baseline data update shall be predicated on the decennial U.S. Census and/or other special census or significant new data that is deemed appropriate by the City Commission for inclusion in the Comprehensive Plan.

2. **Major Planning and Development Problems:** The Evaluation and Appraisal Report (EAR) shall identify major planning and development problems such as the location and distribution of land uses and related adverse physical, economic, social, or environmental impacts.
3. **Accomplishments:** The Evaluation and Appraisal Report (EAR) shall describe the progress the City has made in achieving Comprehensive Plan objectives that have occurred since adoption of the Plan or the last Evaluation and Appraisal Report (EAR), whichever is most recent.
4. **Unanticipated Problems and Opportunities:** The Evaluation and Appraisal Report (EAR) shall describe the nature and extent of unanticipated and previously unforeseen problems and opportunities occurring since the Plan adoption or since the preparation of the latest Evaluation and Appraisal Report (EAR), whichever is most recent.

GENERAL MONITORING AND REVIEW CRITERIA

5. Recommended Amendments: The Evaluation and Appraisal Report (EAR) shall stimulate recommendations concerning new or modified goals, objectives, or policies needed to resolve problems or issues identified during the Comprehensive Plan evaluation process.

**CITY OF CARRABELLE
2020 COMPREHENSIVE PLAN**

Data and Analysis

Prepared By:

Wilson Miller
1441 Maclay Commerce Drive
Suite 101
Tallahassee, Florida 32312

May 2006

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PUBLIC WORKSHOPS

The City of Carrabelle set two major goals when tasked upon updating its Comprehensive Plan. The first goal was to ensure that the revised Carrabelle Comprehensive Plan meets all statutory requirements, as defined by Chapter 163, F.S. & Rule 9J-5, F.A.C. The second goal was to ensure that the updated Comprehensive Plan included the public's participation. As such, the City held a series of five public comprehensive planning workshops, with the hopes of gaining public input regarding the direction of future growth and development within the City of Carrabelle. Workshop attendees included City residents and commercial developers with property interests in Carrabelle. All workshops were well attended, ranging from thirty to seventy-five persons per session. The workshops were conducted from November 2005 through January 2006, as follows:

Workshop	Date	Subject of Workshop
#1	November 10, 2005	Future Land Use Element
#2	November 29, 2005	Capital Improvements, Public Facilities, and Intergovernmental Coordination Elements
#3	December 13, 2005	Coastal Management and Conservation Elements
#4	January 12, 2006	Housing, Traffic Circulation, and Recreation and Open Space Elements
#5	January 26, 2006	Wrap-up session, including "Mapping" and "Dot-Voting" exercises

The Future Land Use Element was the subject of the first workshop. The purpose and requirements of the Future Land Use Element, as defined by Chapter 163, F.S. & Rule 9J-5, F.A.C, were discussed during the first half of the workshop. During the second half of the workshop a brainstorming session was conducted, in which attendees suggested issues specific to Carrabelle that they would like to see addressed within the Future Land Use Element. The second, third, and fourth workshops covered the remaining Elements of the Comprehensive Plan, utilizing the same format.

The purpose of the last workshop was to give attendees an opportunity to provide "hands-on" input through two separate exercises, "Mapping" and "Dot Voting". In the mapping exercise, workshop participants identified areas on maps of Carrabelle to indicate the following: locations for new workforce attainable/affordable housing; locations for cemetery expansion; areas for the preservation of tidal marsh; additional public parking locations; areas for urban redevelopment and infill; areas to relocate the post office and City Hall; and locations for walking paths around downtown.

In the dot voting exercise, a list of the public input ideas that were suggested throughout the workshop series was displayed and participants were instructed to place dots by the ideas they felt were the most important. The top ten categories that received the highest number of votes, and therefore have been determined by the Carrabelle community to be of the highest priority, are as follows:

- 1) Preservation and protection of public access to the waterfront
- 2) Preservation and protection of historic resources
- 3) Workforce attainable housing
- 4) Walkable community (sidewalks & bike paths)
- 5) Preservation and protection of wetlands
- 6) Protection of water quantity and quality
- 7) Economic development
- 8) Mixed Use Future Land Use category
- 9) Co-location of parks and stormwater facilities
- 10) Preservation and protection of native vegetation and wildlife habitat

Please keep in mind that the following 'Data and Analysis', as well as the 'Goals, Objectives and Policies' of the City of Carrabelle's *Comprehensive Plan* have been updated to reflect the priorities as indicated in the list above, as these are the issues that the community of Carrabelle feels are the most important regarding the direction of future growth and development within their City.

1. FUTURE LAND USE ELEMENT

The Future Land Use Element sets forth the physical plan for future development in Carrabelle. This element designates the appropriate location for future land uses and promulgates the policies regulating the location and development of all land uses. The Future Land Use Element sets forth not only the density and intensity of land uses appropriate for all locations, but also considers factors affecting land use development such as timing, cost, and current development trends.

The Future Land Use Map Series, Maps I-1 through I-18 herein (see Table 1-1), reflect the City's policy for managing the allocation of future land use. The Future Land Use Map series can be found in Appendix A of this document. Land use designations on the future land use maps have been allocated pursuant to goals, objectives, and policies stipulated in the Comprehensive Plan, together with the analysis of population, housing and land resources. The process of allocating these land use designations has considered the need to conserve natural resources including wetlands, flood plains, fish and wildlife, consideration of capital improvement needs, and conservation of fiscal resources.

Table 1-1. Future Land Use Map Series

Map Number & Title
Map I-1a: Existing Land Use Map & Map I-1b: Existing Land Use Map – Public Facilities
Map I-2: Future Land Use Map
Map I-3: Adjacent Land Uses Within One Mile of Carrabelle Map
Map I-4: Historic Resources Map
Map I-5: Potable Water Wells and Wellhead Protection Map
Map I-6: FEMA 100-Year Flood Plain Map
Map I-7: NWI Wetlands Map
Map I-8: FLUCCS Categories of Wetlands Map
Map I-9: Marine Wetlands Map
Map I-10: Stratigraphy Map
Map I-11: Soils Map (Simple)
Map I-12: Soils Map (Detailed)
Map I-13: Soil Erosion Susceptibility Map
Map I-14: Coastal High Hazard Area Map
Map I-15: SLOSH Map
Map I-16: Critical Shoreline District Map
Map I-17: Hurricane Evacuation Zone Map
Map I-18: Carrabelle Redevelopment Area Map

A. General Setting of the City of Carrabelle

Incorporated in 1893, the City of Carrabelle is a small community located in southern Franklin County on the Gulf of Mexico (see Figure 1-1 for a location map). The City of Carrabelle is comprised of approximately 2,800 acres. The City is bounded on the west by the Carrabelle River and on the south by the Gulf of Mexico. The City's northern and eastern limits are surrounded by marshes and wetlands. The only major highway, U.S. Highway 98, runs through Franklin County and Carrabelle along the coast. County Road 67 runs north from U.S. Highway 98 at Carrabelle into Liberty County, and County Road 65 follows a northerly route from U.S. Highway 98 at Green Point, west of Carrabelle, through the Apalachicola National Forest. U.S. Highway 319 forks off U.S. 98 Highway, east of Carrabelle, and runs north towards Tallahassee.

From the 1880s to the 1940s, the City of Carrabelle had a thriving lumber industry. Carrabelle's citizens were employed in all phases of production and a large export market resulted in extensive shipping activity. Historically, the City's economy has also been heavily dependent on commercial and recreational fishing. Efforts to revive the seafood-based economy have included investment in oyster

farming and scallop harvesting and processing. A countywide effort to diversify the local economy has been aimed at promoting tourism as an alternative to reliance on the seafood industry.

B. Natural Resources

Topography: The topography of Carrabelle primarily consists of lowlands developed on sediment including carbonates, sand, silt, and clay resulting in the characteristically level relief (Thornbury, 1965). The topographic features of the area are similar to those of most sandy coasts, including beaches, dunes, marshes, and swamps. For the most part, Gulf Coast dunes are not well developed (Kurz, 1942). Please see “Section 7, Conservation Element” for a more detailed discussion of the topographic characteristics of the Carrabelle area.

Groundwater: Franklin County’s groundwater system generally consists of three aquifers: the surficial aquifer, the upper Floridan aquifer, and the lower Floridan aquifer. The surficial aquifer lies just below the land surface and extends throughout the County. It is open to infiltration from rainfall in varying degrees, depending on the percolation characteristics of surface soils and the extent of impervious surfaces, which have been created in the urban areas of the County. The water table aquifer and surface water systems are interconnected throughout the County with the aquifer contributing to base flow levels of the surface waters. The majority of rainfall infiltrating the surficial aquifer travels in a southwesterly direction from higher elevations to natural discharge areas such as lakes, streams or marshes.

Soils: Soils are one of the most important factors affecting the potential for development of land. Structures cannot be built on soils with poor load-bearing capacity unless costly methods are employed to overcome the problem. Soil type is also important in considering and evaluating land-related methods of sewage treatment and effluent disposal. Of particular significance are soil characteristics such as texture, permeability, depth to water table, and slope. Soils with appropriate percolation characteristics not classified as hydric soils, can often support septic tanks that wet soils cannot. The presence of wet soils is also indicative of the presence of wetland vegetative communities. Please see Appendix A, Maps I-10, I-11, I-12, and I-13, which reflect Carrabelle’s Stratigraphy, Soil Types (Simple and Detailed), and Soil Erosion Susceptibility, respectively. For further discussion of the soils in Carrabelle, their effect on sewage collection and treatment, and the use of septic tanks, please see “Section 2, Public Facilities Element”.

Wetlands: There is an extensive marsh and wetland system in and adjacent to Carrabelle. Based on National Wetland Inventory (NWI) data, there are an estimated 2,233.2 acres of marsh and wetlands within the City limits. In other words, seventy-nine (79) percent of the total land in Carrabelle is wetlands. This includes the wetlands along the Carrabelle River, large areas in the northeastern area of the City, and around the airport. Please see Appendix A, Maps I-7, I-8, and I-9, which reflect the NWI Wetlands, the FLUCCS Categories of Wetlands, and the Tidal Flats and Saltwater Marshes (Marine Wetlands) for the City of Carrabelle, respectively. Wetlands are important natural systems and their development should be precluded. Carrabelle has adopted a Critical Shoreline District, which is designed to protect waters and wetlands in and around the City by establishing special regulations and requirements for uplands adjacent to water or wetlands. Within the Critical Shoreline District, habitable development is prohibited within 50 feet of the mean high water line of the waters of the state in areas designated “V” on the FEMA FIRM panels. No impervious surfaces are allowed within 20 feet of the waters or wetlands of the state, except for water dependent uses located in the Commercial Fishing District. Docks, pervious walkways, and elevated walkways may be permitted to allow access to the water. All new development within 150 feet of waters or wetlands of the state are required to obtain a FDEP stormwater permit or letter of exemption prior to obtaining a local building permit. All new development within this district is also required to install a site suitable stormwater management system and obtain approval by the City or its designee. The stormwater system must meet the City’s stormwater standards required for direct stormwater discharge, which are the same standards as those required for Outstanding Florida Waters

(OFWs).

Floodplains: Chapter 9J-5, Florida Administrative Code, defines floodplains as areas inundated during a 100-year flood event or identified by the National Flood Insurance Program as an A-Zone or V-Zone on Flood Insurance Rate Maps or Flood Hazard Boundary Maps. Based on this definition, a large portion of the City is in a flood-prone area. Carrabelle participates in the National Flood Insurance Program. According to a flood insurance study of the City of Carrabelle conducted by the Federal Emergency Management Agency, the City is situated on a coastal rise that is surrounded by low swampy areas. The major source of flooding is from surge resulting from hurricanes and tropical storms. A secondary source of flooding is the Carrabelle River, which is formed by the junction of the Crooked River and New River at the northern boundary of the City. Additionally, although the majority of the developed areas are above the levels of flooding, the City is subject to being isolated during severe storm periods because of the low surrounding areas. Finally, the western part of the City is subject to flooding from the Carrabelle River; and the coastal areas, including the lower reaches of the Carrabelle River and Timber Island, are subject to flooding by the Gulf of Mexico via St. George Sound. According to the FEMA 100-Year Flood Plain Map, (Appendix A, Map I-5 I-6), all of Timber Island, the area along the river, much of the City south of the river, and a large area in the northeastern section of the City can expect some degree of flooding during a 100-year flood.

C. Existing Land Use Inventory

Existing Land Use Inventory

There are currently seven existing land uses within the City of Carrabelle, including commercial, communications, conservation, industrial, public facilities, residential, and vacant. Table 1-3 summarizes the Existing Land Use profile of Carrabelle. Please note that each land use category in Table 1-3 is used for inventory and convenience. This inventory is not intended to create specific definitions for regulatory purposes.

Table 1-2. Existing Land Use Profile

Existing Land Use	Acreage	Total Acreage
Commercial	57.5	2.1%
Communications	0.6	0.0%
Conservation	267.1	9.5%
Industrial	4.1	0.1%
Public Facilities	670.1	24.0%
Residential	606.3	21.7%
Vacant	1191.6	42.6%
Total Acreage	2,797.3	100.0%

Source: WilsonMiller, 2006

Of the 2,797.3 acres within the City limits, approximately 1,605.7 have been developed. There are approximately 1,191.6 vacant, undeveloped acres within the City limits. Each land use is explained below, and their locations are shown on the Existing Land Use Map (Appendix A, Map I-1a).

Conservation: This category is used for conserving or protecting natural resources or environmental quality for the purposes of flood control, protection of quality or quantity of groundwater or surface water, floodplain management, fisheries management, or protection of vegetative communities or wildlife habitats. Conservation lands in Carrabelle include wetlands, marshlands, flood prone areas, and other areas in which valuable natural resources are found. Approximately 9.5 percent or 267.1 acres, of the City of Carrabelle consists of conservation land. Conservation land in the City is primarily located in the western half of the City, along the Carrabelle River (e.g., Kapes Bayou and Poston Bayou).

Residential: This category includes land used for residential purposes including single-family homes, duplexes, townhomes, multifamily structures, mobile homes, condominiums, and accessory buildings, as well as schools. Approximately 21.7 percent, or 606.3 acres, of the City of Carrabelle consists of residential land. Most of the residential land is platted and located in the center of the City.

Commercial: This category includes land used for retail and wholesale trade, offices, motels, restaurants, automobile service stations, repair facilities, or other uses where goods or services are made available to the general public. This category also includes schools and light industrial/commercial associated with seafood processing. Approximately 2.1 percent, or 57.5 acres, of the City of Carrabelle consists of commercial land, most of which are seafood-related and located along U.S. Highway 98 and the Carrabelle River. Other commercial property in the City consists of small convenience stores, gas stations and restaurants/bars.

Industrial: This category includes land used for activities primarily connected with manufacturing, assembly, processing, or storage of products. Approximately 0.1 percent, or 4.1 acres, of the City of Carrabelle consists of industrial land, all of which is located adjacent to the airport in the southwest corner of the City.

Public Facilities: This category includes public buildings or grounds such as City Hall, the Post Office, public parks, fire and police stations, military land, correctional facilities, public utilities and maintenance yards, schools (public and private), churches, and hospitals. This category also includes transportation systems or facilities and public health systems or facilities. Approximately 24 percent, or 670.1 acres, of the City of Carrabelle consists of public facilities. Table 1-3, below, lists the types of existing public facilities in Carrabelle and their corresponding acreages. Map I-1b, Appendix A, identifies the locations of each type of existing public facilities within the City limits.

Table 1-3. Existing Public Facilities by Type and Acreage

Public Facilities	Acres
Carrabelle City Government Facility	2.02
City Park	7.94
City-owned Property	120.61
County-owned Property	3.01
Florida Fish and Wildlife Conservation Commission	4.29
Progress Energy	3.63
Franklin Correctional Institution	388.72
Franklin County Government Facility	24.53
Private/Public Facility (i.e., churches)	14.85
Public Housing Authority	12.01
Recreational	57.35
United States Post Office	0.13
USAF/USCG Facility	30.99
Total	670.0

Source: City of Carrabelle, 2006
WilsonMiller, 2006

Communications: This category refers to cellular towers. Approximately 0.02 percent, or 0.6 acres, of the City of Carrabelle consists of communications land.

Existing Adjacent Land Uses: The adjacent land uses within one mile of Carrabelle primarily includes forested lands, wetlands, and Franklin County Residential. Please see Appendix A, Map 1-3, for a map of adjacent land uses within one mile of Carrabelle.

D. Future Land Use Inventory

Future Land Use Map: The Future Land Use Map (Appendix A, Map I-2) reflects the following land use categories:

Conservation: This category is used for conserving or protecting natural resources or environmental quality for the purposes of flood control, protection of quality or quantity of groundwater or surface water, floodplain management, fisheries management, or protection of vegetative communities or wildlife habitats. Conservation lands in Carrabelle include wetlands, marshlands, flood prone areas, and other areas in which valuable natural resources are found. Approximately 9.5%, or 267.1 acres, of the City of Carrabelle is designated "Conservation". Conservation land in the City is primarily located in the western half of the City, along the Carrabelle River (e.g., Kapes Bayou and Poston Bayou).

Very Low Density Residential: This is a new land use category that does not currently reflect any land uses in Carrabelle. Therefore, it is not reflected on the City's Existing Land Use Map. This category includes land used for low-density residential purposes due to environmental sensitivity and threat of natural disaster destruction. It has been applied to lands that were previously designated "Agriculture". The maximum density is one dwelling unit per five acres. This is the same density that was permitted within the "Agriculture" land use designation. Permitted uses within this category include single-family homes and accessory structures.

Approximately 1.9%, or 52.9 acres, of the City of Carrabelle is designated "Very Low Density Residential" land on the Future Land Use Map. Two islands off the mouth of the Carrabelle River are designated "Very Low Density Residential", as well as a recently annexed property that is located at the southeastern boundary of the City.

The purpose of this land use category is to balance the protection of environmentally sensitive lands (by providing a buffer to protect large parcels of more environmentally sensitive lands from the encroachment of development), wildlife corridors and transition zones, and areas suitable for re-vegetation, with the protection of the property rights of owners in mind.

No more than one (1) unit shall be established per platted lot or parcel existing as of the effective date of this Comprehensive Plan. Substandard lots less than five (5) acres in size, which are contiguous and in common ownership, shall be assembled in order to meet the density standards of this policy.

Specific Requirements:

- a) The provision of an enhanced stormwater volume reduction and water quality treatment system by limiting post-development stormwater discharge volumes to be no greater than pre-development stormwater discharge volumes
- b) Native vegetation will be used for residential lots and common open spaces. Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook*, as produced by Florida's water management districts.
- c) Connection to central water and sanitary sewer systems shall be required prior to any development approvals;
- d) The preservation of at least 30% of the site as common open space; and

- e) The development and implementation of a restoration and management plan for environmentally sensitive lands (e.g., wetlands)

Low Density Residential: This is a new land use category that does not currently reflect any land uses in Carrabelle. Therefore, it is not reflected on the City's Existing Land Use Map. This category includes land used for low-density residential purposes and has been applied to lands that were previously designated "Agriculture" and "Limited Residential". The maximum density is one dwelling unit per acre, except for lots of record platted prior to the adoption of the original Comprehensive Plan (1992). This is the same density that was permitted within the "Agriculture" and "Limited Residential" land use designations. Permitted uses within this category include single-family homes and accessory structures.

Approximately 26.5%, or 742.4 acres, of the City of Carrabelle is designated "Low Density Residential" on the Future Land Use Map. A large portion of "Low Density Residential" land is located within the northeast section of the City and it is completely platted with 1,100 platted lots. Due to the fact that much of the area consists of ponds or wetlands, most of the roads to these platted lots have never been built and the area is sparsely developed. As a result, the area is more rural than urban in character. There is also "Low Density Residential" land located in the southwest corner of the City, surrounding McKissick Pond, as well as a large parcel to the northeast of the City along State Road 67 and two parcels along the eastern side of the Carrabelle River.

The purpose of this land use category is to encourage infill development within the City limits, while maximizing the preservation of conservation areas and unique features of the site; encouraging creative design through the use of an overlay for wetland areas in which homes are clustered* into "villages" surrounded by natural open spaces; incorporating trail and pedestrian opportunities; and promoting enhanced street systems resulting in reduced infrastructure and impervious surfaces.

Specific Requirements:

- a) The provision of an enhanced stormwater volume reduction and water quality treatment system by limiting post-development stormwater discharge volumes to be no greater than pre-development stormwater discharge volumes;
- b) Native vegetation will be used for residential lots and common open spaces. Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook*, as produced by Florida's water management districts.
- c) Connection to central water and sanitary sewer systems shall be required;
- d) The preservation of at least 30% of the site as common open space;
- e) The development and implementation of a restoration and management plan for environmentally sensitive lands (e.g., wetlands); and
- f) The Transfer of Development Rights program shall be the required method for increasing density within this land use category in order to encourage infill development and workforce attainable housing within the City limits

*The term 'clustered' is defined to mean that the built area of a development is well defined and compact, thereby enabling the creation of contiguous expanses of open space and the protection of environmentally sensitive areas. A "clustered subdivision" shall contain a minimum of 30%

open space over the total net buildable area. Development within a clustered subdivision shall be clustered away from environmentally sensitive areas on the site and away from adjacent public conservation land. Uses such as golf courses will not be computed as open space.

Residential: This category includes land used for residential purposes including single-family homes, duplexes, townhomes, multifamily structures, mobile homes, condominiums, and accessory buildings, as well as schools. This category does not include recreational campgrounds or motels, which appear as “Commercial” with the Future Land Use Map series. Approximately 23%, or 643.9 acres, of the City of Carrabelle is designated “Residential”. Most of the “Residential land” is platted and located in the center of the City. The density allowed in “Residential” areas depends on the availability of sewer and water.

- **Single-Family Residential:**
 - Where central water and sewer is available, the maximum density allowed is 8 dwelling units per acre.
 - Where only central water is available, the maximum density allowed is 4 dwelling units per acre. Additionally, an onsite sewerage disposal system (OSDS) must be utilized.
 - Where neither central water nor sewer is available, the maximum density allowed is 1 dwelling unit per acre
- **Multi-Family Residential:**
 - The maximum multi-family density allowed is 15 dwelling units per acre.
 - Restricted to areas where both City water and sewer is available.

Mixed Use Commercial: This is a new land use category that does not currently reflect any land uses in Carrabelle. Therefore, it is not reflected on the City’s Existing Land Use Map. This category includes land used for an integrated mix of uses. Development will be designed to encourage the use of bicycle and pedestrian access among the uses. The uses may include a range of residential unit types; hotel, motel, and other temporary lodging units; neighborhood and community-scale commercial and retail; recreational uses; public uses, such as schools, government offices and services, and religious institutions; marinas and water related facilities; and entertainment facilities. Development shall be clustered to the maximum extent practicable to provide open space and to protect environmentally sensitive areas

Approximately 0.4%, or 11.5 acres, of the City of Carrabelle is designated “Mixed Use Commercial”. Land that is designated “Mixed Use Commercial” is located in the center of the City, surrounding the Senior Center and along County Road 67 (Tallahassee Street).

1. **Density:** Properties shall contain no more than 10 dwellings per acre based on the total land area.
2. **Intensity:** The maximum intensity for Mixed Use Commercial development shall be 80% impervious lot coverage. Properties shall contain a floor area ratio of 0.5 based on the total land area. Maximum building height is measured from the final Finished Floor Elevation (FFE) to the average height of the roof, excluding ornamentation and mechanical equipment or antennas.
3. **Percentage Distribution of Mixed Uses:** At least three of the uses listed in the Intent section shall be developed within the overall parent parcel of land that is assigned this category. One land use shall be a residential use and one land use shall be a non-residential use, neither of which may be less than 10% of the total land area. All of the land uses do not have to be developed at the same time, nor is one land use a prerequisite to another land use. For the

purposes of this section, “properties” refers to the overall parent parcel of land that is assigned the Mixed Use Commercial future land use category and not individual lots within the parent parcel of land.

4. Specific Restrictions:

- a) The stormwater management system will be designed to be as natural as possible, subject to approval by governmental agencies with jurisdiction;
- b) Native vegetation will be used for residential lots and common open spaces. Native vegetation to be used can be identified from *Waterwise Florida Landscape Handbook* as produced by Florida’s water management districts; and
- c) Connection to central water and sanitary sewer systems shall be required prior to any development approvals

Commercial: This category includes land used for retail and wholesale trade, offices, motels, restaurants, automobile service stations, repair facilities, or other uses where goods or services are made available to the general public. This category also includes schools and light industrial/commercial associated with seafood processing. Approximately 7.2%, or 201.4 acres, of the City of Carrabelle is designated “Commercial”, most of which is seafood-related and is located along U.S. Highway 98 and the Carrabelle River. Other commercial property in the City consists of small convenience stores, gas stations and restaurants/bars. The maximum intensity for is 80% impervious lot coverage and the maximum Floor to area ratio (FAR) is 0.4.

The Commercial Future Land Use category also applies to 45 acres, within an area known as Timber Island. The following provisions apply to this area:

- Permanent residential land use shall be prohibited.
- The development program shall be limited to 14,500 gross square feet of commercial space, 400 temporary lodging units, and 480 wet and dry marina slips.
- The temporary lodging units shall be limited to resort-type facilities such as hotels, motels, or other transient lodging facilities. These facilities shall be centrally managed and operated, with the occupancy and tenure of stay limited to a maximum of four weeks. A hurricane preparedness and evacuation plan will be prepared consistent with the provisions of Rule 9J-2.0256(5)(b), F.A.C., and will be placed on file with the City of Carrabelle and Franklin County prior to the issuance of the certificate of occupancy for the first habitable dwelling. At a minimum, the hurricane preparedness and evacuation plan shall require: an automated hurricane warning system for the purpose of warning all transient residents of a pending storm; an annual hurricane awareness program and hurricane evacuation plan with mandatory Category 1 hurricane evacuation. However, hurricane evacuation may be ordered for a lesser event at the discretion of the Franklin County Emergency Management Office.
- A stormwater master plan, which complies with the requirements of the Department of Environmental Protection, will be prepared and approved by the City through the development review process prior to any development of the site.
- Naturally vegetated buffers will be utilized to protect and conserve the natural functions of jurisdictional wetlands and the Carrabelle River. The buffers shall be a minimum of 50 feet in width and landward of the jurisdictional wetland line and the Carrabelle River. No development other than elevated boardwalks and pedestrian walkovers appropriately permitted by regulatory agencies will be allowed within those jurisdictional wetlands and associated wetland buffers located along the western portion of the property. The only allowable development within the other jurisdictional

wetlands and associated wetland buffers located along the Carrabelle River in the northern portion of the property shall be a marina, piers, docks or other similar water access structures associated with the marina to the extent such structures may be permitted by the appropriate regulatory agencies.

Industrial: This category includes land used for activities primarily connected with manufacturing, assembly, processing, or storage of products. Approximately 5.4%, or 152.2 acres, of the City of Carrabelle is designated “Industrial”, all of which is located adjacent to the airport in the southwest corner of the City. The maximum intensity for commercial development is 80% impervious lot coverage and the maximum floor to area ratio is 0.2.

Recreational: This category includes land used for neighborhood parks, spectator sport facilities, and open space. Approximately 2.1%, or 59.3 acres, of the City of Carrabelle is designated “Recreational”. However, this figure is misleading, as other land uses, such as “Public Facilities”, overlap with the “Recreational” land use. For example, the Carrabelle High School athletic complex, which consists of 34 acres, is classified as “Public Facilities” even though it is primarily used for recreational purposes. Additionally, although Tillie Miller Flats (110 acres) and a portion of Timber Island provide open space for recreational purposes, these parcels are designated “Residential” and “Conservation”.

Public Facilities: This category includes public buildings or grounds such as City Hall, the Post Office, fire and police stations, public utilities and maintenance yards, schools (public and private), churches, and hospitals. This category also includes transportation systems or facilities and public health systems or facilities. Approximately 22.7%, or 635.4 acres, of the City of Carrabelle is designated “Public Facilities”. Unlike the definition included in the Existing Land Use Inventory, the “Public Facilities” Future Land Use category does not include “Conservation” lands, even if owned by a public entity. Due to the addition of a new prison facility on 300 acres in the northeast portion of the City, the amount of “Public Facilities” land has doubled since the *1992 Comprehensive Plan* was approved. The maximum floor to area ratio is 0.2.

Military: This category includes 30.99 acres that are being used by the U.S. Air Force/U.S. Coast Guard as a tracking station.

Table 1-4, below, summarizes the Future Land Use profile of Carrabelle.

Table 1-4. Future Land Use Profile

Future Land Use Category	Vacant Acreage	Developed Acreage	Total Acreage
Commercial	114.2	87.2	201.4
Conservation	267.1	0.0	267.1
Low Density Residential	536.7	205.7	742.5
Industrial	148.1	4.1	152.2
Military	0.0	31.0	31.0
Mixed Use Commercial	5.5	6.1	11.5
Very Low Density Residential	52.9	0.0	52.9
Public Facilities	15.0	620.5	635.4
Recreational	0.1	59.2	59.3
Residential	319.1	324.8	643.9
Total Acreage	1,458.7	1,338.6	2,797.3

Source: WilsonMiller GIS Department, 2006

Table 1-5, below, reflects the general range of density or intensity of each Future Land Use category.

Table 1-5. Future Land Use Category Densities/Intensities

Future Land Use Category	Maximum Density/Intensity*
Conservation	N/A
Very Low Density Residential	1du/5ac
Low Density Residential	1du/ac
Residential	Single-Family: <ul style="list-style-type: none"> • Central Water & Sewer- 8du/ac • Central Water Only- 4du/ac • No Central Water or Sewer- 1du/ac Multi-Family: <ul style="list-style-type: none"> • Central Water & Sewer- 15du/ac
Mixed Use Commercial	10du/ac; 0.5 FAR; 80% impervious lot coverage
Commercial	0.4 FAR; 80% impervious lot coverage
Industrial	0.2 FAR; 80% impervious lot coverage
Recreational	N/A
Public Facilities	0.4 FAR; 50% impervious lot coverage
Military	N/A

*Subject to the additional density/intensity requirements of the Coastal High Hazard Area and the Critical Shoreline District, as defined in the City of Carrabelle Comprehensive Plan and Land Development Regulations

Source: Carrabelle Comprehensive Plan, 2006

E. Population Projections

Permanent Population: Table 1-6 reflects U.S. Census and University of Florida Bureau of Economic and Business Research (BEBR) population data for the City of Carrabelle for the past forty-four years. The City of Carrabelle experienced a forty-six (46) percent increase in permanent residential growth between 1960 and 1980. During this twenty-year period, between 1960 and 1980, the City was experiencing a growth of approximately thirty-five (35) new persons per year. However, since 1980, the permanent residential growth within the City has been minimal and has remained relatively constant, unlike the majority of Florida's small municipalities whose populations continue to decrease. In fact, between 1980 and 2000, the City of Carrabelle experienced less than a one (1) percent permanent population growth rate.

Table 1-6. Permanent Population – Observed and Estimated

Year	Number of Permanent Residents	
	Observed*	Estimate**
1960	608	
1970	1,044	
1980	1,304	
1990	1,200	
2000	1,303	
2004		1,306
2005		1,315

Source: *U.S. Census Bureau (2000)

** Shimberg Affordable Housing Center, University of Florida, 2006

The City of Carrabelle reached a total permanent residential population of 1,304 in 1980 and actually showed a decrease of 104 permanent residents ten years later based on the 1990 U.S. Census data. However, the 2000 U.S. Census report indicated that the City population was 1,303, which is only one (1) permanent resident less than the 1980 U.S. Census report and an increase of 103 permanent residents from the 1990 report. The University of Florida's Bureau of Economic and Business Research (BEBR) estimated a permanent population of 1,315 people in Carrabelle in 2005. Based on this data, the City's permanent residential population has increased by only twelve (12) additional persons since the year 2000. Table 1-7, below, reflects the projected permanent residential population for the City of Carrabelle in 2010 and 2020.

Table 1-7. Permanent Population - Projected

Year	Observed Permanent Population	Projected Permanent Population	Growth Rate
1980	1,304		
1990	1,200		-7.9%
2000	1,303		+8.5%
2010		1,458	+11.8%
2020		1,489	+2.1%

Source: Shimberg Affordable Housing Center, University of Florida, 2005

The projections in Table 1-7 indicate that the City's permanent residential population will increase by 155 people (an 11.8 percent increase) within the next decade, and by 31 people (a 2.1 percent increase) between 2010 and 2020. Therefore, a 14.2 percent increase in Carrabelle's permanent population is projected to occur by 2020.

The slow but steady growth occurring within the City over the last twenty years is evident through analysis of historical U.S. Census population and housing unit data. Historic housing unit data reveals that the City increased by 158 dwelling units from 1980 to 2000. Population data also reveals that the average household size has continued to decrease since 1980 from 2.73 to 2.28 persons per dwelling unit in 2000. Table 1-8 depicts the historic population and housing unit data based on the U.S. Census.

Table 1-8. Number of Housing Units and Average Household Size: 1980, 1990, and 2000

Year	Number of Housing Units	Average Household Size
1980	632	2.73
1990	683	2.42
2000	790	2.28

Source: U.S. Census Bureau, 2000

The City of Carrabelle's minimal, but constant, permanent residential population growth over the last twenty years can be contributed to several factors including the dominance of the area's economy on fishing and seafood-related industries, as well as the fact that for a long time this portion of the County was overlooked as a recreational and second home destination. The decline of the fishing and seafood industry within the City began in the 1990s and is consistent with the decline of the fishing and seafood industry within the Apalachee region as a whole. Moreover, the second home market began to progressively grow beginning in the late 1990s and early 2000. The probability of the continuance of growth of seasonal residents through the remainder of the City's planning horizon is very likely. This fact supports an underlying theme in this document that the City of Carrabelle is not going to grow the same way that it has in the past.

Seasonal Population: Given the shift to the second home market in the City, a majority of the residential units being constructed are not for permanent residents, but for seasonal residents. The second home market trend occurring within the City can be contributed to this part of the Florida Panhandle being truly discovered, as reflected by the increasing number of visitors to the area. The tourist/recreational and second home-driven economy is expected to play a major role in shaping the future of the City. Unfortunately, neither Franklin County nor the City has any historic seasonal population data (such as length of stay, number of occupants, and average party size) from which to project the future seasonal population in Carrabelle.

Although no seasonal population data is currently available, the City appears to be undergoing a structural change in its housing pattern based on seasonal demand. In the past, the City's housing pattern generally consisted of single-family dwelling units constructed on historically platted lots. However, due to the annexation of new land and the influx of resort townhome/condominium communities that either are currently being developed or have been approved for development, the City has departed

from its historical growth pattern. Unlike population growth rates, the growth rate of housing units considers the permanent *and* seasonal unit demand. Therefore, historical building permit data may be the only method available at this time to reflect Carrabelle's seasonal population.

The past fifteen years, as reflected in Table 1-9, has shown a steady increase in the number of new structures being built within the City. Between 1980 and 1990, on average, only five new structures a year were occurring for a total of fifty-one (51) new units within the ten-year period. However, beginning in the the1990s, particularly the late 1990s, the City of Carrabelle began to experience an increase in the number of new structures occurring, averaging over ten new structures a year between 1990 and 2000. The trend of new construction continued through the early 2000s, with significant increases occurring within the last few years, including over 120 new structures occurring in 2004. The City of Carrabelle estimates that well over ninety (90) percent of the structures being built within the last five years are for the recreational and second home market.

Table 1-9. Number of Housing Units (Permanent and Seasonal Demand): 1980, 1990, and 2000-2005

Year	Number of Housing Units	Average Household Size
1980	632	2.73
1990	683	2.42
2000	790	2.28
2001	836	Data not available
2002	889	Data not available
2003	950	Data not available
2004	1,038	Data not available
2005	1,162	Data not available

Source: U.S. Census Bureau, Census 2000

The housing unit data reflected in Table 1-9, above, is based on data from the U.S. Census Bureau, Census 2000. The number of housing units for 2001 through 2004 is based on building permit data and mobile home placements obtained from the Franklin County Building Department. Please note that Franklin County, through an existing agreement with the City, issued and tracked building permits for the City until fall 2005. The number of housing units for 2000-2005 was determined by the U.S. Census Bureau housing unit data for 2000 as a base and then using City permit data (based on U.S. Census Bureau methodology) to estimate the additional housing units constructed in the City from 2000-2005.

Analyzing the City's previous fifteen year growth rate in number of new structures occurring from 1990 to 2005 forms the basis to assume a straight-line projection for the next fifteen years and through the planning horizon. Based upon a linear projection of new structures through the planning horizon, the City of Carrabelle can expect to have at least 546 more structures built by 2020 (see Table 1-10).

Table 1-10. Projected Number of Housing Units (Permanent and Seasonal Demand): 2010 - 2020

Year	Number of Housing Units
2010	1,344
2015	1,526
2020	1,708

Source: WilsonMiller, 2005

Based on the need determination, this housing unit number should be multiplied times a market factor in order to ensure that the housing market is not geographically constrained. A market factor of 1.5 was applied to the housing unit projection to ensure adequate flexibility in the housing market. As depicted in Table 1-11, below, the projected number of housing units for 2020 in the City, accounting for a market factor, totals 1,981. Based on the historical building permit data and projections from Tables 1-10 and 1-11 above, the City of Carrabelle will have a need for an additional 819 dwelling units by 2020 to meet the demand of its permanent and seasonal populations.

Table 1-11. Projected Housing Units (Permanent and Seasonal Demand): 2010 - 2020 (With Market Factor¹)

Year	Number of Housing Units with Market Factor
2010	1,617
2015	1,799
2020	1,981

Source: WilsonMiller, 2005

¹A market factor is utilized in order to avoid monopolistic pricing behavior among landowners and inadequate choices of sites and locations for prospective that can occur due to a tight geographic land use supply.

Population Estimates and Projections Recommendations: It is very important to emphasize that recent development efforts have been almost exclusively aimed at the seasonal housing demand rather than the demand of the City's permanent residents. The City acknowledges the need to provide housing for all economic levels and is working towards correcting this imbalance. Please see "Section 3, Housing Element" for further discussion regarding this issue.

It should also be noted that several factors are currently in place that could substantially affect the future growth of the City of Carrabelle, but are not presently quantifiable. These factors include the impact of the Franklin Correctional Institution, which opened in June of 2005 within the City limits and is a major employer and attractor for new residents; the City's ability, through recent and ongoing major upgrades to sanitary sewer and potable water facilities, to provide critical services to the coastal areas adjacent to the City; and the potential future development by the St. Joe Company, of the area adjacent to and east of the City, classified as the "Carrabelle East" tract within the *Franklin County Comprehensive Plan* and *St. James Island Overlay Plan*. Therefore, it will be necessary for the City to monitor and reevaluate projections to track the developmental and associated population changes through the short-term planning horizon (five years) in order to accurately project future projections associated with permanent and seasonal growth for 2015 and 2020. Coordination with Franklin County regarding these potential developments adjacent to the City will be a necessity over the planning period.

F. Analysis of Land Needed to Accommodate the Projected Population

Vacant Land: Approximately fifty-two (52) percent of the City consists of vacant land. The Future Land Use categories that contain the largest percentage of vacant land include "Low Density Residential" (36.8%), "Residential" (21.9%), and "Conservation" (18.3%).

Table 1-12. Future Land Uses: Vacant and Developed Land

Future Land Use	Vacant Acres	Developed Acres	Total Acres	Vacant Acres by Total Acres per FLU Category	Vacant Acres by Total Vacant Acres
Commercial	114.2	87.2	201.4	56.7%	7.8%
Conservation	267.1	0.0	267.1	100.0%	18.3%
Low Density Residential	536.7	205.7	742.5	72.3%	36.8%
Industrial	148.1	4.1	152.2	97.3%	10.2%
Military	0.0	31.0	31.0	0.0%	0.0%
Mixed Use Commercial	5.5	6.1	11.5	47.4%	0.4%
Very Low Density Residential	52.9	0.0	52.9	100.0%	3.6%
Public Facilities	15.0	620.5	635.4	2.4%	1.0%
Recreational	0.1	59.2	59.3	0.2%	0.0%
Residential	319.1	324.8	643.9	49.6%	21.9%
Total Acreage	1,458.7	1,338.6	2,797.3		100.0%

Source: WilsonMiller, 2005

Table 1-12, above, provides a detailed breakdown of vacant and developed land within the City limits.

Availability of Urban Services: Potable water and sanitary sewer services for the City of Carrabelle are provided, owned, and operated by the City. Substantial improvements have recently been made to both

facilities. Both the potable water and sanitary sewer facilities have adequate capacity to serve the projected population of the City through this planning horizon. Please see the “Section 2, Public Facilities Element” for further discussion of public facilities availability and “Section 4, Traffic Circulation Element” for information regarding Carrabelle’s traffic circulation system).

Ratio of Land Use Acreage to Population: For purposes of projecting future land use needs, it is appropriate to establish the ratio of land use acreage to population to establish the proportion of each land use needed to support a given population. The Shimberg Affordable Housing Center estimates a population of 1,315 permanent residents for the City of Carrabelle in 2005 (based on University of Florida Bureau of Economic and Business Research (BEBR) 2004 population data). Due to the fact that neither Franklin County nor the City has any historic seasonal population data (such as length of stay, number of occupants, and average party size) from which to estimate the current seasonal population in Carrabelle, the following land use analysis will be based solely upon the City’s permanent population.

Comparison of the total developed land in the City limits with the 2005 population estimate results in the following land use ratios:

Table 1-13. Developed Acreage Compared to Permanent Population

Future Land Use Category	Existing Developed Acreage	Ratio of Acreage to Population
Commercial	87.2	0.066
Conservation	0	0.000
Low Density Residential	205.7	0.156
Industrial	4.1	0.003
Military	31	0.024
Mixed Use Commercial	6.1	0.005
Very Low Density Residential	0	0.000
Public Facilities	620.5	0.472
Recreational	59.2	0.045
Residential	324.8	0.247
Total Acreage	1,338.6	1.018

Sources: WilsonMiller, 2006
Shimberg Affordable Housing Center, University of Florida, 2005

It is anticipated that within the City limits of Carrabelle the future land use will follow the same patterns as in the past.

Table 1-14: Acreage Needed to Support Permanent Population Through 2020

Future Land Use Category	Total Developed Acres Needed	Existing Vacant and Developed Acres	Surplus or (Shortfall)
Commercial	98.7	201.4	102.7
Conservation	0	267.1	267.1
Low Density Residential	232.9	742.5	509.6
Industrial	4.6	152.2	147.6
Military	n/a	n/a	n/a
Mixed Use Commercial	6.9	11.5	4.6
Very Low Density Residential	0	52.9	52.9
Public Facilities	702.6	635.4	(67.2)
Recreational	n/a	n/a	n/a
Residential	367.8	643.9	276.1
Total Acreage	1,413.5	2,706.9	1,293.4

Source: WilsonMiller, 2006

Using the land use ratios established in Table 1-13 and the projected population as shown in Table 1-7, the following table, Table 1-14, projects the amount of acreage needed for each land use in order to support the permanent population of Carrabelle projected through the year 2020.

As indicated in Table 1-14, with the exception of “Public Facilities”, all of the projected land use needs to support the City’s 2020 population are expected to be met by the current amount of vacant land within the City limits. Approximately 388 acres of the “Public Facilities” future land use category consists of the Franklin Correctional Institution, so subsequent shortfall is most likely an inaccurate representation of the City’s actual “Public Facilities” land use demand. In regards to “Military” lands, the U.S. Air Force/U.S. Coast Guard has not indicated a desire to utilize additional lands within the City limits. Finally, the assessment of recreational demand is most effectively measured through the use of recreation surveys measuring the participation and demand on facilities rather than acreage. Therefore, the “Recreational” land use category is discussed in “Section 5, Recreation and Open Space Element”.

Wetland Constraints: As previously mentioned during the discussion of vacant land above, approximately fifty-two (52) percent of the City consists of vacant land. However, this figure may be misleading when considering whether or not the City has enough vacant acreage available to support its permanent population. This is due to the fact that the development in the City is constrained by wetlands. In fact, seventy-nine (79) percent of the total land in Carrabelle is wetlands.

Table 1-15. Vacant Land Constrained by Wetlands

Existing Land Use	Future Land Use	Vacant Land Constrained by Wetlands (Acres)	Vacant Land Constrained by Wetlands (Percent)
Vacant	Commercial	34.6	4.8%
	Low Density Residential	393.0	54.4%
	Industrial	107.5	14.9%
	Mixed Use Commercial	1.9	0.3%
	Very Low Density Residential	35.9	5.0%
	Public Facilities	6.6	0.9%
	Residential	143.2	19.8%
Vacant Total		722.6	100.0%

Source: WilsonMiller, 2006

According to Table 1-12, the Future Land Use categories that contain the largest percentage of vacant land include “Low Density Residential” (36.8%) and “Residential” (21.9%). In other words, fifty-eight (58) percent of the City’s vacant acreage is within these two Future Land Use categories. However, according to Table 1-15, above, these Future Land Use categories also contain the largest percentage of vacant land constrained by wetlands. For example, over half (54.4%) of the City’s vacant land that is designated “Low Density Residential” is wetlands and almost twenty (20) percent of the City’s vacant land that is designated “Residential” is wetlands. Therefore, even though the City appears to have a surplus of vacant land, a large portion will never be fully developed due to wetlands constraints.

Due to the fact that the lands that are designated “Low Density Residential” happen to contain the largest portions of vacant land and are also the most constrained by wetlands, the City established the “Low Density Residential” future land use category to encourage infill development while maximizing the preservation of conservation areas and unique features of the land. This land use category encourages creative design through the use of an overlay for wetland areas in which homes are clustered into “villages” surrounded by natural open spaces. The term ‘clustered’ is defined to mean that the built area of a development is well defined and compact, thereby enabling the creation of contiguous expanses of open space and the protection of environmentally sensitive areas (i.e., wetlands). According to the City’s *2020 Comprehensive Plan*, a “clustered subdivision” shall contain a minimum of thirty percent (30) open space over the total net buildable area. Development within a clustered subdivision shall be clustered away from environmentally sensitive areas on the site and away from adjacent public conservation land.

A very large portion of “Low Density Residential” land is located within the northeast section of the City, which is completely platted with 1,100 platted lots. Due to the fact that much of the area consists of

ponds or wetlands, most of the roads to these platted lots have never been built and the area is sparsely developed. The City hopes that the clustering option allowed within the “Low Density Residential” Future Land Use category will encourage urban infill, particularly within this area of the City. Additionally, in order to encourage urban infill within the City’s vacant lands, while also protecting the wetlands, the City has committed to developing a density transfer mechanism within the land development regulations that will allow density transfers to cluster developments.

Finally, Table 1-15 indicates that the “Industrial” Future Land Use category contains the third largest portion of wetlands (14.9%). It also happens to have the fourth largest portion of vacant lands (10.2%). The City has indicated that it wishes to encourage the use of existing “Industrial” land, rather than sprawling outside of the City limits. However, based on the information above, it is clear that some of the City’s existing vacant “Industrial” land will be constrained by wetlands. In order to encourage urban infill and the consolidation of services, the City is interested in coordinating with Franklin County regarding the possibility of allowing industrial uses within the nearby Lake Morality Road area.

G. Redevelopment

Carrabelle Redevelopment Area: In 1992, the City of Carrabelle declared a portion of downtown Carrabelle as an area suitable for redevelopment and established a Community Redevelopment Agency (CRA) in 1992. A CRA is a public body that operates pursuant to the State of Florida Community Redevelopment Act of 1969, which gives counties and municipalities the authority to create community redevelopment agencies, and to carry out community redevelopment to eliminate and prevent slum and blighted conditions and to enhance and protect the tax base within designated community redevelopment agency districts. Through special funding tools, such as tax increment financing and grants, the CRA is able to complete special projects such as assisting businesses and developers upgrade their buildings and designing developments that capitalize on the City’s historic assets. Currently, the Carrabelle CRA has a budget of \$500,000.00. In addition, the City has contracted with Environmental Consulting and Technology, Inc. (ECT) to study the possibility of building a City marina in this district. For a map of the boundaries of the Carrabelle Redevelopment Area, please see Map I-18, in Appendix A.

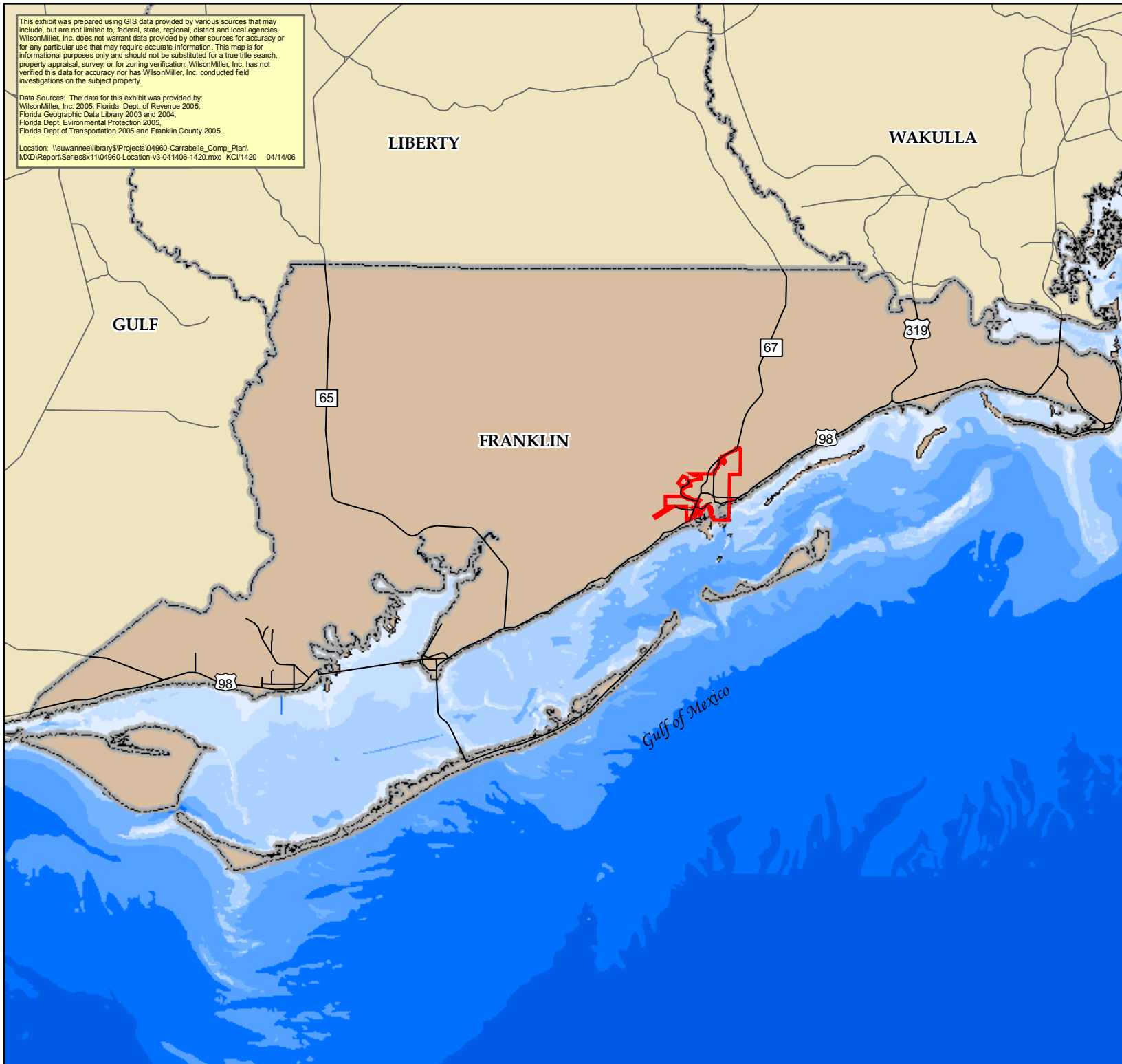
A number of private resort development projects are being planned along the waterfront within the CRA, including Mariner’s Landing, which is planned to have sixty-eight (68) dwelling units. The City of Carrabelle has also expressed interest in identifying and preserving the City’s character as a historical fishing village. These redevelopment projects are intended to help renew the blighted areas of downtown Carrabelle and help transition Carrabelle towards a more diversified economy. They will also increase the amount of public access facilities to the waterfront area. For instance, the City currently has contracted with a private consulting firm to evaluate the possibility of building a City marina in this area.

Proposed Development and Redevelopment in Flood-prone Areas: A portion of the Carrabelle CRA is located within the FEMA 100-Year Floodplain Map (Appendix A, Map I-6). The Flood Hazard Prevention Ordinance, contained in Carrabelle’s Land Development Regulations, regulates coastal construction in all areas of special flood hazard, consistent with Chapter 161, F.S., and the National Flood Insurance Program (NFIP). Special construction standards are required for areas vulnerable to flooding. These standards are intended to allow structures to withstand the forces of the 100-year storm. All new habitable structures must be constructed with the lowest floor level above this base flood elevation. As existing buildings that are below the base flood elevation are expanded or replaced, they will have to meet the new flood requirements. It is the City’s intent that eventually all buildings will meet these new requirements for building in a flood zone.

This exhibit was prepared using GIS data provided by various sources that may include, but are not limited to, federal, state, regional, district and local agencies. WilsonMiller, Inc. does not warrant data provided by other sources for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification. WilsonMiller, Inc. has not verified this data for accuracy nor has WilsonMiller, Inc. conducted field investigations on the subject property.

Data Sources: The data for this exhibit was provided by:
WilsonMiller, Inc. 2005; Florida Dept. of Revenue 2005,
Florida Geographic Data Library 2003 and 2004,
Florida Dept. Environmental Protection 2005,
Florida Dept of Transportation 2005 and Franklin County 2005.

Location: \\auwannee\library\Projects\04960-Carrabelle_Comp_Plan\NXD\Report\Series&k11\04960-Location-v3-041406-1420.mxd KCI\1420 04/14/06






Future Land Use Element Figure 1-1

General Location Map

April 2006

City of Carrabelle, Florida

Legend

-  Major Roads
-  Carrabelle City Limits
-  Franklin County, Florida

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Future Land Use Element
Figure 1-2

**Carrabelle
Redevelopment Area
Map**

April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
-  Parcel Boundaries (Approx.)
-  Carrabelle Redevelopment Area

This exhibit was prepared using GIS data provided by various sources that may include, but are not limited to, federal, state, regional, district and local agencies. WilsonMiller, Inc. does not warrant data provided by other sources for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification. WilsonMiller, Inc. has not verified this data for accuracy nor has WilsonMiller, Inc. conducted field investigations on the subject property.

Data Sources: The data for this exhibit was provided by:
WilsonMiller, Inc. 2005; Florida Dept. of Revenue 2005,
Florida Geographic Data Library 2003 and 2004,
Florida Dept. Environmental Protection 2005,
Florida Dept of Transportation 2005 and Franklin County 2005.

Location: \\suwannee\library\Projects\04960-Carrabelle_Comp_Plan\
MXD\Report\Series8x11\04960-Redev_Area-v2-041406-1420.mxd KCI\1420 04/14/06

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2. PUBLIC FACILITIES ELEMENT

The purpose of this element is to provide for the analysis and review of Carrabelle's present facilities that provide services for potable water, sanitary sewer, solid waste, stormwater drainage, and natural groundwater aquifer recharge in order to plan for projected growth.

A. Potable Water Sub-Element

Existing Conditions: The City of Carrabelle is the owner and operator of its potable water supply. The service area is limited to the City limits and the surrounding area of Carrabelle (See Figure 2-1). The Carrabelle water system was installed in the early 1940s and was expanded in 1960. The system maintains three deep wells from which raw water is pumped and then treated with a natural draft aerator to remove hydrogen sulfide. The Northwest Florida Water Management District (NFWFMD) is responsible for managing potable water supplies to meet existing and future demands. Regulation of consumptive use is achieved through a permitting system, through which water resources are allocated among the permitted consumers. The NFWFMD rules pertinent to Carrabelle are contained in Chapter 40D-2, F.A.C.

The City of Carrabelle has an adopted Level of Service (LOS) standard for potable water of 220 gallons day (gpd). The City of Carrabelle has not adopted a LOS standard for non-residential potable water uses. The Carrabelle water system has a permitted capacity of 401,000 gallons per day (gpd) with a design capacity of 1,512,000 gpd and is currently operating at an average daily demand of 237,000 gpd. Therefore, the current available permitted capacity for the Carrabelle water system is 164,000 gpd (see Table 2-1).

The NFWFMD has prepared a draft Water Consumptive Use Permit Modification to reflect the transfer of the Franklin Correctional Institute Well #1 from the Department of Corrections to the City's system and permit. The modification will increase the City's permitted average daily withdrawal from 211,000 gpd to 377,000 gpd, an increase of 166,000 gpd. The modification will increase the City's permitted maximum daily withdrawal from 401,000 gpd to 732,000 gpd, an increase of 331,000 gpd.

Table 2-1. Carrabelle Water System

Service Area	Design Capacity (gpd)	Permitted Capacity (gpd)	Average Daily Demand (gpd)	Current Available Permitted Capacity (gpd)	Minimum Adopted LOS (gpd)
City of Carrabelle	1,512,000	377,000	237,000	140,000	220

Sources: NFWFMD Water Use Permits
Water Resource Master Plan for the Carrabelle Potable Water System
2004 Sewer and Water Allocations Report (prepared by BDI, Inc.)

Needs Assessment and Projected Demand: The Carrabelle water system is currently undergoing extensive capital improvements (an upgrade of approximately 90% of all water facilities) that will provide adequate service to the City through the planning period. In June 1998, the NFWFMD completed the first District-wide water supply assessment, which contained projections for water use. In 2003, the District conducted a five-year update of the water supply demand projections through 2025 (NFWFMD, 2003). Current water sources were determined to be adequate through 2025 for Franklin County. Additionally, the NFWFMD has stated that the City of Carrabelle is not required to adopt Water Supply Facility Work Plan (WSFWP) amendments due to the fact that it is not located within a Regional Water Supply Plan (RWSP) area. However, the City has incorporated policies within the Comprehensive Plan to adopt, by December 2007, a water supply plan that will reflect and be consistent with the NFWFMD's most recent *District Water Management Plan*. The City's plan will include a work plan covering at least a ten-year planning period for building water supply facilities that are identified as necessary to serve

existing and new development. The City is currently in the process of automating its water meter reading system, due to be completed in January 2008, which will result in more accurate and up-to-date water consumption data.

Table 2-2 reflects the projected capacity needs of the Carrabelle water system for 2010 and 2020 at the current level of service.

Table 2-2. Carrabelle Water System: Projected Capacity Needs for 2010 and 2020

Year	Permitted Capacity	Projected Demand	Total % Of Capacity Used
2010	600,000	419,000	70%
2020	1,225,000	856,000	70%

Sources: NWFWM Water Use Permits
Water Resource Master Plan for the Carrabelle Potable Water System
2004 Sewer and Water Allocations Report (prepared by BDI, Inc.)

Problems and Opportunities for Facility Replacement, Expansion and New Facility Siting: Table 2-3 reflects the Carrabelle water system improvement projects that have been completed or are currently in progress. These improvements are funded through grant money and water tap fees. Further details of these improvement projects are discussed within the five-year schedule of capital improvements in “Section 9, Capital Improvements Element”.

Table 2-3. Carrabelle Water System, Recent Projects

1	Line Extension – Hwy 67
2	Hwy 67 North Treatment Plant <ul style="list-style-type: none"> • Well • Ground Storage Tank • High Service Pump Station
3	Well at DOC FCI Site <ul style="list-style-type: none"> • Modify Pump* • Piping to Hwy 67 North Plant*
4	North Elevated Water Storage Tank (at DOC FCI site)
5	Computer Hydraulic Model of Water System*
6	West Elevated Water Storage Tank (near Airport)*

Source: Baskerville-Donovan, Inc., 2005, *in progress

B. Sanitary Sewer Sub-Element

Existing Conditions: Sanitary sewer services for the City of Carrabelle are provided, owned, and operated by the City. The City of Carrabelle Wastewater Treatment Plant (WWTP) is located on County land off U.S. Highway 98, on Kenneth B. Cope Avenue. The wastewater facility provides wastewater services to residential, commercial, and resort customers within its service area, which is limited to the City limits and surrounding areas of Carrabelle (see Figure 2-1).

The wastewater collection and treatment facilities were first constructed in the 1940s. A new treatment plant opened in August of 1989 and in January of 2003, ninety-nine (99) percent of the collection system was replaced with a new vacuum system, which has significantly reduced inflow/infiltration in the collection system.

The City of Carrabelle has an adopted Level of Service (LOS) standard for sanitary sewer of 180 gallons per day. The City of Carrabelle has not adopted a LOS standard for non-residential sanitary sewer uses. The City of Carrabelle WWTP has a permitted capacity to treat up to 1,200,000 gallons per day (gpd) with a design capacity of 1,200,000 gpd and is currently operating at an average daily wastewater flow of 160,000 gpd. Therefore, the current available capacity for the City of Carrabelle Wastewater Treatment Facility is 1,040,000 gpd (see Table 2-4).

Table 2-4. City of Carrabelle Wastewater Treatment Facility

Service Area	Design Capacity (gpd)	Permitted Capacity (gpd)	Average Daily Wastewater Flow (gpd)	Current Available Capacity (gpd)	Minimum Adopted LOS (gpd)
City of Carrabelle	1,200,000	1,200,000	160,000	1,040,000	180

Sources: NFWFMD Water Use Permits
Water Resource Master Plan for the Carrabelle Potable Water System
2004 Sewer and Water Allocations Report (prepared by BDI, Inc.)

The current treatment process for Carrabelle's WWTP consists of bar screens, grit chamber, surge tank, aeration basins, clarification, aerobic digester, centrifuge, chlorine contact chamber, and holding pond prior to disposal. Residuals (sludge) are aerobically digested, dewatered by centrifuge, and then transported to the Franklin County landfill. Treated effluent from the facility discharges to a 32.82-acre sprayfield land application site that is owned and operated by the City and is located east of Carrabelle and just north of the WWTP.

In addition, the City of Carrabelle began operation of the newly upgraded Advanced Wastewater Treatment (AWT) facility in November 2005. The AWT facility is designed to produce reuse water for irrigation purposes. The capacity for the City of Carrabelle AWT facility is permitted to treat up to 1,200,000 gpd of wastewater flow. The Florida Department of Environmental Protection (FDEP) has issued the operational notification for the new plant to discharge only to the land application facility. The City has submitted to FDEP the application to operate the reuse of the reclaimed water, and the authorization letter is expected in early 2006.

Needs Assessment and Projected Demand: The Carrabelle sanitary sewer collection system has recently undergone extensive capital improvements that will provide adequate service to the sewerage portion of the City through the planning period. Several areas of the City, especially in the northeast section, are still served by septic tanks and need to be replaced by the City system during the planning period.

Table 2-5 reflects the projected capacity needs of the Carrabelle wastewater treatment system for 2010 and 2020 at the current level of service.

Table 2-5. Carrabelle Wastewater Treatment Facility: Projected Capacity Needs for 2010 and 2020

Year	Permitted Capacity	Projected Demand	Total % Of Capacity Used
2010	1,200,000	388,200	32
2020	1,200,000	729,000	61

Sources: NFWFMD Water Use Permits
Water Resource Master Plan for the Carrabelle Potable Water System
2004 Sewer and Water Allocations Report (prepared by BDI, Inc.)

Problems and Opportunities for Facility Replacement, Expansion and New Facility Siting: As mentioned previously, the City of Carrabelle substantially upgraded its WWTP. The new Advanced Wastewater Treatment (ATW) facility will serve the City of Carrabelle and surrounding areas including the St. James Bay development and the Franklin Correctional Institution (FCI). In addition, the Franklin County consolidated public school, which will be located between Carrabelle and EastPoint, may request sanitary sewer service from the Carrabelle system. The City has also entered into an agreement with the St. James Bay development to supply the development with reuse water for golf course irrigation and the Franklin Correctional Institution to supply reuse water for toilet flushing and laundry services. The agreement with St. James Bay requires reuse water of advanced wastewater quality standards. Additionally, high-level disinfection, as required by the F.A.C. for reclaimed water, has been incorporated

into the design. Recently, by-products resulting from the disinfection process have become an issue that the City is currently addressing on an emergency basis, as requested by State authorities.

The expanded AWT facility has a treatment capacity of 1.20 million gallons per day (mgd) and effluent disposal capacity of 1.197 mgd. As mentioned previously, the primary means of treated effluent disposal will be as a reclaimed water source designed for public access reuse on a local golf course and for toilet flushing and laundry services at the Franklin Correctional Institute. Reclaimed water will be sent to Lake #2 within the St. James Bay development for storage until irrigation water is needed. The calculated storage capacity for Lake #2 is identified as 1,120,000 gallons. Reclaimed water will also be sent to a ground storage tank located on the Franklin Correctional Institute property. This tank will have a volume of 240,000 gallons. Due to the area of the new AWT facility, which previously consisted of a sprayfield area and a recently permitted land exchange between the City of Carrabelle and the St. Joe Company, the acreage for the City's existing sprayfield has decreased. The new acreage is 28.7 acres, which allows for a flow of 0.262 mgd.

Table 2-6 reflects the Carrabelle sanitary sewer system improvement projects that have been completed or are currently in progress. These improvements are funded through grant money and sewer tap fees. Further details of these improvement projects are discussed within the five-year schedule of capital improvements in "Section 9, Capital Improvements Element".

Table 2-6. Carrabelle Wastewater System, Recent Projects

1	Vacuum Sewers Phase 1
2	Vacuum Sewers Phase 2
3	Wastewater Treatment Facility 1.2 MGD*
4	Master Lift Station at Timber Island*
5	Master Lift Station at DOC FCI Site
6	Force Main Sewer from St. James Bay
7	Force Main Sewer from DOC FCI Site
8	Reuse Water (treated wastewater effluent) to St. James Bay
9	Reuse Water (treated wastewater effluent) to DOC FCI Site
10	Three Rivers Road/River Road Area Sewers*
11	Master Lift Station at Three Rivers Road*
12	Carrabelle Beach Area Sewers*
13	Master Lift Station at River Road (Anglers Harbor)

Source: Baskerville-Donovan, Inc. (2005); *in progress

Septic Tanks: There are no package treatment plants located within Carrabelle. Although a majority of the citizens in the City utilize the City's wastewater collection system, those households that are not connected to the sanitary sewer system utilize septic tanks. Even when properly designed, installed, and maintained, these systems do not provide the level of treatment that wastewater treatment plants provide. Improperly functioning septic systems add to pollution loading in the form of nitrogen, phosphorus, and fecal coliform. The Franklin County Health Department has records of installed septic systems, but does not indicate how many septic systems remain in operation. The City's water and sewer engineers (Baskerville Donovan, Inc.) were also unable to provide an approximate number of septic tanks within the City. It is anticipated that many of these septic systems are installed in locations with high water tables and unsuitable soil porosity, causing poor treatment performance, resulting in additional pollution loading.

Historically, septic tank leachate has contributed to degradation of water quality adjacent to the City. The Florida Department of Health (FDOH) conducted the most recent survey of all septic tank systems within the Apalachicola Bay area in April 1988. The purpose of the survey was to determine the suitability of existing septic tanks as onsite sewage treatment systems. The Carrabelle survey area consisted of about four square miles, including the City of Carrabelle, the Carrabelle River Subdivision, the Three Rivers Subdivision, and 'Sun and Sand Village'. Of the three hundred and twenty eight (328) systems surveyed, ninety-one (91), or twenty-eight (28) percent were rated unsatisfactory. The survey concluded that while

it could not be established that the septic systems were polluting the Apalachicola Bay based on the survey alone, the number of illegal, failed, or otherwise noncompliant systems posed an unacceptable risk. In response to these concerns, the City has extended or is planning to extend centralized sewer lines to approximately ninety (90) percent of the three areas of primary concern, listed below.

The three areas of primary concern include:

- **Three Rivers Subdivision:** This area consists of a large number of failures and illegal systems. Sanitary sewer upgrades are currently under construction and completion is anticipated in October 2006.
- **State Road 30-A:** This area is located within the Critical Shoreline District and the lots cannot meet the setback requirements.
- **Marine Street:** This area is located within the Critical Shoreline District and the lots cannot meet the setback requirements. Sanitary sewer upgrades in this area have been put on hold until developers get together to address the issue.
- **River Road:** Sanitary sewer upgrades are currently under construction and completion is anticipated in October 2006.

Soil Limitations for Septic Tanks: Soils are important in considering and evaluating sewage treatment and septic tank location. If the soil type or the depth of the absorption layer is not appropriate, partially treated effluent may seep into the groundwater systems or flow into surface waters. Of particular significance are soil characteristics such as texture, permeability, depth to water table, and slope. On the basis of such information, suitability of the soils for various uses may be estimated. Map I-11 and Map I-12, in Appendix A, reflect the soils found in Carrabelle. The "Detailed Soils Map" (Map I-12) identifies a number of the various soils found within the City limits. The most evident soils include:

- **Bohicket and Tisonia Soils, Tidal:** These soils are very poorly drained, nearly level soils located in gulf tidal marshes and in estuarine marshes along estuarine creeks, streams, and rivers. Slopes are less than 1 percent. The Bohicket and Tisonia soils have a water table at or above the surface throughout the year, and they are flooded daily by normal high tides. The available water capacity is high and permeability is very slow.
- **Dorovan-Pamlico Complex, Depressional:** These soils are very poorly drained, nearly level soils located in depressions and poorly defined drainageways. Slopes range from 0 to 2 percent. The Dorovan and Pamlico soils have a seasonal high water table ponded on the surface or within a depth of 24 inches for 3 to 6 months in most years. The available water capacity is high in both soils and permeability ranges from moderate to rapid.
- **Kureb Fine Sand, 2 to 5 Percent Slopes:** This excessively drained, gently sloping soil is found on convex coastal ridges and remnant dunes. The Kureb soil does not have a seasonal high water table within a depth of 72 inches. The available water capacity is very low and permeability is very rapid.
- **Leon Sand:** This poorly drained, nearly level soil is found in broad areas in the flatwoods and on knolls or low ridges in titi bogs. Slopes range from 0 to 2 percent. The Leon soil has a seasonal high water table at a depth of 6 to 12 inches for 1 to 4 months in most years. The available water capacity is very low in the surface and subsurface layers and low in the subsoil. Permeability is rapid in the surface and subsurface layers and moderate or moderately rapid in the subsoil and underlying material.

- **Pickney-Pamlico Complex, Depressional:** These soils are very poorly drained, nearly level soils located in depressions, freshwater swamps, and poorly defined drainageways. Slopes are generally less than 1 percent. The Pickney and Pamlico soils have a seasonal high water table within a depth of 18 inches for as much as 5 months each year. The water table is generally within a depth of less than 6 inches for the rest of most years. The available water capacity ranges from very low to very high in the Pamlico soil and from very low to moderate in the Pickney soil. Permeability ranges from moderate to rapid in both soils.
- **Resota Fine Sand, 0-5 Percent Slopes:** This is a moderately well drained, nearly level or gently sloping soil found on coastal ridges and remnant dunes. Slopes range from 0 to 5 percent. The Resota soil has a seasonal high water table at a depth of 40 to 60 inches for as long as 6 months in most years. The water table is below a depth of 60 inches during dry periods. The available water capacity is very low and permeability is very rapid.
- **Rutledge Fine Sand:** This very poorly drained, nearly level soil is located on broad, low-lying flats and on narrow flats adjacent to streams. Slopes range from 0 to 2 percent. The Rutledge soil has a seasonal high water table at or slightly above the surface for 3 to 6 months in most years. The water table is within a depth of 20 inches during the rest of most years. The available water capacity is low and permeability is rapid.
- **Scranton Fine Sand:** This is a very poorly drained, nearly level soil found in broad areas in the flatwoods. Slopes range from 0 to 2 percent. The Scranton soil has a seasonal high water table at a depth of 6 to 18 inches for 3 to 6 months in most years. The available water capacity is low and permeability is rapid.

Table 2-7, below, identifies the characteristics of each of the soils found in Carrabelle, including the soils described above.

Table 2-7. Carrabelle Soil Characteristics

Soil Number	Soil Name	Suitability as septic tank absorption fields	Limitations for pond reservoir areas	Soil permeability [Inches/Hr]	Organic matter [Percent]
4	Dirego and Bayvi soils, tidal	Severe	Severe	2-20	8-60
5	Aquents, nearly level	N/A	N/A	N/A	N/A
7	Bohicket and Tisonia soils, tidal	Severe	Slight	0.06-20	5-65
8	Ridgewood sand, 0 to 5 percent slopes	Severe	Severe	6-20	<1
10	Corolla sand, 0 to 5 percent slopes	Severe	Severe	>20	<0.5
13	Hurricane sand	Severe	Severe	>6.0	<2
15	Ortega fine sand, 0 to 5 percent slopes	Moderate	Severe	0.6-20	1-2
17	Kershaw sand, 0 to 5 percent slopes	Slight	Severe	>20	<1
19	Kureb fine sand, 3 to 8 percent slopes	Slight	Severe	6-20	<2
20	Lynn Haven sand	Severe	Severe	6-20	2-4
22	Leon sand	Severe	Severe	6-20	0.5-4
24	Mandarin fine sand	Severe	Severe	6-20	<3
26	Duckston sand, occasionally flooded	Severe	Severe	>20	0.5-3
29	Resota fine sand, 0 to 5 percent slopes	Moderate	Severe	>20	<1

30	Rutlege loamy fine sand, depressional	Severe	Severe	6-20	3-9
31	Rutlege fine sand	Severe	Severe	6-20	3-9
33	Scranton fine sand	Severe	Severe	6-20	1-4
36	Pinkney-Pamlico complex, depressional	Severe	Severe	6-20	3-15
39	Scranton sand, slough	Severe	Severe	6-20	1-4
41	Pamlico-Pinkney complex, frequently flooded	Severe	Severe	0.6-20	20-60
48	Udorthents, nearly level	N/A	N/A	N/A	N/A

Source: Baskerville-Donovan, Inc. (March 2006), Draft *City of Carrabelle: Stormwater Management Needs Assessment*

Table 2-7 indicates that the majority of the soils within Carrabelle are unsuitable for septic tanks. Figure 2-2 reiterates this finding, as it identifies the entire City of Carrabelle as having severe septic tank limitations.

In order to facilitate the phasing out of septic tanks with the City limits, it is the policy of City and State law that when sanitary sewer service is made available, all existing septic tanks are to be abandoned and hook-up to the public system is mandatory. Additionally, the City's land development regulations require that all development located adjacent to available publicly provided water and sewer systems must connect within 180 days of notification of availability as defined by Florida Statute. Finally, the City also plans to adopt and enforce a Critical Shoreline Ordinance that restricts the use of septic tanks within 150 feet of the mean high water line of the waters or wetlands of the State.

C. Solid Waste Sub-Element

Existing and Projected Conditions: The City of Carrabelle has an adopted Level of Service (LOS) standard for solid waste of five (5) pounds per capita per day. The City of Carrabelle has not adopted a LOS standard for non-residential solid waste uses. The City is presently considering mandatory trash collection, as well as mandatory collection of recyclable goods (the City currently serves as a central recycling center, in cooperation with Franklin County). Solid waste collection is currently handled by Waste Management of Northwest Florida, which collects and transports the City's solid waste to a transport station located near EastPoint. However, Waste Management of Northwest Florida is currently providing this service under an expired contract. Thus, the City is in the process of renegotiating its contract with Waste Management of Northwest Florida and plans to address the issues of mandatory trash collection and mandatory recyclables collection during the renegotiations. All collected waste generated in Franklin County is transported from the transfer station and disposed of in the Bay County Incinerator located in Panama City. Franklin County is currently generating a combined average daily volume of twenty (20) tons per day, or approximately 7,040 tons per year.

Needs Assessment and Projected Demand: The Bay County Incinerator is a County-owned regional facility that collects and disposes of solid waste from six (6) surrounding counties, including Bay, Calhoun, Franklin, Gulf, Wakulla, and Washington. The Bay County Incinerator currently processes approximately 178,850 tons per year and has an available capacity to accept an additional 36,135 tons per year. The Bay County Incinerator is not expected to reach full capacity until the year 2025.

Problems and Opportunities for Facility Replacement, Expansion and New Facility Siting: The City does not have a solid waste disposal facility and does not have plans to construct such a facility within the current planning horizon. Due to the fact that the City does not require mandatory trash collection, some resident dump their trash along residential roads and within undeveloped areas. People also leave 'white goods' (i.e., refrigerators, stoves, and other appliances) on the side of the road. The County informally picked up such goods on a regular basis. However, in the fall of 2005, the County informed Carrabelle that it would no longer provide this service. In order to address the aforementioned solid waste problems, in 2005 the City established a solid waste code-enforcement program. Initially, the program only

enforced the removal of derelict debris from public right-of-ways, but it has now been expanded to enforce the removal of derelict debris left on private properties. Remarkable progress has been made in one year. The City is also moving forward with the adoption and implementation of a mandatory trash collection requirement and possibly a mandatory recyclables collection requirement. A final problem that the City must address is that most or all areas within the City limits have documented black bear populations and require bear-proof solid waste containers.

D. Drainage Sub-Element

Existing Regulations and Programs Which Govern Land Use and the Development of Natural Drainage Features:

Federal: Section 208 of the Federal Water Pollution Control Act (PL 92-500, 1972) is the directing federal law with respect to water pollution abatement. In implementing the Act, the Environmental Protection Agency (EPA) identified pollutants carried in stormwater runoff as a major source of water contamination. To achieve the pollution abatement goals of the act, EPA provided assistance to State and local governments to develop Areawide Water Quality Management Plans, or “208 Plans” as they are commonly known. The purpose of the 208 Plan is to study a broad range of potential water pollution sources, including stormwater and focus on identifying pollutant sources and abatement needs, as well as development of regulatory programs to ensure implementation. The Environmental Protection Agency (EPA) also oversees stormwater discharges with the use of a National Pollutant Discharge Elimination System (NPDES) permit process. The NPDES program was established in 1987 as part of the Clean Water Act.

State: Florida Administrative Code Chapter 62-25 provides requirements for stormwater facilities. Residential properties are generally considered exempt. Most other developed properties require stormwater general permits based on minimum design standards for stormwater treatment facilities. Detention and retention ponds are the most common treatment facilities permitted, and are generally required to capture the first half-inch of runoff for areas less than 100 acres or first inch for areas larger than 100 acres.

In addition, in October 2000, the EPA authorized the Florida Department of Environmental Protection (FDEP) to implement the NPDES stormwater permitting program in the State of Florida (in all areas except Indian Country lands). The FDEP authority to administer the NPDES program is set forth in Section 403.0885, Florida Statutes (F.S.). The NPDES stormwater program regulates point source discharges of stormwater into surface waters of the State of Florida from certain municipal, industrial and construction activities. As the NPDES stormwater permitting authority, the FDEP is responsible for promulgating rules and issuing permits, managing and reviewing permit applications, and performing compliance and enforcement activities.

Local: The City has established a Level of Service standard for drainage/stormwater facilities within its Comprehensive Plan, which states that facilities shall accommodate the 25-year, 24-hour storm duration with the runoff from the first 1.5 inches of rainfall retained, and the facilities shall be designed in accordance with the specifications described in Chapter 62-25, F.A.C. so that the receiving water quality is not degraded and complies with water quality standards established in Chapter 17-302, F.A.C. In addition, stormwater facilities shall also meet the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs). There shall be no exception to the application of Chapter 62-25, F.A.C., or the OFW standards. Finally, the City has contracted with Baskerville Donovan, Inc. to conduct a Stormwater Needs Assessment and propose a Stormwater Master Plan, which is slated for completion by December 2006.

The City's land development regulations are also designed in accordance with Florida Administrative Code Chapter 62-25 with the exception of the following requirements:

- a) Detention with filtration systems shall not be allowed unless the applicant demonstrates that no other alternative is feasible, that the proposed filtration system discharge will meet applicable water quality standards and that the applicant shall be responsible for perpetual maintenance of the system.
- b) Off-line retention systems shall be used whenever the soil conditions will allow percolation of the treatment volume within 72 hours.
- c) When soil conditions will not allow infiltration practices to be used, the stormwater system shall consist of a wet detention system with a vegetation littoral zone.
- d) To enhance the effectiveness of the wet detention system, landscape retention pretreatment practices such as swales or the placement of raised storm sewer inlets in grassed areas shall be employed in combination with the detention system unless site conditions prohibit such practices.
- e) Other stormwater management practices may be used provided the applicant demonstrates that the stormwater management system will provide treatment equivalent to that provided by off-line retention systems.

Additionally, Carrabelle's land development regulations require an adequate stormwater management system, erosion control, and flood damage prevention plan for all new development. In order to evaluate the proposed plan, a developer is required to submit a topographic map of the entire plat with contour lines at one foot and a proposed drainage plan, including ultimate destination of flow and storm drainage systems and retention areas, to the Carrabelle Planning and Zoning Advisory Board and City Commission.

The City also plans to adopt and enforce a Critical Shoreline Ordinance that restricts development within 150 feet of the mean high water line of the waters or wetlands of the State and prohibits impervious surfaces within 20 feet of the mean high water line of the waters or wetlands of the State. In addition, all development within 150 feet of the mean high water line of the water or wetlands of the State must undergo a special review process. First, the Planning and Zoning Board must review the development. Then, they recommend to the City Commission what actions should be taken. The purpose of this ordinance is to protect the natural function of wetlands and to protect the waters or wetlands of the State from pollution that accompanies development.

Existing Conditions: Almost the entire City of Carrabelle is subject to flooding. Three major drainage basins affect regional drainage patterns in Franklin County: the Apalachicola River basin, the Ochlockonee River basin, and the New River basin. Carrabelle is located within the New River basin. Surface water features located in Carrabelle include the Crooked River, the New River, and the Carrabelle River, as well as several lakes, extensive swamps and tidal marshes. The Carrabelle River originates at the confluence of the Crooked and New Rivers. Please refer to Figure 2-3 for a map of Carrabelle's major natural drainage features and Map I-6, Appendix A, for the FEMA 100-Year Floodplain Map.

Tropical deluges of three inches or more are not uncommon in the Carrabelle area. Rainstorms of this magnitude have potential adverse effects, as they generally result in flooding, greater stormwater runoff, and less absorption into the water table. According to a study conducted by Dr. Morton Winsberg (Department of Geography, Florida State University), areas along the Gulf Coast can expect an average of at least one torrential rainstorm (at least three inches of rain during a 24-hour day) annually. In fact, the City of Apalachicola (approximately 23 miles west of Carrabelle), received the highest frequency of torrential rainstorms (53) based on 53 years of daily weather records (1948-2000).

The City of Carrabelle is also vulnerable to hurricane-induced storm surges, resulting in extensive flooding. According to the Florida Division of Emergency Management (FDEM), a storm surge is defined as water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level fifteen (15) feet or more. In addition, wind driven waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides. Because Carrabelle's coastline lies less than ten (10) feet above mean sea level, the danger from storm tides is tremendous. In fact, although Hurricane Dennis (July 2005) made landfall approximately 160 miles west of Carrabelle, the City experienced extremely high storm surge levels, on the order of 8-10 feet above normal elevations.

In 2005, Baskerville Donovan, Inc. (BDI) conducted a *Stormwater Needs Assessment* to address Carrabelle's stormwater drainage issues. As part of the assessment, BDI created a stormwater map of Carrabelle, which was then used to divide the City and surrounding areas into drainage basins. Basins usually are divided by naturally occurring ridgelines or highways and each basin is uniquely comprised of varying features such as drainage area, stormwater infrastructure, soil type, and land use. According to the draft *Stormwater Needs Assessment (March 2006)*, seven drainage basins were identified:

- 1) **Ball Field Basin:** This drainage basin is located in the southeast portion of Carrabelle. U.S. Highway 98 and State Road 30-A cross the northern and southern segments of the basin, respectively. The Ball Field Basin contains two sub-basins: Ball Field Sub-Basin 1 and 2. Sub-Basin 1 encompasses the majority of the basin. Ball Field Basin also contains one stormwater management facility and one possible wetland or isolated low area.
- 2) **South Tallahassee Street Basin:** This drainage basin is located in the south central part of Carrabelle. U.S. Highway 98 runs along the southern portion of the basin and State Highway 67 divides the basin running north/south. The South Tallahassee Street Basin is divided into two sub-basins and includes one isolated low area.
- 3) **U.S. Highway 98 Basin:** This drainage basin is located in the southwest region of the City, west of State Highway 67 with US 98 running along its southern edge. The U.S. Highway 98 Basin is divided into two sub-basins, US 98 East and US 98 West and includes four isolated low areas.
- 4) **Ryan Drive Basin:** This drainage basin is located in the west to northwest portion of the City between Ryan Drive and State Highway 67. The Ryan Drive Basin is the largest in the City with an area of 181.85 acres and is divided into three sub-basins: Ryan Drive Sub-Basin 1, 2 and 3, with Sub-Basin 2 further broken down into five basins. This drainage basin also contains several significant wetlands in each sub-basin, including a 27-acre wetland in Ryan Drive Sub-Basin 3.
- 5) **10th Street Basin:** This drainage basin is located in the east and southeast section of the City and includes Carrabelle High School. U.S. Highway 98 bisects the eastern portion of this basin. The 10th Street Basin is the second largest basin in City, with an area of 144.47 acres and is divided into five different sub-basins: 10th Street Sub Basins 1, 2, 3, 4, and 5. It also includes a significant wetland (4.6 acres) and isolated low area west of the high school.
- 6) **Frog Pond Basin:** This drainage basin is located south of U.S. highway 98 and east of 12th Street East. Frog Pond is the 38.31 acre basins' main attribute and drains directly into St. George Sound.

- 7) **Marvin Drive Basin:** This drainage basin is the western-most basin, located between Ryan Drive and the Carrabelle River. It is the smallest of all the basins, with an area of 11.14 acres.

Most of these basins empty either directly into the Carrabelle River or indirectly into St George Sound and the Gulf of Mexico. Table 2-8, below, summarizes the drainage basin data and Exhibit 2-1 identifies the corresponding drainage basin locations.

Table 2-8. Drainage Basin Descriptions

No.	Basin Name	Location	Acres	Outfall
1	Ball Field Sub-Basin 1	South East	78.62	St. George Sound
2	Ball Field Sub-Basin 2	South East	6.26	St. George Sound
3	South Tallahassee Street Basin 1	South Central	37.98	St. George Sound
4	South Tallahassee Street Basin 2	South Central	2.99	St. George Sound
5	U.S. 98 East Basin	South West	19.37	Carrabelle River
6	U.S. 98 West Basin	South West	11.53	Carrabelle River
7	Ryan Drive Sub-Basin 1	South Central	36.43	Carrabelle River
8	Ryan Drive Sub-Basin 2	South Central	31.22	Carrabelle River
9	Ryan Drive Sub-Basin 3	North Central	114.20	Carrabelle River
10	Marvin Drive Basin	West Central	11.14	Carrabelle River
11	Tenth Street Sub-Basin 1	South East	10.36	St. George Sound
12	Tenth Street Sub-Basin 2	South East	24.55	St. George Sound
13	Tenth Street Sub-Basin 3	South East	67.01	St. George Sound
14	Tenth Street Sub-Basin 4	South East	12.96	St. George Sound
15	Tenth Street Sub-Basin 5	South East	29.59	St. George Sound
16	Frog Pond Basin	South East	38.31	St. George Sound

Source: Baskerville-Donovan, Inc. (March 2006), Draft *City of Carrabelle: Stormwater Management Needs Assessment*

BDI also identified additional areas throughout the City that have experienced flooding and drainage problems. Table 2-9, below, lists the physical location and description of the historical problem areas, and also provides the map location number. Map numbers relate to Exhibit 2-2, which illustrate these area locations.

Table 2-9. Historical Drainage Problems

Map No.	Physical Location	Problem Description
101	212 River Road	Flooding of residence, no outfall
102	River Road Subdivision	Flow from neighboring subdivision
103	Post Office	Inadequate drainage pipe size
104	Ball Fields	No conveyance structures; inadequate side-drains, cross-drains and ditches
105	County Road 30-A, Between 9 th and 12 th St East	Inadequate CMP cross-drain pipe
106	Avenue C South and 3 rd Street East	Inadequate CMP cross-drain pipe
107	Avenue J North and 4 th Street East	Inadequate CMP cross-drain pipe
108	Wellborn Street and Bruce Avenue	Inadequate CMP cross-drain pipe
201	Riverview Drive and 13 th Street West	Lack of drainage pipe maintenance
202	Ryan Drive and 9 th Street West	Lack of maintenance of ditch and pipe
203	Ditch – From NW corner of Avenue D North and 5 th St. West, to Avenue E North and 8 th St. West	Lack of ditch maintenance
204	Avenue D North and 5 th Street West	Lack of drainage pipe maintenance
205	5 th Street West and Avenue D North	Lack of drainage pipe maintenance
206	Avenue A North between 3 rd and 4 th Street West	Lack of drainage pipe maintenance

207	Avenue A North and 3 rd Street West	Lack of drainage pipe maintenance
208	2 nd Street West, near Avenue B North	Lack of drainage pipe maintenance
209	Avenue A North and 1 st Street West	Lack of drainage pipe maintenance
210	Tallahassee Street between Avenue B and C North	Remove asphalt from grate
211	Avenue C North, between Tallahassee St. & 1 st St. West	Lack of maintenance of ditch and pipe
212	Tallahassee Street between Avenue G and F North	Lack of maintenance of ditch and pipe
213	Avenue C North, between 3 rd & 4 th St. East	Lack of drainage pipe maintenance
214	5 th Street East and Gray Avenue	Lack of maintenance of ditch and pipe

Source: Baskerville-Donovan, Inc. (March 2006), Draft *City of Carrabelle: Stormwater Management Needs Assessment*

According to the draft *Stormwater Needs Assessment (March 2006)*, the City's stormwater needs can be grouped into two categories: (1) current infrastructure improvements/additions; and (2), the creation of a Stormwater Master Plan that details the City's direction for future management needs.

- 1) **Infrastructure Improvements/Additions:** Infrastructure improvements include items such as construction of new detention basins and modifications to existing wetlands, replacement of undersized/ deteriorated pipes, and repair/construction of new drainage channels. Recommended detention basins will be the largest component of the additions to the stormwater system. The overall removal capability of stormwater facilities is considered moderate to high. Treatment levels in these facilities are a function of storage volume and detention time. Essentially, larger basins allow longer detention times that allow better overall pollutant removal, as well as lower discharge flow rates. Property availability and topography conditions will influence facility size and design. Suspended sediment, total phosphorous, total nitrogen, oxygen demand, trace metals, and bacteria removal rates in basins can range from 20% to 80%.

Preliminary cost estimates for said improvements and additions are shown in Table 2-10. Additional information such as detailed topographical data, soils investigation, property availability, desired facility performance, etc. will be required to establish more accurate cost estimates. Table 2-10 also includes recommended improvements and additions for the historical drainage problems requiring more immediate attention.

Table 2-10. High Priority Improvements/Additions with Preliminary Cost Estimates

**Map No.	Improvements/Additions and Location	Comments	Cost Estimate
104	New Stormwater Facility park located on the current ball field site south of US 98.	Create the new stormwater facility and connect to a conveyance system by way of rate control structures.	\$600,000
105	Replace existing CMP w/ RCP located along County Rd 30-A East of 9 th St East.	Replace existing CMP, which is likely to corrode and become compromised, with RCP.	\$76,000
101	Re-grade a pipe and create an easement at 212 River Rd.	Create positive outflow for runoff, this improvement will solve localized residential flooding. This project must be coordinated with Franklin County.	\$53,000
103	Replace existing pipe with a larger size at the Post Office located on Tallahassee St and U.S. 98	The Post Office parking lot holds water because of an inadequately sized pipe; a larger pipe along w/ a new inlet will convey the stormwater. The adjoining lot may be the site of the new City Hall. This problem may be resolved when the adjoining site is developed.	\$25,000

107	Replace existing CMP w/ RCP at Ave J North and 4 th St East.	Replace existing CMP, which is likely to corrode and become compromised, with RCP.	\$25,000
108	Replace existing CMP w/ RCP at Wellborn St and Bruce Ave.	Cut the existing road and replace CMP w/ RCP, as it is inadequate w/ respect to RCP.	\$21,000
106	Replace existing CMP w/ RCP at Ave C South and 3 rd St East	Replace existing CMP, which is likely to corrode and become compromised, with RCP.	\$19,000
109	Retrofit existing RCP Avenue A North/ US 98 w/ Baffle Boxes	Retrofit existing RCP w/ Baffle Box for Sediment/Pollutant Removal	\$125,000
Total			\$944,000

** See Exhibit 2-2 for improvement locations.

Source: Baskerville-Donovan, Inc. (March 2006), Draft *City of Carrabelle: Stormwater Management Needs Assessment*

- 2) **Stormwater Master Plan:** The development of a Stormwater Master Plan that addresses the issues associated with the Florida Administrative Code Chapter 62-25 permit process is recommended to identify the City's future management direction for its Stormwater Program in terms of both structural (constructed) and non-structural (regulatory) responses. Additional items to include in the Plan may be testing schedules with locations, pollutant identification, and a request for the public to regulate their own properties. This Plan will help prepare the City for Florida Administrative Code Chapter 62-25 permit requirements when stormwater programs become mandatory.

Recommendations:

BDI's draft *Stormwater Needs Assessment* report recommends that the City of Carrabelle address its drainage issues via the following steps:

- 1) **Evaluation of High Priority Improvements:** Perform an evaluation of the proposed improvements and additions to the City's existing stormwater system, which would include a manageable short-term list of high priority improvements.
- 2) **Development of Stormwater Master Plan:** With City concurrence that it desires a systematic approach to stormwater management, develop a draft Stormwater Master Plan which would address the following items and outline the City's Stormwater Program:
 - Identification of stormwater related problems
 - Identification of environmentally sensitive areas
 - Determination of stormwater needs regarding quantity vs. quality issues
 - Structural implementation measures
 - Non-structural implementation controls
 - Program cost estimates
 - Implementing ordinances and standards
 - Identification of revenue sources
 - Determination of program administration structure
- 3) **Review of Stormwater Master Plan:** Review the draft Stormwater Master Plan through internal discussions with City staff and professional consultants and solicit comments from the citizens during public meetings.

- 4) **Adoption of Final Stormwater Master Plan:** After obtaining staff, professional and public input, prepare and adopt a final Stormwater Master Plan.
- 5) **Implementation of Stormwater Program:** Implement Stormwater Program outlined in the Stormwater Master Plan based on available revenues and City emphasis.

E. Natural Groundwater Aquifer Recharge

Existing Regulations and Programs Which Govern Land Use and the Development of Groundwater Recharge Areas:

- **Federal:** In 1986, the Federal Safe Drinking Water Act (PL 93-523) was amended to strengthen protection of public water system wellfields and aquifers that are the sole source of drinking water for a community. The amendments for wellfield protection require states to work with local governments to map wellhead areas and develop land use controls that will provide long-term protection from contamination for these areas. The aquifer protection amendments require the EPA to develop criteria for selecting critical aquifer protection areas. The program calls for State and local governments to map these areas and develop protection plans, subject to EPA review and approval. Once a plan is approved, the EPA may enter into an agreement with the local government to implement the plan.
- **State:** In implementing the Florida Safe Drinking Water Act (Section 403, F.S.), the FDEP has developed rules classifying aquifers and regulating their use (Chapter 17-22, Part III, F.A.C.). The FDEP has also established regulatory requirements for facilities which discharge to groundwater (Chapter 17-4.245, F.A.C.) and which inject materials directly underground (Chapter 17-28, F.A.C.). The task of identifying the nature and extent of groundwater resources available within the State has been delegated to regional water management districts. Each district must prepare a Groundwater Basin Resource Availability Inventory (GWBRAI), which the local governments are to use to plan for future development in a manner that reflects the limits of available resources. The criteria for the inventories and legislative intent for their use are found in Chapter 373, F.S. The Florida Legislature has also directed local governments to include topographic maps of areas designated by the Water Management Districts as prime recharge areas for the Floridan or Biscayne aquifers in local comprehensive plans and to give special consideration to these areas in zoning and land use decisions [Section 163.3177 (6) (c), F.S.].
- **Local:** The City of Carrabelle has established wellfield protection Level of Service standards within its Comprehensive Plan and has enacted a wellfield protection ordinance within its land development regulations. The wellfield protection Level of Service standards and wellfield protection ordinance adopted by the City of Carrabelle consists of two zones requiring different levels of protection:
 1. *Primary Protection Zone:* The innermost zone surrounding the wellhead that requires the strictest restrictions. Within the Primary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 200 feet of a public wellfield. The following uses are prohibited within the Primary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities;
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities; and
 - e. Septic tanks

2. *Secondary Protection Zone*: The zone surrounding the Primary Protection Zone. Within the Secondary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 1,000 feet of a public wellfield. The following uses are prohibited within the Secondary Protection Zone:
- a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities; and
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities

Please see Figure 2-4 for a map of the potable water wellfield protection areas in Carrabelle.

Existing Conditions: Franklin County's groundwater system generally consists of three aquifers: (1) the surficial or water table aquifer; (2) the upper Floridan aquifer; and, (3) the lower Floridan aquifer. The water table aquifer lies just below the land surface and extends throughout the County. It is open to infiltration from rainfall in varying degrees, depending on the percolation characteristics of surface soils and the extent of impervious surfaces, which have been created in the urban areas of the County. The water table aquifer and surface water systems are interconnected throughout the County, with the aquifer contributing to base flow levels of the surface waters. The majority of rainfall infiltrating the water table aquifer travels in a southwesterly direction from higher elevations to natural discharge areas such as lakes, streams or marshes.

Assessment: The upper and lower Floridan aquifers lie below the water table aquifer, and are separated by confining layers with relatively low permeability. Only about three (3) percent of the County's average annual rainfall percolates through the confining layers into the Floridan aquifer. In comparison to other areas of the State, recharge to the Floridan aquifer in Franklin County is moderate to small. In addition, only minor alterations of recharge areas have taken place in the coastal portion of Franklin County where urban development has occurred. In fact, the NFWFMD has not adopted or identified any prime or high groundwater recharge areas within the City and has no plans of doing so in the near future. As a result, a topographic map of such areas is currently not available.

Recommendations: As mentioned previously, the NFWFMD has not adopted or identified any prime or high groundwater recharge areas within the City and has no plans of doing so in the near future. However, just as with stormwater runoff to surface water, pollutants picked up by runoff, which enters an aquifer, can degrade the quality of the groundwater. This becomes particularly significant when the aquifer is tapped as a potable water supply downstream. Even though the effects on aquifer recharge have been minor in the past, it is still important to protect the aquifer recharge area, especially with the increase in residential development that is currently taking place in Carrabelle. Therefore, by following the recommendations of the draft *Stormwater Needs Assessment* presented above, the City will substantially protect and improve the natural resources of the City by minimizing pollution runoff to potential groundwater recharge areas, in addition to wetlands, streams, the Carrabelle River, and St. George Sound.

This exhibit was prepared using GIS data provided by various sources that may include, but are not limited to, federal, state, regional, district and local agencies. WilsonMiller, Inc. does not warrant data provided by other sources for accuracy or for any particular use that may require accurate information. This map is for informational purposes only and should not be substituted for a true title search, property appraisal, survey, or for zoning verification. WilsonMiller, Inc. has not verified this data for accuracy nor has WilsonMiller, Inc. conducted field investigations on the subject property.

Data Sources: The data for this exhibit was provided by:
WilsonMiller, Inc. 2005; Florida Dept. of Revenue 2005,
Florida Geographic Data Library 2003 and 2004,
Florida Dept. Environmental Protection 2005,
Florida Dept of Transportation 2005 and Franklin County 2005.

Location: \\suwannee\library\$\Projects\04960-Carrabelle_Comp_Plan\
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



Public Facilities Element Figure 2-1

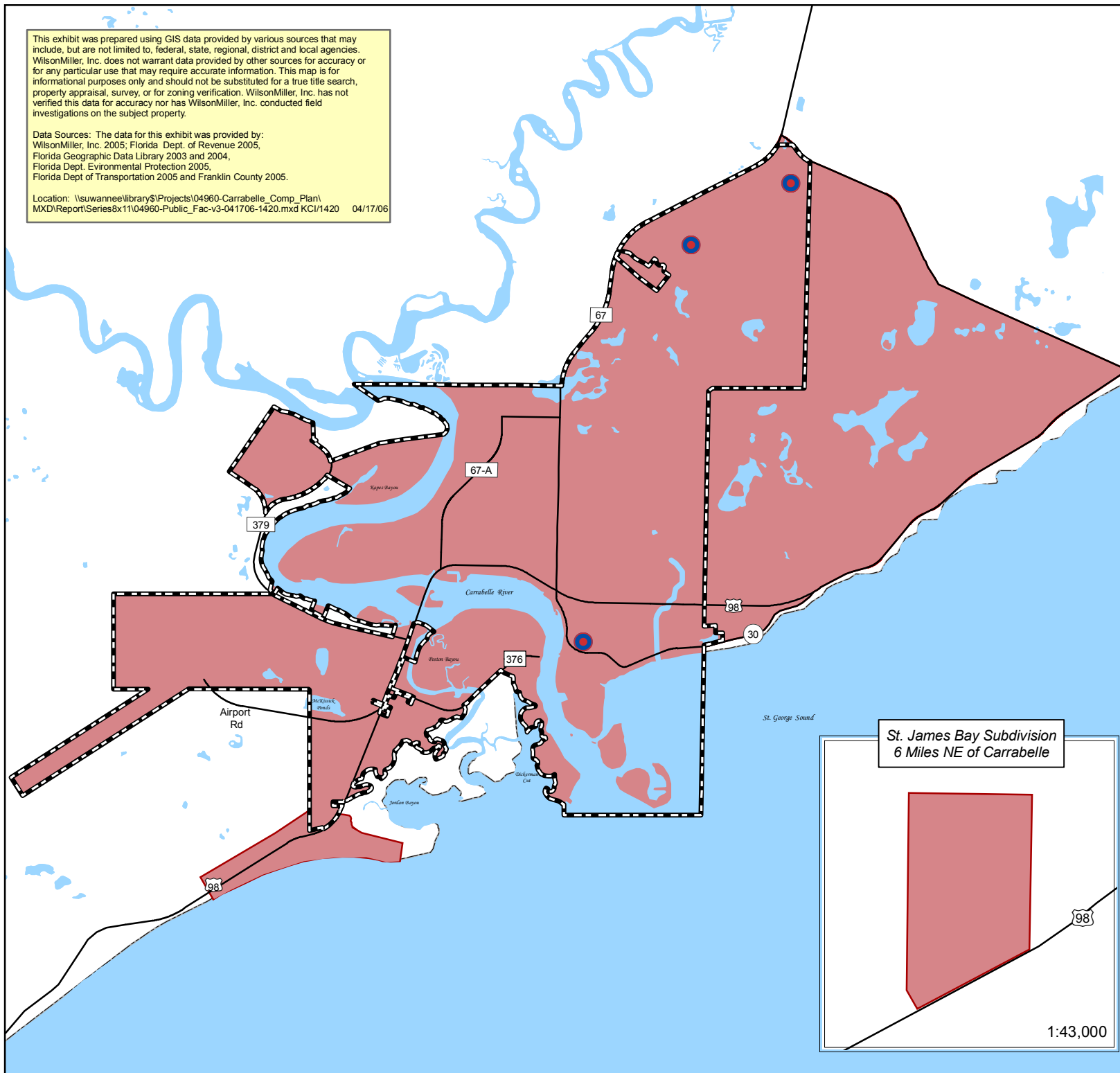
Potable Water and Sanitary Sewer Service Areas Map

April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Utility Service Area
-  Rivers, Lakes, and Bays
-  Franklin County Boundary
-  Primary Zone
200 Foot Radius
-  Secondary Zone
1000 Foot Radius



St. James Bay Subdivision
6 Miles NE of Carrabelle

1:43,000

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New Directions in Planning, Design & Engineering

0 0.15 0.3 0.6 Miles



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Florida Dept. Environmental Protection 2005,
Florida Dept of Transportation 2005 and Franklin County 2005.

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Public Facilities Element Figure 2-2

Soils Map: Soil Limitations for Septic Tanks


April 2006

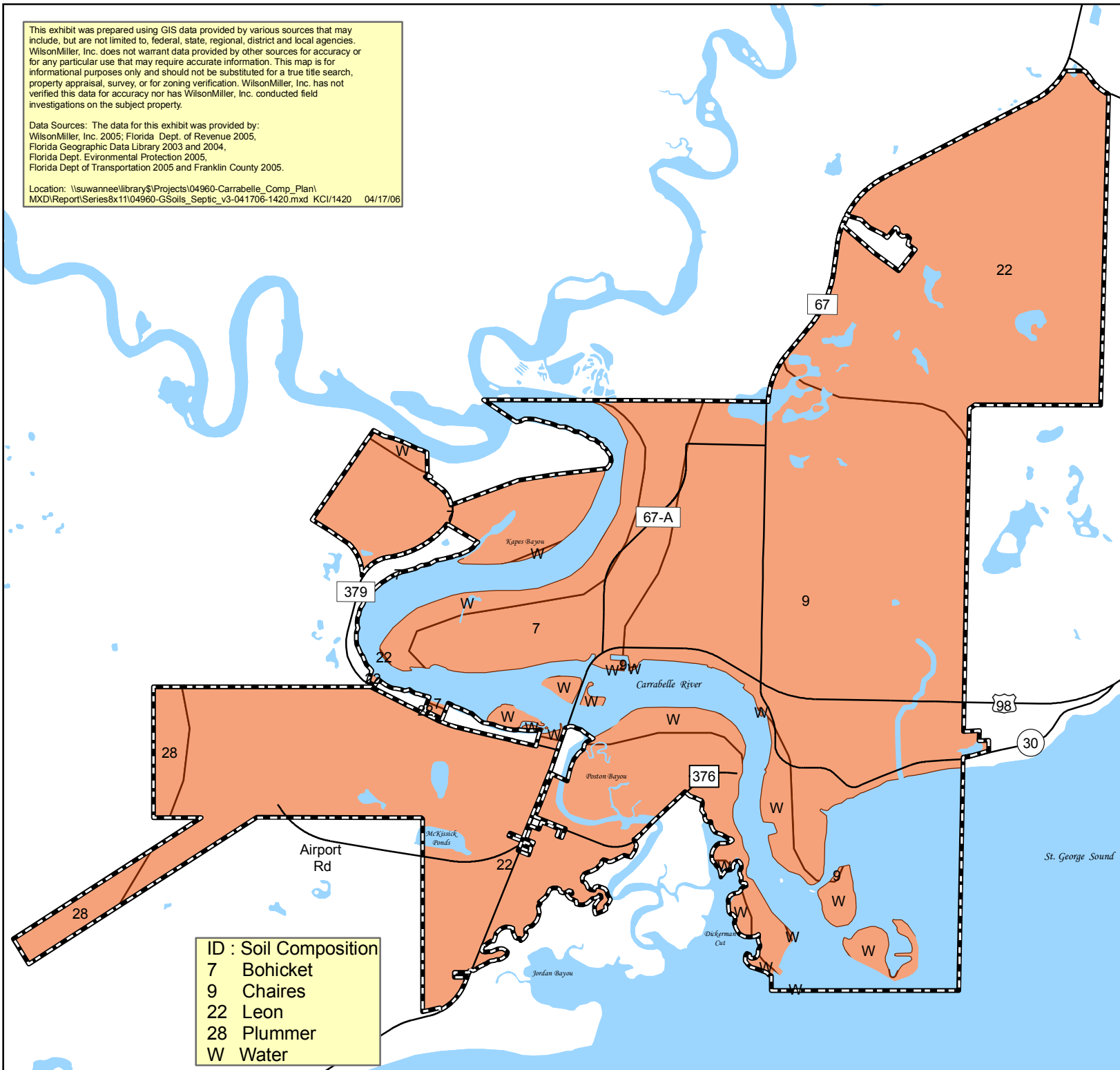
City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays

Soil Limitations for Septic Tanks

-  Severe - Unfavorable



ID : Soil Composition
7 Bohicket
9 Chaires
22 Leon
28 Plummer
W Water

WilsonMiller
New Directions In Planning, Design & Engineering

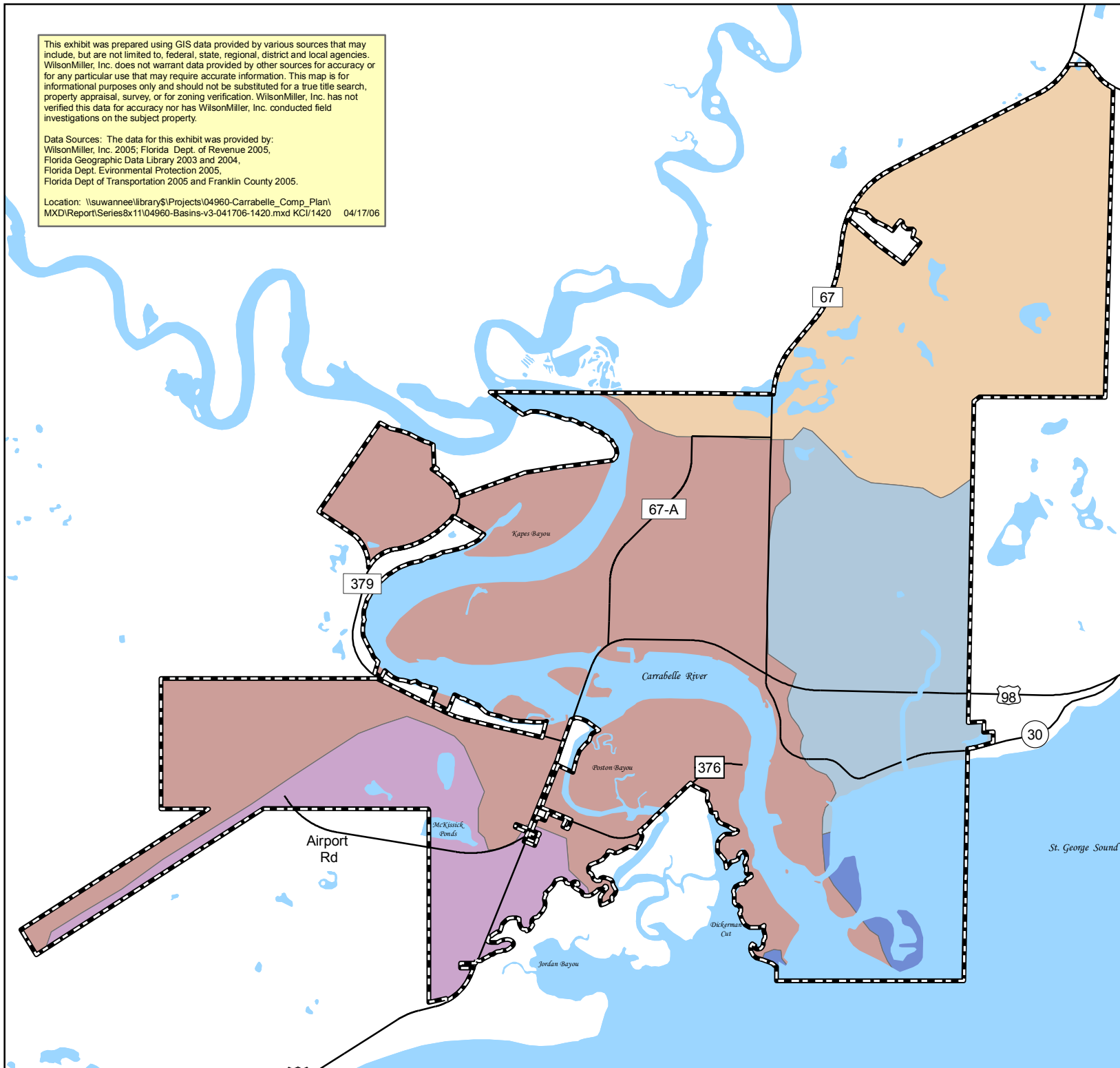
0 0.15 0.3 0.6 Miles



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Florida Dept. Environmental Protection 2005,
Florida Dept of Transportation 2005 and Franklin County 2005.

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Public Facilities Element Figure 2-3

Natural Drainage Features Map: Basins

April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
- Basin Names**
-  Apalachicola Bay
-  Crooked River
-  Direct Runoff to Bay
-  New River
-  St. George Sound

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0 0.15 0.3 0.6 Miles



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MXD\ReportSeries8x11\04960-Wells-v3-041706-1420.mxd KCI/1420 04/17/06










Public Facilities Element Figure 2-4

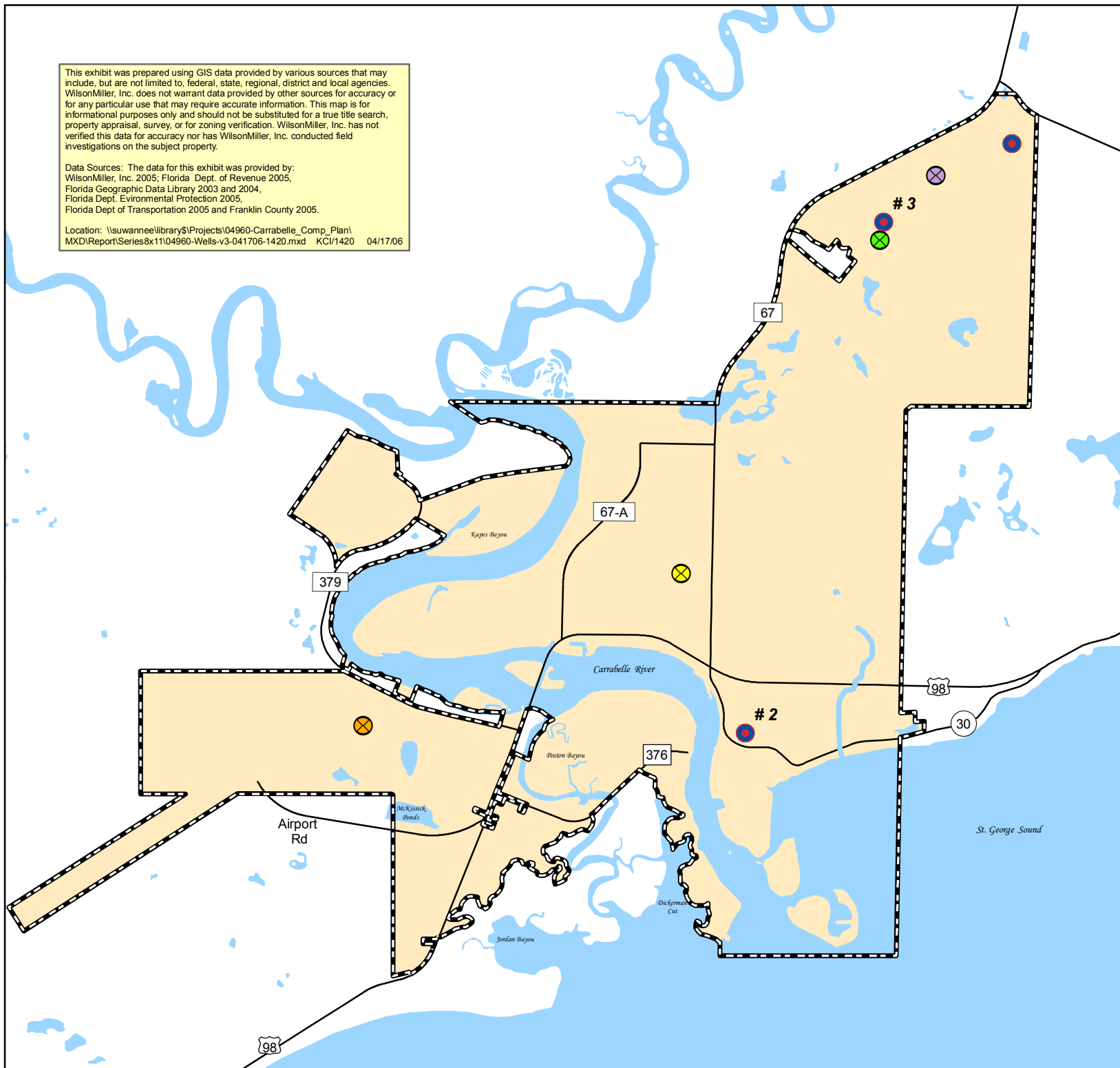
Water Wells and Wellhead Protection Area Map

April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
-  Primary Zone
200 Foot Radius
-  Secondary Zone
1000 Foot Radius
-  Elevated Storage
Tank (125,000 gal.)
-  Elevated Storage Tank
(135,000 gal.)
-  Ground Storage Tank
(400,000 gal.)
-  Proposed Elevated Storage
Tank (500,000 gal.)



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0 0.15 0.3 0.6 Miles



3. HOUSING ELEMENT

The purpose of the Housing Element is to evaluate the existing housing units available to the residents of the City, project future housing needs, and establish guidelines to ensure that there is sufficient housing available to meet future housing needs. The majority of the data utilized within this section comes from the Affordable Housing Needs Assessment (AHNA), prepared by the Shimberg Center for Affordable Housing for the Florida Department of Community Affairs, which reflects data collected from the U.S. Census 2000. U.S. Census housing data (financial and physical characteristics) for 2002 and 2004 was not available for the City of Carrabelle.

A. Existing Housing Inventory

Table 3-1 reflects the age of Carrabelle's existing housing inventory. Twenty-three (23) percent of the existing inventory will be at least fifty years old by 2010 and thirty-nine (39) percent will be at least fifty years old by 2020.

Table 3-1. Age of Housing Inventory, 2000

Year Structure Built	Local Government	
	Carrabelle	Franklin County
1939 or Earlier	53	457
1940-1959	125	1,200
1960-1969	128	841
1970-1979	171	1211
1980-1989	145	1,664
1990-1994	70	872
1995-1998	73	775
1999-March 2000	18	160
Total	783	7,180

Source: Shimberg Affordable Housing Center, University of Florida, 2006

The approximate distribution by category of the various types of housing units is reflected in Table 3-2:

Table 3-2. Housing Unit Types, 2000

Structural Type	Carrabelle	Franklin County
	Number of Units	Number of Units
Single Family	471.4 (60.2%)	5,018.8 (69.9%)
Multi-Family	72.8 (9.3%)	610.3 (8.5%)
Mobile Home	226.3 (28.9%)	1,450.4 (20.2%)
Other	13.3 (1.7%)	100.5 (1.4%)
Total	783.8 (100%)	7,180 (100%)

Source: Shimberg Affordable Housing Center, University of Florida, 2006

According to Table 3-2, the majority of the housing stock in the City of Carrabelle consists of single-family housing, which comprises approximately sixty (60) percent of the housing stock. Mobile homes comprise almost thirty (30) percent of the housing stock and make up the second largest housing type in the City. As compared to the State of Florida, where mobile homes comprise only twelve (12) percent of the housing stock, Carrabelle's percentage of mobile homes is over double that amount. This occurrence is mostly likely due to the affordability of mobile homes.

It is very important to note that based on recent observations during a street-by-street tour of the City, approximately twenty-five percent or more of the mobile home residences were observably vacant, abandoned, or available for redevelopment. It is very likely that these properties are owned by non-

residents and used for boat storage. Therefore, while Carrabelle's mobile homes are measured as permanent residences within the U.S. Census 2000 and Shimberg housing data, many of those homes are most likely abandoned or vacant. In addition, the older age of many of the mobile homes within the City indicates that they are substandard based on current regulations and will continue to deteriorate over time.

Occupancy Status of Existing Housing Units: Table 3-3, Housing Tenancy, shows that 74% of the 562 occupied housing units within Carrabelle are owner-occupied.

Table 3-3. Occupied Housing Units by Tenure, 2000

	Carrabelle	Franklin County
Occupied Housing Units	562	4,096
Owner-Occupied Housing Units	416	3,246
Renter Occupied Housing Units	146	850
Vacant Housing Units	228	3,084
Vacant (Year-round)	69	1,721
Vacant Seasonal	159	1,363
Total Occupied and Vacant Units	790	7,180

Source: Shimberg Affordable Housing Center, University of Florida, 2006

According to the 1992 Carrabelle Comprehensive Plan, ninety-eight (98) percent of the 632 housing units were determined to be year-round units. Based on the data identified in Table 3-4, below, the number of year-round units has decreased to seventy-one (71) percent. One possible reason for this decrease in year-round housing is the development of seasonal housing units to meet the increasing demand for second homes in Carrabelle.

Table 3-4. Units by Vacancy and Occupancy Status, 2000

Local Govt.	Occupied	Vacant	Total	Vacancy Rate (%)	Vacant Seasonal Units	Total Units	Vacancy Rate Total Units (%)
Carrabelle	562	69	631	10.9	159	790	28.9
Franklin County	4096	858	4954	17.3	2226	7180	43.0

Source: Shimberg Affordable Housing Center, University of Florida, 2006

The increase in the development of second homes can be demonstrated by further analyzing the data in Table 3-1 and Table 3-4. Table 3-1 indicates that 477 housing units were built prior to 1980. Of these 477 housing units, 467 were year-round ($477 \times .98$). As of the 2000 Census count, Carrabelle had 783 housing units, 556 of which were year-round ($556 \times .71$). Based on this analysis, out of the 306 housing units built since 1980, only 89 have been for year-round occupancy ($556-467$). Thus, seventy-one (71) percent of the housing units built since 1980 have been seasonal. In other words, seven out of every ten new housing units built in Carrabelle have been seasonal in nature. As such, the City has recognized that its housing market does not provide an adequate mix of homes to meet the needs and lower income levels of its permanent residents.

Value of Existing Housing Units: Table 3-5 reflects the value of the owner-occupied housing units and Table 3-6 reflects the monthly cost of owner-occupied units.

Table 3-5. Value of Specified Owner-Occupied Units, 2000

Local Govt.	<\$50K	\$50K-\$99,999	\$100K-\$149,999	\$150K-\$199,999	\$200K-\$299,999	\$300K-\$499,999	\$500K-\$999,999	>1,000,000	Total
Carrabelle	64	128	46	24	6	0	0	0	268
Franklin County	381	607	362	252	275	98	66	12	2053

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Table 3-6. Owner Costs (Mortgage Status and Selected Monthly Costs), 2000

Local Govt.	<\$300	\$300-\$499	\$500-\$699	\$700-\$999	\$1000-\$1499	\$1500-\$1999	>\$2000	Sub Total	Not Mortgaged	Total Units
Carrabelle	0	33	44	17	14	2	2	112	156	268
Franklin County	7	144	180	234	201	88	39	893	1160	2053

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Renters who contract with the property owner on a monthly basis occupy the remaining occupied housing units in Carrabelle. Table 3-7 outlines the specified renter-occupied housing units and the monthly contract rent.

Table 3-7. Specified Renter-Occupied Housing Units, Gross Rent 2000

Local Govt.	<\$200	\$200-\$299	\$300-\$499	\$500-\$749	\$750-\$999	\$1000-\$1499	\$1500 or More	NO Cash Rent	Total
Carrabelle	21	30	54	26	0	0	0	35	166
Franklin County	62	124	272	148	48	15	10	172	851

Source: Shimberg Affordable Housing Center, University of Florida, 2006

The affordability of housing depends on two major factors: the income of the residents and the cost of the housing unit. Based on the data in Table 3-8, the median income for households in Carrabelle is \$23,750. For comparison purposes, the median income in Franklin County is \$26,756. Additionally, 19.4% of Carrabelle's population has been determined to be impoverished, as compared to 17.7% of Franklin County's population.

Table 3-8. Income Distribution of Households, 2000

Number	Households	Percent Distribution (%)
Less than \$10,000	116	20.6
\$10,000 to \$14,999	58	10.3
\$15,000 to \$19,999	68	12.1
\$20,000 to \$24,999	48	8.5
\$25,000 to \$29,999	53	9.4
\$30,000 to \$34,999	36	6.4
\$35,000 to \$39,999	44	7.8
\$40,000 to \$44,999	17	3.0
\$45,000 to \$49,999	20	3.6
\$50,000 to \$59,999	47	8.4
\$60,000 to \$74,999	31	5.5
\$75,000 to \$99,999	10	1.8
\$100,000 to \$124,999	12	2.1
\$125,000 to \$149,999	0	0.0
\$150,000 to \$199,999	0	0.0
\$200,000 or more	2	0.4
Total	562	100.0
Median Income	\$23,750	
Percent of population for whom poverty status is determined	19.4%	

Source: U.S. Census Bureau, Census 2000

Most affordable housing programs consider the payment of more than thirty (30) percent of household income to be a cost burden on very low-, low- and moderate-income households. In other words, if a household is paying more than thirty (30) percent of its adjusted gross income for rent, it is considered too high. Tables 3-9 and 3-10, below, reflect the number of households that spend more than thirty (30)

percent of their income on housing, and a relative percent compared to the County. Table 3-9 is the cost burden for renters and Table 3-10 is the cost burden for owners.

Table 3-9. Cost Burden Summary Table, Renter, 2000

Local Govt.	<30%	30-39%	40-49%	>50%	Total Households	Total Cost Burden 30% or More	% Cost Burden >30%
Carrabelle	100	12	8	18	138	38	28%
Franklin County	628	87	66	123	904	276	31%

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Table 3-10. Cost Burden Summary Table, Owner, 2000

Local Govt.	<30%	30-39%	40-49%	>50%	Total Households	Total Cost Burden 30% or More	% Cost Burden >30%
Carrabelle	324	31	15	40	410	86	21%
Franklin County	2797	332	162	380	3671	874	24%

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Based on the information above, twenty-eight (28) percent of Carrabelle's households spend more than thirty (30) percent of their income on monthly rental payments and twenty-one percent of Carrabelle's households spend more than thirty (30) percent of their income on monthly mortgage payments.

Tables 3-11 and 3-12, below, predict the cost burden to the citizens of Carrabelle into the year 2025. They are divided into owner and renter categories.

Table 3-11. Households with Cost Burden >30%, Renter, 2004-2025

Local Government		2004	2005	2010	2015	2020
Carrabelle						
Cost Burden	<30%	97	100	113	115	114
	30-39%	12	12	16	15	15
	40-49%	8	8	12	12	12
	>50%	18	18	21	22	21
Total Households		135	138	162	164	162
Total Households with Cost Burden >30%		38	38	49	49	48
Percentage Households with Cost Burden >30%		28%	28%	30%	30%	30%
Franklin						
Cost Burden	<30%	609	628	763	774	783
	30-39%	84	87	105	107	107
	40-49%	65	66	83	89	87
	>50%	122	123	155	165	163
Total Households		880	904	1106	1135	1140
Total Households with Cost Burden >30%		271	276	343	361	357
Percentage Households with Cost Burden >30%		31%	31%	31%	32%	31%

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Table 3-12. Households with Cost Burden >30%, Owner, 2004-2025

Local Government		2004	2005	2010	2015	2020
Carrabelle						
Cost Burden	<30%	319	324	357	371	370
	30-39%	31	31	35	40	39
	40-49%	14	15	17	18	17
	>50%	40	40	49	49	48
Total Households		404	410	458	478	474
Total Households with Cost Burden >30%		85	86	101	107	104
Percentage Households with Cost Burden >30%		21%	21%	22%	22%	22%
Franklin County						
Cost Burden	<30%	2732	2797	3416	3675	3888
	30-39%	327	332	402	435	459
	40-49%	156	162	204	219	234
	>50%	370	380	462	498	525
Total Households		3585	3671	4484	4827	5106
Total Households with Cost Burden >30%		853	874	1068	1152	1218
Percentage Households with Cost Burden >30%		24%	24%	24%	24%	24%

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Based on the information above, forty-eight of Carrabelle's households (or thirty percent) are projected to spend more than thirty (30) percent of their income on monthly rental payments. In addition, 104 of Carrabelle's households (or twenty-two percent) are projected to spend more than thirty (30) percent of their income on monthly mortgage payments.

Housing Condition: Based on Chapter 420, F.S., substandard housing units lack complete plumbing or sanitary facilities for the exclusive use of the occupant; are in violation of one or more major housing code sections, where the violation poses a threat to the health of the occupant; or is a unit declared unfit for human habitation, but that could be rehabilitated for less than fifty (50) percent of the property value. Assessing the condition of Carrabelle's housing stock is made difficult by the lack of a standard methodology. The Florida Department of Community Affairs is in the process of developing a methodology, but in its absence, data provided by the U.S. Census or criteria of evaluation employed by individual counties are normally used.

The 2000 Census provides some measure of interior conditions indicating a substandard unit: a) overcrowding; b) lacking built-in heating facilities; c) lacking complete kitchen facilities; and, d) lacking complete plumbing facilities. More than one of these deficiencies may have been found in the same housing unit. These data pertain to interior, non-structural conditions. An assessment of the exterior conditions of housing usually takes the form of field surveys (the last such survey was done in 1987 in preparation of the City's first Comprehensive Plan). The structural quality of housing is usually assessed through home inspections conducted by a licensed inspector, architect or structural engineer. Such exterior assessments were beyond the scope of this analysis.

Table 3-13 shows the number of units and share of occupied units that have substandard interior housing characteristics.

Table 3-13. Housing Condition Characteristics, 2000

Local Govt.	Persons per Room		Kitchen Facilities		Plumbing Facilities	
	Occupied Units with 1.01+ Persons per Room	Share of Occupied Units (%)	Units Lacking Complete Facilities	Share of Units (%)	Units Lacking Complete Facilities	Share of Units (%)
Carrabelle	10	1.8	3	0.5	5	0.9

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Subsidized Housing Units: The Northwest Florida Regional Housing Authority is the public housing authority for Section 8 rental assistance and subsidized apartments in Carrabelle. The City of Carrabelle has one housing development, Carrabelle Cove, which receives government assistance (see Table 3-14). Carrabelle Cove receives assistance from the Rural Rental Housing Section 515 program from the U.S. Department of Agriculture. This program provides affordable multi-family rental housing for very low-, low-, and moderate income families; the elderly; and persons with disabilities. In 1992, Carrabelle Cove received housing credits from the State, which will allow the development to continue to stay affordable for the next thirty years. Carrabelle Cove is located at 807 Gray Avenue, north of Carrabelle High School on a ten-acre parcel. However, the housing development only takes up for acres. Therefore, there are six additional acres owned by the public housing authority that are wetlands.

Table 3-14. Inventory of Federal and State Assisted Housing Units

Name	Total Units	Address	Federal Funding Source(s)	State Funding Source(s)
Carrabelle Cove	32	807 Gray Avenue	Rural Rental Housing Section 515 program	Housing Credits 9%

Source: Shimberg Affordable Housing Center, University of Florida, 2006
Franklin County Comprehensive Plan Technical Data and Analysis Report, 2004

Additionally, the Northwest Florida Regional Housing Authority provides ten (10) single-family affordable housing units in Carrabelle. It should also be noted that the City has utilized the Small Cities Community Development Block Grant (CDBG) program in the past and is planning to pursue more housing grants within this planning horizon. Franklin County also recently formed the Franklin County Community Development Corporation (CDC) to provide low and moderate-income families with the information and assistance they need to make informed and reasonable decisions to achieve their housing goals.

Group Homes: The most prevalent group with special housing needs in Carrabelle is the elderly. According to Census 2000, seventeen (17) percent of Carrabelle's population is 65 years or older. Group homes are an alternative living facility for the elderly. Carrabelle is home to the one licensed group home in Franklin County. Harbor Breeze Retirement Center, previously known as Carrabelle Manor, is an adult care facility with thirty beds (see Table 3-15).

Table 3-15. Licensed Group Homes in Carrabelle, 2003

Name	Location	Number of rooms/beds
Harbor Breeze Retirement Center	3rd St W & Avenue D	30

Source: Franklin County Comprehensive Plan Technical Data and Analysis Report, 2004
Franklin County Health Department, 2003

Recreational Vehicle/Mobile Home Parks: Table 3-16 identifies two licensed mobile home parks in or adjacent to the City of Carrabelle. As reflected in the table, the mobile home parks cater to owners of recreational vehicles (RVs). In fact, after contacting each mobile home park, it was discovered that neither park offers spaces for mobile homes. In other words all spaces are designated to RVs rather than mobile homes. This fact may be attributable to the high volume of vacationers that frequent this area.

Table 3-16. Licensed RV/Mobile Home in Carrabelle, 2006

Name of Park	Recreational Vehicles	Mobile Homes
Carrabelle Palms RV Park	90	0
Ho-Hum RV Park	50	0
Total	140	0

Source: City of Carrabelle, 2006

Despite the fact that no mobile home spaces are reflected in Table 3-16, it is important to note that mobile homes are, in fact, the second largest percentage of housing type in Carrabelle, comprising nearly thirty percent of the housing stock. The explanation for this discrepancy is that the majority of mobile homes are located on individual lots within the City rather than in licensed mobile home parks.

Historically Significant Housing: While the Florida Department of State, Division of Historical and Archaeological Resources does not list any historically significant buildings, City residents have indicated that historically significant buildings do exist at the local level. However, these structures have not been officially identified. In order to address this issue, the City has adopted policies within the Comprehensive Plan stating that it will complete a comprehensive survey of historic resources, including historically significant housing, by 2007. Furthermore, the City will update all applicable provisions of the Comprehensive Plan to include the findings of the historical resources survey and will also take measures to have historically significant housing placed on the National Register of Historic Places and shall assist in their rehabilitation and adaptive reuse through technical assistance.

Recent Housing Construction Activity: Table 3-17 reflects building permit activity within Carrabelle for the past decade. Please note that Franklin County, through an existing agreement with the City, issued and tracked building permits for the City until fall 2005. According to the data, the number of building permits has almost doubled, representing an eighty-eight (88) percent increase within the past five years, while the number of building permits in Franklin County reflects a sixty percent increase-one (61) percent increase over the same five year period.

Table 3-17. Building Permit Activity, 1994-2005

Local Govt.	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Carrabelle	64	99	93	79	76	70	66	68	76	88	127	124
Franklin County	474	513	543	513	633	637	732	900	795	831	934	1,176

Source: Franklin County, 2006

Table 3-18 reflects that the number of building permits in Carrabelle increased by 44% within the one year period of 2003-2004, as compared to the building permit activity in Franklin County, which only experienced a 10% increase over the same period. However, building permit activity in Carrabelle experienced a decrease of 2.4% between 2004 and 2005, while Franklin County experienced a 25.9% increase over the same period.

Table 3-18. Percent Increase in Building Permit Activity, 2003-2004 and 2004-2005

Local Govt.	2003	2004	Change	2004	2005	Change
Carrabelle	88	127	44%	127	124	-2.4%
Franklin County	831	934	12%	934	1,176	25.9%

Source: Franklin County, 2006

Table 3-19 reflects the number of permits issued for the construction of single-family dwelling units, as opposed to townhouses and condos. In 2004, there was almost triple the amount of permits issued for the construction of townhouses and condos in Carrabelle, as compared to single-family dwelling units.

The permit activity for Franklin County during the same year reflects the opposite, with its construction focusing almost exclusively on single-family dwellings.

Table 3-19. Number of Permits Issued for the Construction of Single Family Housing and Townhouses & Condos, 2004 and 2005

Local Govt.	2004		2005	
	Single-Family Dwellings	Townhouses & Condos	Single-Family Dwellings	Townhouses & Condos
Carrabelle	8	22	15	26
Franklin County	129	7	25	2

Source: Franklin County, 2006

Interestingly, the number of permits issued for single-family dwelling units in Carrabelle has almost doubled between 2004 and 2005. The number of permits issued for townhouses and condos in Carrabelle also increased between 2004 and 2005. In comparison, permit activity for single-family dwelling units in Franklin County decreased by 102 units, or 81%, 2004 and 2005. Permit activity for townhouses and condos in Franklin County also decreased during this time period.

B. Analysis of the Existing Housing Inventory and Projections for the Future

Future Housing Needs: Table 3-20 reflects the projected housing need of current and anticipated future residents through 2025.

Table 3-20. Permanent (Non-Seasonal) Housing - Projected Demand and Need By Type, 2005-2025

Local Govt.	Est. Housing Units By Type 2002		Projected Demand By Type							
			2005		2010		2015		2020	
	Single Family	Multi-Family	SF	MF	SF	MF	SF	MF	SF	MF
Carrabelle	554	73	559	73	574	75	583	76	594	78

Source: Shimberg Affordable Housing Center, University of Florida, 2006

According to this data, in 2020 the City of Carrabelle will need forty (40) additional single-family dwelling units and five (5) additional multi-family dwelling units. Please note that this data does not reflect the number of homes that will be needed to replace Carrabelle's substandard/deteriorating housing stock.

Future Affordable Housing Needs: As mentioned previously, the affordability of housing depends on two major factors: the income of the residents and the cost of the housing unit. As reflected in Table 3-8, the average income for Carrabelle households is \$23,750. One method of determining whether affordable housing is available is to evaluate the percent of income spent on housing costs. Most affordable housing programs consider the payment of more than thirty (30) percent of household income to be a cost burden on very low-, low- and moderate-income households. In other words, if a household is paying more than thirty (30) percent of its adjusted gross income for rent, it is considered too high.

Table 3-21 provides projections of the need for future construction of affordable housing based on the projected number of future households, the number of existing housing units, and household income as a percent of Average Median Income (AMI). These projections show the number of units that would need to be constructed between a base year, in this case 2002, and a given year in order to meet the expected expansion in the number of households (plus an assumed vacancy rate). These projections identify the additional units that would need to be constructed to keep pace with the growth in households. Ensuring that all of these units are built at appropriate price or rent levels would ensure that the new households entering or forming in each place would not face undue cost burdens. According to Table 3-21, the City of

Carrabelle would need to construct forty-five (45) additional units to keep pace with the growth in households.

Table 3-21. Construction Need for Households by Income as a Percentage of AMI, Growth in Household from 2002

Local Govt.	Household Income as % of AMI	2002-2005	2005-2010	2010-2015	2015-2020
Carrabelle	<20%	0	2	3	4
Carrabelle	20-29.9%	1	2	3	5
Carrabelle	30-39.9%	0	2	3	4
Carrabelle	40-49.9%	0	1	2	3
Carrabelle	50-59.9%	0	1	2	3
Carrabelle	60-79.9%	1	3	4	6
Carrabelle	80-119.9%	1	4	5	7
Carrabelle	120+ %	2	7	10	13
Carrabelle	Total	5	22	32	45

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Table 3-22 reflects the number of households that make less than eighty (80) percent of the Adjusted Median Income (AMI) and spend more than fifty (50) percent of their income on housing, projected out to 2020. The numbers in this table represent one measure of the affordable housing units needed.

Table 3-22. AHNA Affordable Housing Need Summary 2002-2025

Number of severely burdened (50%+) households with income less than 80%AMI by tenure						
Local Govt.	Tenure	2004	2005	2010	2015	2020
Carrabelle	Owner	39	39	46	47	47
Carrabelle	Renter	17	17	20	21	20

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Based on the data in Table 3-22, 47 additional affordable single-family housing units and 20 affordable multi-family rental units will need to be built by 2020 in order to house very low-, low- and moderate-income Carrabelle residents. Please note that this data does not reflect the number of homes that will be needed to replace Carrabelle's substandard/deteriorating housing stock.

According to the Shimberg Center for Affordable Housing, the data in Table 3-22 encompasses a broad range of households that are likely experiencing distress because of their housing costs. With their low incomes, the large portion of income taken up by housing costs is likely to limit these households' ability to afford other necessities. Additionally, the eighty (80) percent of median income figure is a traditional measure of eligibility for programmatic housing assistance. For example, all beneficiaries of the federal public housing program and federal HOME program must have incomes below this amount. The need indicator can serve as an approximation of the total number of households that would benefit from some type of housing assistance. Such assistance could include the construction of new affordable housing units, but it could also include the provision of subsidies to make current units more affordable.

While the data provided in Table 3-22 can provide a measure of overall housing need, targeting housing assistance requires more detail about income variation within the total number of low-income, severely cost-burdened households. For example, if needs are to be addressed through construction of new units, income variation within low-income households means that not all new rent- or price-restricted units will be affordable to all households. For example, a household at thirty (30) percent AMI would still pay more than half of its income for rent in an apartment with rent set for households with incomes of sixty (60) percent AMI. Additionally, a number of housing programs, such as the Low Income Housing Tax Credit and, in most cases, Section 8 Housing Vouchers, set income limits below eighty (80) percent of area

median. Table 3-23 and Table 3-24 reflect the number of households that make less than 80% of AMI and spend more than 50% of their income on housing, separated by tenure. Table 3-23 shows the numbers for renters, and Table 3-24 shows the numbers for owners. These tables are expanded to show the breakdown of income ranges.

Table 3-23. Number of severely cost burdened (50%+) households with income less than 80% AMI by tenure and income level, Renter, 2004-2025

Tenure: Renter							
Local Govt.	Household Income as % of AMI	2004	2005	2010	2015	2020	2025
Carrabelle	<30% AMI	13	13	16	17	16	17
Carrabelle	30-49% AMI	3	3	3	3	3	2
Carrabelle	50-59% AMI	1	1	1	1	1	1
Carrabelle	60-79% AMI	0	0	0	0	0	0
Carrabelle	Total	17	17	20	21	20	20

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Table 3-24. Number of severely cost burdened (50%+) households with income less than 80% AMI by tenure and income level, Owner, 2004-2025

Tenure: Owner							
Local Govt.	Household Income as % of AMI	2004	2005	2010	2015	2020	2025
Carrabelle	<30% AMI	22	22	27	27	27	28
Carrabelle	30-49% AMI	10	10	10	10	11	11
Carrabelle	50-59% AMI	3	3	3	4	4	4
Carrabelle	60-79% AMI	4	4	6	6	5	5
Carrabelle	Total	39	39	46	47	47	48

Source: Shimberg Affordable Housing Center, University of Florida, 2006

Housing Need Projected to be met by the Private Sector

As mentioned in “Section 1, Future Land Use Element”, there has been a steady increase in the number of dwelling units built within the City over the past fifteen years. Between 1980 and 1990, on average, only five new structures a year were occurring for a total of fifty-one (51) new units within the ten-year period. However, by the late 1990s the City began to experience an increase in the number of new structures occurring, averaging over ten new structures a year between 1990 and 2000. The trend of new construction continued through the early 2000s, with significant increases occurring within the last few years, including over 120 new structures built in 2004. Analyzing the City’s previous fifteen year growth rate in number of new structures occurring from 1990 to 2005 forms the basis to assume a straight-line projection for the next fifteen years and through the planning horizon. Based upon a linear projection of new structures through the planning horizon, the City of Carrabelle can expect to have at least 546 more structures built by 2020 (see Table 3-25).

Table 3-25. Projected Number of Housing Units: 2010, 2015, and 2020

Year	Number of Housing Units
2005	1,162
2010	1,344
2015	1,526
2020	1,708

Source: WilsonMiller, 2005

Based on the need determination, this housing unit number should be multiplied times a market factor in order to ensure that the housing market is not geographically constrained. Therefore, a market factor of 1.5 was applied to the housing unit projection to ensure adequate flexibility in the housing market. As

depicted in Table 3-26, the projected number of housing units for 2020 in the City, accounting for a market factor, totals 1,981.

Table 3-26. Market Factor Applied to Projected Housing Units: 2010, 2015, and 2020

Year	Number of Housing Units with Market Factor
2010	1,617
2015	1,799
2020	1,981

Source: WilsonMiller, 2005

According to the data above, it appears that the private sector will be able to meet the City's housing needs through the planning period. However, this is misleading, as the City of Carrabelle estimates that well over ninety (90) percent of the structures being built just within the last five years are for the second home market. This trend can be attributed to the increasing number of visitors to the area that have recently discovered Carrabelle as an overlooked, but very attractive, portion of the Florida Panhandle. It is expected that a second home-driven economy will play a major role in shaping the future of the City. While the private sector may, in fact, construct a multitude of dwelling units in Carrabelle over the planning period, it is more than likely that these structures will be resort townhomes and/or vacation homes serving only those households with a very high-income range. As mentioned previously, the average annual income in Carrabelle is \$23,750; not nearly enough to be able to rent or own a home that is geared toward the second home market. Thus, it is assumed that the private market cannot be relied upon by the City to provide housing that is affordable unless incentives are provided to encourage them to do so.

C. Housing Delivery System

Vacant Land: The Future Land Use categories that contain the largest percentage of vacant land include "Low Density Residential" (36.8%) and "Residential" (21.9%). In other words, fifty-eight (58) percent of the City's vacant acreage is designated for housing. However, Future Land Use categories also contain the largest percentage of vacant land constrained by wetlands. For example, over half (54.4%) of the City's vacant land that is designated "Low Density Residential" is wetlands and almost twenty (20) percent of the City's vacant land that is designated "Residential" is wetlands. Therefore, even though the City appears to have a surplus of vacant land available for housing, a large portion will never be fully developed due to wetlands constraints.

Due to the fact that the lands that are designated for residential land use happen to contain the largest portions of vacant land and are also the most constrained by wetlands, the City established the "Low Density Residential" future land use category to encourage infill development while maximizing the preservation of conservation areas and unique features of the land. This land use category encourages creative design through the use of an overlay for wetland areas in which homes are clustered into "villages" surrounded by natural open spaces. The term 'clustered' is defined to mean that the built area of a development is well defined and compact, thereby enabling the creation of contiguous expanses of open space and the protection of environmentally sensitive areas (i.e., wetlands). According to the City's *2020 Comprehensive Plan*, a "clustered subdivision" shall contain a minimum of thirty percent (30) open space over the total net buildable area. Development within a clustered subdivision shall be clustered away from environmentally sensitive areas on the site and away from adjacent public conservation land.

A very large portion of "Low Density Residential" land is located within the northeast section of the City, which is completely platted with 1,100 platted lots. Due to the fact that much of the area consists of ponds or wetlands, most of the roads to these platted lots have never been built and the area is sparsely developed. The City hopes that the clustering option allowed within the "Low Density Residential" Future Land Use category will encourage urban infill, particularly within this area of the City. Additionally, in order to encourage urban infill within the City's vacant lands, while also protecting the wetlands, the City

has committed to developing a density transfer mechanism within the land development regulations that will allow density transfers to cluster developments.

Services: Drinking water and sanitary sewer collection and treatment services are provided to City residents by the City of Carrabelle. “Section 2, Public Facilities Element” of this document provides further detail. Carrabelle’s land development regulations address onsite sewage disposal systems that do not comply with Chapter 10D-6, F.A.C., requiring the repair of malfunctioning onsite sewage disposal systems and providing for notification and penalties for non-compliance. The land development regulations also require adequate stormwater drainage and street improvements to be provided for new subdivisions by the developer. In addition, stormwater drainage is regulated by FDEP and a permit is required from the Florida Department of Transportation (FDOT) if a residential road ties into a State roadway.

Redevelopment Potential: Based on recent observations during a street-by-street tour of the City, there are a number of vacant residential lots scattered throughout Carrabelle. Additionally, approximately twenty-five (25) percent or more of the mobile home residences were observably vacant, visibly substandard, abandoned, or available for redevelopment. Therefore, there is much potential for redevelopment within the City limits.

Financing: Federal loan programs are an important component of housing finance in Carrabelle. The Federal Housing Administration (FHA) and the Veterans Administration (VA) provide loan backing that allows a buyer to obtain a larger loan-to-value ratio. These loans constitute forty (40) to sixty (60) percent of bank loans in the area. Up until a few years ago, the housing market in Carrabelle was quite slow. However, due to the recent real estate boom that is occurring throughout the Panhandle region, the value of land in Carrabelle has increased, making it extremely difficult for Carrabelle residents to afford homes in the area.

Administrative Role of Government Agencies: Government agencies play an important role in the provision of subsidized housing in Carrabelle. As indicated in Table 3-14, the City of Carrabelle has one multi-family housing development, Carrabelle Cove, which receives assistance from the Rural Rental Housing Section 515 program from the U.S. Department of Agriculture (USDA). Additionally, the Northwest Florida Regional Housing Authority provides ten (10) single-family affordable housing units in Carrabelle. Table 3-27 lists other federal and state programs that are available to provide assistance to developers to encourage the development of affordable housing.

Table 3-27. Federal and State Housing Programs

Housing Program	Description
Section 202, HUD	Offers interest-free capital advances to nonprofit sponsors to finance development of supportive elder rental housing; generally serves 0% to 50% AMI households.
Section 236, HUD	Provides a subsidy to reduce mortgage interest payments to provide rental housing for 0% to 80% AMI households.
Section 515, USDA-RD	Competitive loans awarded to developers to provide affordable multifamily rental housing for families, elders and people with disabilities; typically serves 0% to 30% AMI households.
Section 502 Direct Loan Program, USDA-RD	Provides home loans to households for the purchase of an existing home or for new home construction; no down payment required; typically serves households below 80% AMI.
Section 502 Single Family Housing Guaranteed Loan Program, USDA-RD	Funds may be used to build, repair, renovate or relocate a home, or purchase and prepare sites including providing water and sewage facilities in rural areas; serves applicants up to 115% AMI without adequate housing, but with adequate credit.
Multifamily Mortgage Revenue Bonds	Taxable and tax-exempt bonds that are issued by either the Federal government or the State to provide below market-rate loans for rental housing
HOME Rental	A State program that provides competitive, non-amortized, zero or low interest loans to developers for acquisition and/or new construction or rehabilitation of rental housing; targets small developments in rural areas; targets 20% of units at 50% of AMI, with balance no higher

	than 60% of AMI.
State Apartment Incentive Loan (SAIL)	A State program that provides low-interest loans on a competitive basis to affordable housing developers to bridge the gap between the development's primary financing and the total cost of the development; targeting to homeless people, farm workers and elders.
Community Development Block Grant (CDBG) Small Cities Program	A State program that provides funding primarily to rural areas with 20% of CDBG funding going primarily to homeownership and rehab of existing housing; targets up to 120% AMI.
State Housing Initiatives Partnership (SHIP) Program	Funds are collected through documentary stamp tax revenue from the sale of homes and then deposited into the Local Government Housing Trust Fund. The purpose is to assist in meeting specific housing needs of very low-, low- and moderate-income households and to expand the production and preservation of affordable housing.

Source: City of Carrabelle Comprehensive Plan, 1992
WilsonMiller, 2005

D. Summary and Recommendations

Based on the projections in Table 3-20, by the year 2020 the Carrabelle will need forty (40) additional single-family housing units and five (5) additional multi-family rental units in order to meet the projected housing demand of its permanent residents. This data is supported by Table 3-21, which also indicates that the City would need to construct forty-five (45) additional units to keep pace with the growth in households. In regards to affordable housing needs, based on the projections in Table 3-22, forty-seven (47) additional affordable single-family housing units and twenty (20) affordable multi-family rental units (for a total of 67 housing units) will need to be built by 2020 in order to house Carrabelle's very low-, low- and moderate-income permanent residents. For a tabular breakdown of these numbers, please see Table 3-28, below.

Table 3-28. 2020 Projected Housing Demand (Permanent Residents Only)

Type of Dwelling Unit	Housing	Affordable Housing	Housing and Affordable Housing
Single-Family	40	47	87
Multi-Family	5	20	25
Total	45	67	112

Source: Shimberg Affordable Housing Center, University of Florida, 2006

In summary, the City is projected to need a total of 112 housing units to meet the demands of its permanent residents in 2020, sixty-seven (67) of which must be considered affordable.

As depicted in Table 3-26, the private sector is projected to provide 1,981 housing units by 2020. Thus, it would appear that the private sector would be able to meet the City's housing needs through the planning period. However, this may be misleading, as the City Administrator has estimated that well over ninety (90) percent of the structures built within the last five years were for the second home market. As mentioned previously, the average annual income in Carrabelle is \$23,750; not nearly enough to be able to rent or own a home that is geared toward the second home market. Thus, it is assumed that the private market cannot be relied upon by the City to provide housing that is affordable unless incentives are provided to encourage them to do so or other mechanisms are in place to require them to do so.

Based on the discussion above, as well as the fact that the provision of workforce attainable and affordable housing was determined to be the third highest priority identified during the five public comprehensive planning workshops, it is clearly evident that the greatest housing need over the planning period is for more affordable housing. As discussed above, meeting this need may prove to be difficult, as there is a great divide between the type of housing the average citizen living in Carrabelle can afford to rent or buy and the expensive vacation homes that the private sector is currently constructing.

Furthermore, construction of affordable housing is not the most attractive option to developers due to the inflated value of property in Carrabelle. As such, it is highly recommended that the City consider adopting and implementing affordable housing measures that will encourage and ensure the construction of a mix of workforce attainable and affordable housing in Carrabelle, including inclusionary zoning, community land trusts, density bonus programs, and impact fee waiver programs.

- **Inclusionary Zoning:** This affordable housing mechanism requires developers to provide a certain percentage of affordable housing units within their development projects. For example, such an ordinance could require ten (10) percent of the new development to be set aside as affordable housing. If this is not feasible for the developer, three alternative options are also available, including:
 1. The developer must build or rehabilitate an equal amount of new affordable housing units in a different location;
 2. The developer must make an equivalent cash payment to the City towards the provision of new affordable housing units; or
 3. The developer must donate land that would support the equivalent amount of affordable dwelling units.
- **Community Land Trust:** A Community Land Trust is a nonprofit organization that buys land and existing houses, or builds new houses, and then sells or leases (often with the option to buy) the housing to residents at affordable prices. Community Land Trusts acquire and hold land, but sell off any residential or commercial buildings that are on the land. In this way, the cost of land in the housing equation is minimized or eliminated, thus making the housing more affordable. They also include land leases that are long-term (typically ninety-nine years), renewable, and assignable to the heirs of the leaseholder. Additionally, Community Land Trusts have in place "limited equity" policies and formulas that restrict the resale price of the housing in order to maintain its long-term affordability. Finally, properties developed by a Community Land Trust must pay local property taxes. While appreciation in land value is typically limited through the terms of the Community Land Trust's long-term lease, this is comparable to the impact that other types of restrictive covenants or easements may have on land values. Moreover, by creating new housing and stabilizing neighborhoods, land trusts work to strengthen the local economy and tax base. These features of the Community Land Trust model provide homeownership opportunities to people who might otherwise be left out of the market. This technique would be especially appropriate for Carrabelle, as it is particularly useful in areas where land values are inflated. The City should consider either partnering with the Franklin County Community Development Corporation (CDC) or creating its own Community Land Trust in order to ensure that the housing needs of its permanent residents are not left out, particularly in regards to the infill and redevelopment process.
- **Density Bonus Program:** The concept of this affordable housing mechanism is that for every affordable unit that a developer promises to build, he or she can build a calculated number of market rate units greater than would be allowed otherwise. For example, a developer proposes to build thirty (30) multi-family residential dwelling units on a two-acre site that has a Future Land Use designation of "Residential", which allows a maximum of fifteen (15) dwelling units per acre (if central water and sewer are available). However, if the developer promises that ten (10) of those units will be affordable to households at or below 50% of median income then instead of a maximum of thirty (30) units, the developer can build thirty-five (35) units.
- **Impact Fee Waiver Program:** Impact fees have become an important tool that local governments use to finance public infrastructure. These fees can also help keep local tax rates down. Many communities, however, have acknowledged that these fees have created an undue burden on those least able to afford increased housing costs. These communities have developed programs to waive or defer fees that would otherwise add to the cost of producing

affordable housing. For example, the City of Carrabelle could establish an ordinance that makes available a fee waiver to builders who build homes or rental units designed for persons below an agreed upon Average Median Income (AMI) or rentals below a certain percent of the AMI. Deed restrictions or other covenants could be required of all developers to ensure the level and period (length) of affordability is maintained. Or, the City could establish an ordinance that defers impact fees for the new construction of homes or rental units that are purchased or rented by qualified low-income households. A non-interest bearing deferred loan is placed on all properties and repayment occurs upon sale of the property or transfer of title, or if the property is no longer used as the primary residence by the applicant.

By December 2006, the City has committed to appointing an Affordable Housing Committee, whose goal will be to evaluate the following affordable housing mechanisms: inclusionary zoning, community land trusts, density bonus programs, and impact fee waiver programs. This evaluation shall result in the adoption and implementation of one or more of the aforementioned affordable housing mechanisms by December 2007.

4. TRAFFIC CIRCULATION ELEMENT

The purpose of the Traffic Circulation Element is to plan for future motorized and nonmotorized traffic circulation systems pursuant to Chapter 163, F.S., and Chapter 9J-5, F.A.C. Before a local government can adequately plan for its future, it must assess the capability of its existing traffic circulation system to serve current demand. Therefore, it is necessary to determine existing Levels of Service and to identify existing roadway deficiencies within the traffic circulation system.

Please refer to the Future Traffic Circulation Map series, listed in Table 4-1, found in Appendix B of this document.

Table 4-1. Future Traffic Circulation Map Series

Title	Map #
Transportation Facilities Map	Map II-1
Functional Classification Map	Map II-2
Maintenance Responsibility Map	Map II-3
Average Annual Daily Trips Map	Map II-4
Average Annual Daily Trips Map-Projected 2012	Map II-5
Road Status Map	Map II-6

Source: Carrabelle Comprehensive Plan, 2005

A. Roadway Classifications

The following terms will be used in classifying and evaluating the streets and roads in Carrabelle:

Principle Arterial Road: A roadway that provides service for relatively continuous high traffic volume, long trip length, and high operating speeds.

Minor Collector Road: A roadway that provides service for relatively moderate average traffic volume, moderate average trip length, and moderate average operating speed. Such a roadway also collects and distributes traffic between local roads and arterial roads and serves as a linkage between land access and mobility needs.

Local Road: A roadway that provides service for relatively low average traffic volume, short average trip length or minimal through-traffic movements with high land access to abutting property.

B. Existing and Future Roadway Conditions

Transportation Functional Classifications and Inventory of Facilities: U.S. Highway 98 (State Road 30) is classified as a principal arterial road that runs in an east west direction through Carrabelle. It links Carrabelle with Apalachicola to the west and with Wakulla County to the east. County Road 67 is classified as a rural minor collector road and is the primary north south route through the City. This road links Carrabelle with Liberty County to the north. County Road 67A (Ryan Drive) is also classified as a rural minor collector road that serves as an alternate route for traffic entering the City from the north and heading for the western end of Carrabelle's commercial district. As mentioned previously, Carrabelle is a fishing/oyster community and trucks use County Road 67A on their way to load seafood. Finally, County Road 30-A, also a rural minor collector road, serves as a scenic bypass for U.S. Highway 98 from the intersection of County Road 67 with U.S. 98 to a point one half mile east of the City where County Road 30-A once more connects with U.S. 98. All other roads in the City are considered local roads and traffic on them is relatively sparse. A number of the local roads are unpaved and do not have street signs. Please see the Future Traffic Circulation Map Series (Appendix B) Map II-6, which illustrates the paved, unpaved, minimally opened, and platted-not opened roads within the City limits. See Table 4-2 for a summary of principle arterial and rural minor collector streets.

Table 4-2. Roadway Classifications

Roadway	Classification
U.S. Highway 98 (State Road 30)	Principle Arterial
County Road 67	Rural Minor Collector
County Road 67-A (Ryan Drive)	Rural Minor Collector
County Road 30-A	Rural Minor Collector

Source: Carrabelle Comprehensive Plan: Data and Analysis, 1992

Carrabelle-Thompson Airport: The Carrabelle-Thompson Airport is located at the southwest corner of the City. The airport is classified as a small general aviation airport that serves small to medium sized general aircraft. The runway is approximately 4,000 feet and the City is looking to extend it to 5,000 feet for jet service. In 2004 the City was awarded grant money from the U.S. Department of Agriculture (USDA), Rural Economic Development Initiative (REDI), to make improvements to the Carrabelle-Thompson Airport (see Table 4-3 for details).

Table 4-3. U.S. Department of Agriculture, Rural Economic Development Initiative Grants

Improvements	Grant Amount
Carrabelle-Thompson Airport - Airport Master Plan/Airport Layout Plan	\$50,000.00
Carrabelle-Thompson Airport – ARFF Facility Construction	\$36,000.00
Carrabelle-Thompson Airport – Instrument Approach Aids	\$30,000.00
Carrabelle-Thompson Airport – Instrument Approach Aids	\$45,000.00
Carrabelle-Thompson Airport – Instrument Approach Aids	\$90,000.00
Carrabelle-Thompson Airport - Airport Master Plan/Airport Layout Plan	\$50,000.00

Source: FDOT Annual Report: Rural Economic Development Initiative, 2004

C. Analysis

The analysis of the City traffic network falls within two basic categories: existing Levels of Service (LOS) standards and design capacities. These categories have various points of importance for establishing a complete assessment of present system strengths and weaknesses. Existing LOS standards show the present demand on the system and identify areas needing additional roadway capacity. Existing design capacities indicate the ability of the existing circulation systems to accommodate future increases in traffic demand.

Levels of Service and Design Capacities: Levels of Service (LOS) standards provide a good summary of facility conditions. The LOS standard of a roadway is defined as the ability of a maximum number of vehicles to pass over a given section of roadway or through an intersection during a specified time period, while maintaining a given operating condition. In order to establish a basis for adopting LOS standards at peak hour, pursuant to Chapter 93-5, F.A.C., the existing LOS for roadways was calculated using the ratio of peak hourly demands to peak hourly capacity.

The Florida Department of Transportation (FDOT) defines six levels of service and these are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst operating conditions:

- **LOS A:** Describes primarily free-flow traffic operations at average travel speeds. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at intersections is minimal.
- **LOS B:** Represents reasonably unimpeded traffic flow operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tensions.

- **LOS C:** Represents stable traffic flow operations. However, ability to maneuver and change lanes may be more restricted than in LOS B, and longer lines and/or adverse signal coordination may contribute to lower average travel speeds. Motorists will experience appreciable tension while driving.
- **LOS D:** Borders on a range in which small increases in traffic slow may cause substantial increases in approach delay and, hence, decreases in speed. This may be due to adverse, signal progression, inappropriate signal timing, high volumes, or some combinations of these.
- **LOS E:** Represents traffic flow characterized by significant delays and lower operating speeds. Such operations are caused by some combination or adverse progression, high signal density, extensive delays at critical intersections, and inappropriate signal timing.
- **LOS F:** Represents traffic flow characterized at extremely low speeds. Intersection congestion is likely at critical signalized locations, with high approach delays resulting. Adverse signal progression is frequently a contributor to this condition.

Level of Service standard varies depending on the type of road facility. All roads within Carrabelle are two-lane rural, undivided, and uninterrupted flow arterials. Undivided means that the roads do not have medians and uninterrupted means that there are no full traffic signals in Carrabelle. The LOS standards for roadways within Carrabelle are defined numerically in Table 4-4.

Table 4-4. Numeric Thresholds for Rural, Two Lane, Undivided Roads

Lanes Divided	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
2 Undivided	2,500	7,200	12,700	17,300	23,500	N/A

Source: Florida Department of Transportation, 2002

The Florida Department of Transportation contracted with the Apalachee Regional Planning Council to determine the existing LOS on all State roads within Franklin County. The ARPC's analysis used the best available data, which was the 2003 traffic data available from FDOT's Transportation Statistics Office for State roads only.

Table 4-5 reflects the existing and future conditions of State roads within the City of Carrabelle. The "Length" column is intended to be approximate and is included to assist in locating section ends. The column titled "LOS Std. Max. Vol." Shows the acceptable LOS standard for that section and the maximum volume listed in the FDOT Table for that road type, number of lanes and LOS. The applicable FDOT and Carrabelle LOS standard is "C". The "2003 AADT" is the most recent FDOT count and shows annual average daily traffic (AADT) with appropriate factors. There is no information available concerning the peak hour. The "LOS Analysis" shows the past, present and project count and LOS for each section. The "Annual Rate" shows the past average growth rate per year based on this data.

Table 4-5. Existing and Future Conditions of State Roads

State Road Section	Length (miles)	LOS Std. Max. Vol.	FDOT Stat.	2003 AADT	LOS Analysis			% Of Capacity	One-Yr Growth (%)	Annual Rate (%)
					Year	Count	LOS			
U.S. 98										
S. Limit to Carrabelle Bridge	1.2	(LOS C) 12,700	1,604	6,000	1994	5,400	B	58.82	-9.09	1.98
					1995	6,300	C			
					1996	4,300	B			
					1997	5,900	C			
					1998	7,200	C			
					1999	7,400	C			
					2000	5,900	C			

State Road Section	Length (miles)	LOS Std. Max. Vol.	FDOT Stat.	2003 AADT	LOS Analysis			% Of Capacity	One-Yr Growth (%)	Annual Rate (%)
					Year	Count	LOS			
U.S. 98										
					2001	6,200	C			
					2002	6,600	C			
					2003	6,000	C			
					2008	6,619	C			
					2013	7,301	C			
Carrabelle Bridge to City Limit	1.8	(LOS C) 12,700	1,601	5,400	1994	3,500	B	52.94	28.57	3.53
					1995	4,100	B			
					1996	3,600	B			
					1997	3,400	B			
					1998	3,900	B			
					1999	4,200	B			
					2000	4,100	B			
					2001	4,100	B			
					2002	4,200	B			
					2003	5,400	B			
					2008	6,422	C			
					2013	7,637	C			

Source: Apalachee Regional Planning Council, 2005

According to the analysis, all State Roads within the City are operating at LOS C or better and do not exceed sixty (60) percent of capacity. Additionally, it appears that traffic growth in Carrabelle has been moderately high and will continue to grow, based on the 2008 and 2013 projections, if approximate growth of the past ten years continues. Please see the Future Traffic Circulation Map Series (Appendix B) Maps II-4 and II-5, which reflect the current Annual Average Daily Trips and the projected 2012 Annual Average Daily Trips, respectively.

Hurricane Evacuation: In order to ensure adequate evacuation of the coastline, the City has established coordination with Franklin County to create evacuation routes for City residents and visitors. In the event of a natural disaster, Franklin County would coordinate such an evacuation. U.S. Highway 98 and County Road 67 have been designated as the hurricane evacuation routes within the City of Carrabelle. Unfortunately, there are large portions of the counties in the Apalachee region that do not enjoy the benefits of an extensive or robust road system. Therefore, the evacuation roadway network tends to channel most evacuees to the same road segments, thereby increasing the likelihood of local and regional bottlenecks. Segments with the highest travel demand (evacuating vehicles to service volume ratio) are considered the “critical links” for a particular evacuation scenario. These congested roadway segments control the flow of evacuation traffic during a hurricane evacuation and are key areas for traffic control and monitoring. According to the ARPC’s *Evacuation Transportation Analysis* (2004), U.S. Highway 98 through Lanark Village to the U.S. Highway 19 split (located approximately 5.38 miles east of Carrabelle) is one of the critical roadway segments in Franklin County that will control the flow of evacuation traffic. Additionally, segments of U.S. Highway 98 between EastPoint and Carrabelle are in close proximity to the shoreline and could be subject to critical erosion during a storm. Due to these facts, the City would like to encourage its residents to evacuate via County Road 67. Therefore, the City considers County Road 67 as its *primary* evacuation route and U.S. Highway 98 as its *secondary* evacuation route. Please see “Section 7, Coastal Management Element” for an analysis of the adequacy of the existing and projected transportation system to evacuate the coastal population prior to an impending natural disaster.

Roadway Maintenance: Previously, a verbal understanding existed between the Cities and the County by which the County received all State road funds and allocated them throughout the County according to

priorities established by the County Commission. The City of Carrabelle has assumed responsibility for its own road improvements and receives Gas Tax funds to do so.

FDOT Adopted Work Program: The FDOT 2006-2010 Adopted Work Program includes two projects that are partly located within the City of Carrabelle. These projects are identified in Table 4-6.

Table 4-6. Florida Department of Transportation 2006-2010 Adopted Work Program

Transportation System	Description	Length (miles)	Type of Work	Fiscal Year	Amount
Non-intrastate State Hwy	SR 65 from SR 30 (US 98) to Liberty County line	24.284	Resurfacing	2006	\$6,768.00
Non-intrastate State Hwy	SR 30 (US 98/319) From Carrabelle River Bridge to SR 377 (US 319)	10.76	Resurfacing	2008	\$7,336,214.00

Source: Florida Department of Transportation, 2005

D. Recommendations

Based on the public comprehensive planning workshops conducted in November 2005 through January 2006, the following traffic circulation issues have been determined by the Carrabelle community to be of the highest priority:

- **Road Maintenance:** The City will annually evaluate and prioritize roadways for maintenance and paving projects.
- **Coordination with FDOT and Franklin County in order to:**
 1. Address existing deficiencies, especially where there is potential for high accident frequency, such as the intersection of U.S. Highway 98 and:
 - River Road
 - Ryan Drive (County Road 67-A)
 - Timber Island Road
 - Airport Road
 2. Address the possibility of relocating the truck route (County Road 67-A)
 3. Address the evaluation of major evacuation routes and determine where deficiencies occur and where operational improvements can be made to maintain or reduce hurricane evacuation times.
 4. Reconfigure the intersection of SE Avenue A, U.S. Highway 98, County Road 67, and Marine Street.
 5. Maintain and/or improve those County or State roads that were identified within the City's annual roadway maintenance review.
- **Sidewalk and Bike Plan:** The City has committed to prepare a plan by December 2007 for developing bicycle and pedestrian ways that will connect residential areas to recreational areas and major activity centers. Within this plan, roadway frontage for which sidewalks should be installed to provide a citywide network for pedestrian traffic will be identified. For roadway frontage identified for inclusion in the sidewalk system, developers shall be required to install sidewalks as part of any new development. The City will also provide land use and other strategies to promote the use of bicycle and pedestrian movement within the land development regulations.

- **Turn Lanes on U.S. Highway 98:** The portion of U.S. Highway 98 within the City lacks turn lanes. Although some turn lanes have been added since the year 2000, there is still a need for turn lanes within the City limits. For example, the main intersection of U.S. Highway 98 and County Road 67 still lacks a turn lane; a turn lane has most likely not been added yet due to space constraints. Additionally, the ARPC transportation analysis states that it is very likely that left turn lanes will be needed at least at Timber Island Road and River Road and that the need for turn lanes should be evaluated with each proposed development.
- **Alternate Routes for Local Traffic:** The City should begin to evaluate local traffic patterns and encourage residents to utilize streets other than U.S. Highway 98 to facilitate local through-traffic. The City should coordinate these alternate routes with its sidewalk and bike plan, which will be prepared by December 2007.

5. RECREATION AND OPEN SPACE ELEMENT

The purpose of this Element is to inventory and evaluate existing recreation and open space facilities and to plan for future recreation and open space needs. This element will consider recreation and open space as it relates to quality of life for permanent residents and seasonal visitors.

A. Background

Residents, both seasonal and year-round, generate demand for recreation facilities and open space. Integration of recreation and open space with other land use activities is especially important for the City of Carrabelle, which generates most of its economic development activities from water-dependent and water-related activities and recreational opportunities offered by the City's major natural resource -- the Carrabelle River and St. George Sound. The natural beauty of the City's waterfront is what ultimately has attracted most development and people to Carrabelle. In fact, preservation and protection of public access to the waterfront was determined by the Carrabelle community to be the highest priority in regards to inclusion into the Comprehensive Plan.

B. Inventory

This subsection presents an inventory of existing public and private recreational and open space facilities within the City of Carrabelle and Franklin County that are accessible to the public. Included in this inventory are municipal, county, and State active- and resource-based parks as well as major privately owned facilities opened to the public. Recreation facilities at school sites, though only available for public use when classes are not in session, represent another source to be included in the inventory.

The inventory emphasizes recreational space located within the City limits. However, Franklin County and the State of Florida maintain an abundance of regional parks and recreation space within the City as well as scattered throughout the region. These parks are also available to and frequented by residents of Carrabelle and its visitors.

Recreation facilities that are owned and operated by the private sector are also available at private marinas or as amenities provided by a residential community. A popular fishing destination, Carrabelle has attracted marinas that likely would not be there if not for the seasonal population. An inventory is provided for those private activity-based recreation facilities that are open to the public on a fee basis.

Resource-Based and Activity-Based Facilities: Recreational sites are frequently classified as resource-based or activity-based. Resource-based sites and facilities are centered on particular natural resources and may provide opportunities for picnicking, hiking, hunting, water sports, fishing, or simply enjoying nature. Activity-based recreational sites and facilities are defined as sites developed for the enjoyment of particular activities such as basketball, baseball, or football.

The City of Carrabelle is located along the Gulf Coast in Florida's Panhandle and is an area known for its abundant recreational opportunities. Therefore, this section examines not only the recreation resources within the City of Carrabelle, but also lists the recreation resources provided by Franklin County, the State of Florida, and the federal government. Recreation resources described below may include parks, wildlife refuges, marine sanctuaries, botanical sites, geological sites, historical sites, aquatic preserves, and other conservation areas.

City of Carrabelle Recreational Resources: The City of Carrabelle has a variety of resource-based activities due to its geographic proximity to the Carrabelle River and St. George Sound. Resource-based recreational areas in Carrabelle include two public boat ramps that provide access to the Carrabelle River and adjoining waters, private marinas, and a newly acquired wildlife park. Activity-based recreation areas in Carrabelle include parks, basketball and tennis courts, and the Carrabelle High School athletic complex (football, baseball, and softball fields, gymnasium, basketball court, playground, and track). The older

population of Carrabelle has enjoyed the activities offered at the Franklin County Senior Citizens Center; however at the time of this writing, few activities are currently available as compared to the past planning period. Table 5-1 details Carrabelle's recreational facilities.

Table 5-1. Recreational Facilities within Carrabelle

Name	Ownership	Size (Approximate Acreage)	Facility
Tennis/Basketball	Public	0.5 acres	1 tennis and basketball court
Tillie Miller Park	Public	3.0 acres	Playground equipment, open space, 2 tennis courts, walking path with exercise stations
Carrabelle City Boat Ramp	Public	0.2 acres	1 boat ramp, 1 lane
The Moorings/Sea Change Marina	Private	10.1 acres	1 boat ramp, 120 slips (additional 34 currently under construction), 3 RV spaces
"C"-Quarters Marina	Private	5.0 acres	No boat ramp, 67 slips
Dockside Marine	Private	7.0 acres	1 boat ramp, 16 slips
Timber Island Boat Ramp	Public (County)	0.2 acres	1 boat ramp, 1 lane
Carrabelle Riverwalk Park	Public	0.52 acres	2 saltwater fishing piers (155 linear ft), 4 picnic tables, 1 picnic shelter
George Sands Athletic Field	Public	0.5 acres	Baseball/softball field*
Classie Lowery Park	Public (County)	0.1 acres	Playground equipment
Carrabelle High School	Public (County)	34.0 acres	Football, baseball, and softball fields (1 each), gym, basketball court, playground equipment
John David Patton Wildlife park	Public	53.0 acres	Planned hiking trail
Total		114.12 acres	
Franklin County Senior Citizens Center	Private	2,821 sq. ft.	Coffee hour, computer instruction
Carrabelle Branch of the Franklin County Public Library	Public	5,000 sq. ft.	Inter-library loan program, computer access (including wi-fi), family and pre-school programs, yoga classes
Total		7,821 square feet	

*The George Sands Athletic Field is anticipated for closure in the near future (the property is planned for a regional stormwater pond). Carrabelle residents are expected utilize the baseball and softball facilities at the Will S. Kendrick Sports Complex (located in Unincorporated Franklin County), which will open in Spring 2007.

Source: Florida Dept. of Environmental Protection, Florida Recreation and Parks Facility Inventory, 2002
City of Carrabelle, 2005

Existing Open Space: Existing public open space within the City limits consists of the John David Patton Wildlife Park, which contains 53 acres. Existing private open space within the City limits includes small parcels and large areas of wetlands.

Franklin County Recreational Resources: As a small town with limited recreational land, Carrabelle relies upon surrounding Franklin County to fill some of the open space needs of City residents. See Table 5-2, below, for open space areas and resource-based recreation within Franklin County.

Table 5-2. Open Space and Resource-Based Recreation within Franklin County

Name	Size (Approximate Acreage)	Facilities
Alligator Harbor Aquatic Preserve	14,366 acres	Fishing and boating
Apalachicola Bay Aquatic Preserve	51,905 acres	Fishing and boating
Apalachicola National Estuarine Reserve	246,766 acres	Hunting, fishing, boating, hiking, camping,

		nature appreciation
Apalachicola National Forest	31,087 acres	Hunting, freshwater beach, 6 picnic tables, camping, and boat ramp
Apalachicola Wildlife Management Area	21,816 acres	Hunting
Bald Point State Park	5,000 acres	Beach access, pavilions, grills, restrooms, bicycling, canoeing and kayaking launch ramp, fishing, boating, nature trails
Box R Ranch	8,397 acres	Hunting, canoeing, kayaking, hiking, equestrian and cycling
Carrabelle Beach	320 acres	Swimming and picnic tables
Crooked River Lighthouse*	N/A*	N/A*
Dr. Julian C. Bruce State Park, St. George Island	1,883 acres	9 miles of saltwater beaches, 3 picnic areas; 2 bathhouses, 1 hiking trail, controlled fishing, and primitive camping
Forbes Island	6,400 acres	Hunting
Fort Gadsden Historic Site	78 acres	Historic site, playground, and 2 covered picnic areas
Ochlockonee River State Canoe Trail	5,120 acres	Canoeing
St. George Island Beach (County-owned)	5,760 acres	500 feet beach front, bathrooms, picnic pavilions, parking
St. James Bay Golf Course	378 acres	18-hole golf course
St. Teresa Beach	640 acres	Swimming and boating
St. Vincent National Wildlife Refuge	12,358 acres	Limited hunting and fishing
Tate's Hell State Forest	19,200 acres	Hunting and fishing, picnicking, canoeing, boating, camping
Will S. Kendrick Sports Complex (Due to open in Spring 2007)	49 acres	Baseball fields, soccer fields, walking track, playground, restrooms, parking, concession

* The Carrabelle Lighthouse Association manages the Crooked River Lighthouse. According to the Assistant Planner of Franklin County, the location is very small, there are no recreational facilities to speak of, and the lighthouse is only open at certain times.

Source: Franklin County Planning Department, 2006

C. Current and Future Needs Assessment

Level of Service Standards: Table 5-3, below, indicates the City's adopted Level of Service (LOS) standards for recreation and open space. Please note that the seasonal population for Carrabelle was not factored into the projection of future needs due to the fact that the City has no seasonal population data from which to make a population projection from at this time.

Table 5-3. Adopted Recreation Levels of Service and Existing Facilities

Facility	Unit of Measure	LOS*	Number of Facilities Currently Provided
Basketball Court	1 court	Per 1,500 persons	2 courts
Baseball/Softball Field	1 field	Per 1,500 persons	2 fields
Boat Ramp	2 lanes	Per 1,500 persons	2 lanes
Camping	1 acre	Per 1,500 persons	0 acres
Community Building	1 building/12,000 sq. ft.	Per 1,500 persons	7,821 sq. ft.
Fishing Pier	800 linear sq. ft.	Per 5,000 persons	310 linear sq. ft.
Football/Soccer Field	1 field	Per 4,000 persons	1 field
Playground	1 acre	Per 1,500 persons	3.1 acres
Community Swimming Pool	1 pool/4,860 sq. ft.	Per 8,700 persons	0
Tennis Court	1 court	Per 1,500 persons	3 courts
Hiking Trail	1 mile	Per 1,500 persons	0
Open Space	1 acre	Per 1,000 persons	53 acres

Source: City of Carrabelle Comprehensive Plan, 1992
City of Carrabelle, 2005

Current and Future Needs: The estimated 2005 permanent population for the City of Carrabelle is 1,315 persons. Based on the minimum adopted Level of Service standards above (Table 5-3), the City of Carrabelle is currently meeting the recreation and open space needs of its citizens. The estimated 2020 permanent population for the City of Carrabelle is 1,489 persons. For the most part, the level of demand for future recreation and open space needs will also meet the recreation and open space needs of its citizens through 2010. However, Table 5-4 does indicate that there are a few recreational facility issues that the City must begin working on now in order to ensure that the needs of its future population are met, including:

- **Community Building:** The City's 'Community Building' minimum level of service standard is 12,000 square feet. The City currently utilizes the Franklin County Senior Citizens Center (2,821 square feet) and the Carrabelle Branch of the Franklin County Public Library (5,000 square feet), for a total of 7,821 square feet. Therefore, the City must pursue an additional 4,179 square feet to meet the estimated 2020 permanent population's demand for 'Community Buildings'. This need is underscored by the fact that the City is currently leasing space in a strip mall for public meetings. In order to meet this need for more 'Community Building' space, the City is considering building a larger City Hall in a more centralized location.
- **Fishing Pier:** The City's fishing pier minimum level of service standard is 800 linear square feet. The City currently utilizes one fishing pier totaling 310 linear square feet, which is adequate to meet the demands of the City's estimated 2020 permanent population. However, during the public comprehensive planning workshops that were conducted in November 2005 through January 2006, the preservation and protection of public access to the waterfront was determined by the Carrabelle community to be the highest priority in regards to inclusion into the Comprehensive Plan. In response, the City has contracted with Environmental Consulting and Technology, Inc. (ECT) to study the possibility of building a public marina and pier along the Carrabelle River within the Carrabelle Redevelopment Area.
- **Hiking Trails:** The City currently has no hiking trails. However, it recently acquired the John David Patton Wildlife Park, which consists of 53 acres of open space. The City intends on incorporating hiking trails within the park in order to meet the minimum level of service standard. In the meantime, Carrabelle residents can continue to utilize the many miles of hiking trails within unincorporated Franklin County, including the Apalachicola National Estuarine Reserve, Bald Point State Park, Box R Ranch, and the Dr. Julian C. Bruce State Park.
- **Camping:** The City currently has no hiking trails. Carrabelle relies on the many camping opportunities provided by unincorporated Franklin County in order to meet the minimum level of service standard. Nearby camping facilities include the Apalachicola National Estuarine Reserve, the Apalachicola National Forest, the Dr. Julian C. Bruce State Park, and Tate's Hell State Forest.
- **Community Swimming Pool:** Although the City of Carrabelle is not anticipating a population that would require a community swimming pool within the current planning horizon, the City does wish to acquire a swimming pool in the near future. Therefore, the City plans on coordinating with the Franklin County School Board regarding this issue.
- **Boat Ramps with Parking Facilities:** During the public comprehensive planning workshops that were conducted in November 2005 through January 2006, preservation and protection of public access to the waterfront was determined by the Carrabelle community to be the highest priority in regards to inclusion into the Comprehensive Plan. The Carrabelle community also indicated that visitor impact on the public boat ramps and boat ramp parking has led to citizen demand for additional boat ramp parking. The public boat ramps currently do not offer parking facilities for boat trailers. Therefore, the permanent residents are competing with visitors for nearby parking,

which greatly limits citizen's public access to the waterfront. Therefore, the City must make it a priority to provide boat ramp parking along with its boat ramp facilities.

Grants: Over the past ten years, the City has successfully applied for grant money from the Florida Department of Environmental Protection (FDEP) and the Florida Department of Community Affairs (FDCA). Most recently, the City has been awarded \$300,000 from FDEP to make improvements to the Tillie Miller Park and \$144,000 from FDCA to provide a wildlife park located in the northeast corner of Carrabelle (see Table 5-4 for details).

Table 5-4. FDEP Improvement Grants

Improvements	Grant Amount
Carrabelle Riverwalk Park	\$100,000.00
Carrabelle Riverwalk Park	\$100,000.00
Carrabelle Riverwalk Park	\$100,000.00
Tillie Miller Park	\$150,000.00
Tillie Miller Park	\$150,000.00
John David Patton Wildlife Park	\$144,000.00

Source: City of Carrabelle, 2005

Recommendations: Residents, both seasonal and year-round, generate demand for recreation facilities and open space. To fully enjoy parks and open space, residents must have parks and beach access points located near their neighborhoods. However, not all residents reside within walking distance to beaches or parks. Adequate parking facilities for automobiles, boat trailers, and bicycles will enhance accessibility to parks, recreation facilities, and beach access points. Planning for parks and recreation facilities must take into consideration accessibility to residential neighborhoods. To assure that recreation and open space are available for existing and future residents, both year-round and seasonal population, recreation and open space must be planned and integrated within new development as well as provided as a single function use in the form of public recreation facilities. Recreation and open space planning must be integrated with planning for land use, economic, social, and transportation.

As such, the City has indicated that it shall develop a master plan, including conceptual greenway maps, that includes proposed new recreational trail systems and conservation greenways to link existing and new open space and outdoor recreation areas. Land acquisition efforts will focus on establishing these new links and enhancing existing greenways and recreation trail systems, including the acquisition of areas for destination areas and trailheads, including parking areas. In addition, the City has committed to preparing a plan for developing bicycle and pedestrian ways that will connect residential areas to recreational areas and the downtown area by December 2007. The plan shall include programs for implementation and anticipated funding sources.

As mentioned previously, the Carrabelle River is a recreational resource that fulfills not only a local need, but has a regional importance as well. It has provided the primary basis upon which the City's economic development activities have been built. The river provides traditional recreational opportunities such as fishing and boating. Please see Figure 7-1 of the Coastal Management Element for a map of these public access facilities to the Carrabelle River. The City has several waterfront access points via road ends, but many are unimproved or under-improved, and serve only as open space. Improving these waterfront open space areas into public access points can enhance access to the Carrabelle River, particularly for residents living within walking distance to these locations. Potential for additional public access to the Carrabelle River can increase by improving these points with access paths, boardwalks, benches, and other complementary facilities.

In order to enhance and improve public access to Carrabelle's waterfront, the City has incorporated the following policies within the Comprehensive Plan:

- The City shall provide adequate parking for waterfront recreation areas and designated public waterfront access sites through improvement or construction of parking areas, as feasible.
- The City shall pursue state or federal grant funds to develop 900 feet of public waterfront property adjacent to the Carrabelle River into a public marina.
- The City shall pursue state or federal grant funds to improve selected street-ends for use as dedicated public waterfront access points and will clearly mark such points as waterfront access.
- Development or redevelopment of the riverfront and parks shall provide linkage to multi-modal transportation facilities, as appropriate, and shall accommodate bicycle facilities, sufficient parking, and access facilities, including those that are ADA-accessible.

6. INTERGOVERNMENTAL COORDINATION ELEMENT

The purpose of this Element is to formulate improved coordination processes among adjacent local governments and with local, regional, state, and federal agencies. Very often, planning and management responsibilities fall under the jurisdiction of several agencies. The effective implementation of federal, state, regional, and local planning policies requires the identification of all agencies with which the local government must coordinate; a thorough understanding of the roles of each agency and that of the local government; and the creation of adequate intergovernmental coordination mechanisms to carry out policies.

The first section of this Element identifies the primary public and quasi-public entities that have some service or regulatory responsibility within the jurisdiction of the City of Carrabelle. The second section includes a description of the coordination mechanisms between the City and each of these entities, including the nature of the relationship and the office with primary responsibility for coordination. Finally, the third section analyzes the effectiveness of these coordination mechanisms as they relate to specific issues identified in the other Elements of this Comprehensive Plan. Each issue is analyzed according to the requirements of Chapter 9J-5, F.A.C., identifying problems and needs and recommending solutions.

A. Inventory

1. Local Governments: Franklin County is located in the Florida Panhandle approximately eighty (80) miles southwest of the State capitol, Tallahassee. The Franklin County Board of County Commissioners governs the unincorporated areas of the County. Within Franklin County, there are two municipalities: Apalachicola and Carrabelle. Each municipality has its own government and provides municipal services such as police, water, sewer, and zoning protection.

2. Regional Agencies:

- **Apalachee Regional Planning Council (ARPC):** The Apalachee Regional Planning Council (ARPC) consists of a nine-county area in the central Florida Panhandle, including Franklin County. The ARPC provides planning and technical assistance functions. The ARPC is charged with the preparation of a Comprehensive Regional Policy Plan pursuant to Chapter 186, F.S. The Comprehensive Regional Policy Plan provides regional issues, goals, policies, and standards to further the goals and policies of the State of Florida Comprehensive Plan for the Apalachee Region. The updated local government comprehensive plans must be consistent with the issues, goals, policies, and standards of the Comprehensive Regional Policy Plan. The ARPC also reviews Developments of Regional Impact (DRIs) pursuant to Chapter 380, F.S. The ARPC's primary function is to determine the positive and negative impacts of the proposed development and prepare an advisory report with recommendations to the local governments affected by the development.
- **Northwest Florida Water Management District (NFWFMD):** The Northwest Florida Water Management District (NFWFMD) stretches from the St. Marks River Basin in Jefferson County to the Perdido River in Escambia County. The District is one of five water management districts in Florida created by the Water Resources Act of 1972. Franklin County is one of the sixteen counties that lie within the NFWFMD. Within the District's 11,305-square-mile area, there are several major hydrologic (or drainage) basins: Perdido River and Bay System, Pensacola Bay System (Escambia, Blackwater, and Yellow Rivers), Choctawhatchee River and Bay System, St. Andrew Bay System, Apalachicola River and Bay System, and St. Marks River Basin (Wakulla River). The NFWFMD's responsibilities include water resource planning and permitting for well drilling, surface water storage, and other specific uses.

3. State Agencies:

- **Governor's Office of Policy and Budget (OPB):** The Governor's Office of Policy and Budgeting (OPB) is responsible for reviewing all applications for Federal domestic assistance when the Federal program requires State clearinghouse review. The purpose of this review is to insure that the proposed project is in conformance with State plans and programs. The ultimate goal of the review process is to provide for intergovernmental coordination between local, State and Federal agencies. The OPB is also responsible for preparation of the State of Florida Comprehensive Plan, which provides Statewide goals and policies with which all local and regional comprehensive plans must be consistent.
- **Florida Department of Transportation (FDOT):** The Florida Department of Transportation (FDOT) is responsible for planning, constructing, and maintaining the State road system. Given the close relationship and interdependence between land use and transportation, the coordination of the local and State transportation plans is important. The FDOT regulates access to State roads. Before new developments may have access to a State road, the developer must present plans for review to the FDOT. New developments may also influence drainage in new developments adjacent to State roads. New developments that expect to increase the amount of runoff to the drainage system of a State road must submit a drainage plan for review to the FDOT.
- **Florida Department of Community Affairs (FDCA):** The Florida Department of Community Affairs (FDCA) is the designated State land-use planning agency. The FDCA has been assigned the responsibility of reviewing local comprehensive plans to determine if they are consistent with Chapter 163, F.S., the Comprehensive Regional Policy Plan, and the State Comprehensive Plan. Copies of Carrabelle's *Comprehensive Plan 2020* must be provided for this purpose to the FDCA prior to its adoption.
- **Florida Department of Environmental Protection (FDEP):** The Florida Department of Environmental Protection (FDEP) is primarily a permitting organization with respect to environmental quality. Plans and management strategies for achieving air and water quality goals have been set both at the Federal and State levels. Many of these programs strive to maintain or improve air and water quality by regulating the discharge of pollutants into water and air. Dischargers must receive permits from FDEP. The Florida Department of Environmental Protection is also charged with the administration, supervision, development, and conservation of Florida's natural resources.

4. Federal Agencies:

- **U.S. Army Corps of Engineers:** The Corps of Engineers regulates dredge and fill activities in waters and wetlands under Federal jurisdiction. Authorization to engage in dredge and fill is contingent upon receiving approval from the Corps, as well as the Florida Department of Environmental Protection.
- **U.S. Department of Agriculture, Forest Service:** The U.S. Forest Service, a division of the Department of Agriculture, has responsibility for forest management assistance and provides fire protection and forestry management services to forest and wildlife areas in the County. The U.S. Forest Service operates and maintains the Apalachicola National Forest. The Apalachicola National Forest extends into three other counties: Liberty, Leon, and Wakulla. In Franklin County, the Apalachicola National Forest covers 21,000 acres and includes several recreation areas.

5. Other Groups:

- **Progress Energy:** Progress Energy provides electric utilities to the City of Carrabelle.
- **Carrabelle Potable Water and Sanitary Sewer Systems:** Potable water and centralized sanitary sewer services are provided by the City of Carrabelle.
- **The Franklin County School Board:** The Franklin County School Board is an independent public agency operating primary and secondary educational facilities countywide. The Board, with five members elected by district, has limited power of taxation to support public education, but has no regulatory authority over the use of land.
- **Civic Groups:** Civic groups active in the area include the Carrabelle Area Chamber of Commerce, Apalachicola Bay Area Chamber of Commerce, Apalachicola Riverkeepers, Boys and Girls Club, Franklin's Promise, Big Bend Hospice, garden clubs, and historic societies. Other organizations include the seafood workers association, the Carrabelle Lighthouse Association, and chapters of the American Legion, the Disabled American Veterans, the American Red Cross, and the American Cancer Society.

B. Interlocal Mechanisms

Local governments coordinate the provision of services in certain areas of mutual interest through various types of agreements. Intergovernmental coordination mechanisms may involve contractual agreements that specify a cooperative arrangement, outline the organization and administration requirements, and provide for the exchange of funds. These formal arrangements are known as "interlocal agreements." Less formal agreements are often used where funds are not exchanged in the provision of a service or program. Described below are the existing formal and informal coordination mechanisms between the City and Franklin County, and, in some cases, the City of Apalachicola.

Recreation: Both the City of Apalachicola and the City of Carrabelle allow residents of the unincorporated areas of Franklin County to use recreational facilities owned and operated by each City and to participate in recreational programs sponsored by the Cities. This is an informal agreement. Many of the activities sponsored by Carrabelle take place in facilities owned by the Franklin County School Board.

Road Improvement: Previously, a verbal understanding existed between the Cities and the County by which the County received all State road funds and allocated them throughout the County according to priorities established by the County Commission. The City of Carrabelle has assumed responsibility for its own road improvements and receives Gas Tax funds to do so.

Public Library: The City of Carrabelle makes its public library available to County residents and visitors by informal agreement. In addition to typical library services, the public library also serves as a community center, offering family and pre-school programs, yoga classes, and computer classes.

Fire Protection: The City of Carrabelle Volunteer Fire Department provides fire protection for City residents. There are five other fire departments in Franklin County: the Apalachicola Volunteer Fire Department, the Eastpoint Volunteer Fire Department, the St. George Island Volunteer Fire Department, the St. James/Lanark Volunteer Fire Department, and the Alligator Point Volunteer Fire Department. By written agreement these six fire departments constitute the Municipal Services Districts of the County. The Districts levy taxes for fire protection and each District receives funds based on its submitted budget.

Mosquito Control: Franklin County operates two trucks according to the latest State and federal requirements.

C. Analysis by Element

Broad intergovernmental coordination issues or problems as identified in each of the other Comprehensive Plan Elements are listed in this section. Each problem is analyzed according to requirements of Chapter 9J-5, F.A.C., providing a means for analyzing existing methods of coordination, identifying problems and needs, and providing solutions.

Section 1. Future Land Use Element

- **Coordinating Permits in Areas Under Overlapping Jurisdiction of Federal, State, and Local Agencies:** Development along or adjacent to waterways or wetlands requires permission from agencies with overlapping authority. The City currently has an informal system of sharing information on permits with other agencies, but problems do occur for both applicant and agencies because of inadequate and indirect communication. Currently, no coordination mechanism exists. The City issues building permits contingent upon other appropriate permits being obtained.

Recommendation: The City and the County Planner should consider developing procedures that will facilitate the evaluation of joint application in affected areas. A more formal process should be considered to coordinate efforts and to ensure compatible development.

- **Land Use Plan Amendments and Zoning Changes Adjacent to City-County Boundaries:** When land is rezoned or developed in unincorporated areas adjacent to the City according to the land use and zoning designations of the County, the result may be a development that is inconsistent with land use and zoning regulations of the City. As the City and County grow, the potential for conflict increases. Currently, no coordination mechanism exists. Public notice is given and adjacent landowners are notified, but no intergovernmental communication occurs. The relationship is dependent upon informal verbal communication. It would be of mutual benefit to both the City and the County to coordinate planning and zoning changes. All local governments have the right and the responsibility to address the impacts of development proposed in the local Comprehensive Plans in adjacent jurisdictions.

Recommendation: The City should consider establishing an intergovernmental committee to coordinate zoning and land use changes along City/County boundaries. The purpose will be the maintenance of compatible land development. In addition, the City should consider entering into a joint planning agreement with Franklin County to ensure that lands near or adjacent to the Carrabelle-Thompson Airport shall be assigned land use designations that are compatible with the Airport Master Plan. Finally, the City should also consider entering into a joint planning agreement with Franklin County to ensure that lands near or adjacent to the proposed Carrabelle East development and the Lake Morality Road area shall be assigned compatible land use designations.

Section 2. Public Facilities Element

- **Solid Waste Management:** The City does not require mandatory trash collection. The City is presently considering mandatory trash collection, as well as mandatory collection of recyclable goods (the City currently serves as a central recycling center, in cooperation with Franklin County). Solid waste collection is currently handled by Waste Management of Northwest Florida, which collects and transports the City's solid waste to a transport station located near EastPoint. However, Waste Management of Northwest Florida providing this service under an expired contract. Thus, the City is in the process of renegotiating its contract with Waste Management of Northwest Florida and plans to address the issues of mandatory trash collection and mandatory

recyclables collection during the renegotiations. Due to the fact that the City does not require mandatory trash collection, some residents dump their trash along residential roads and within undeveloped areas. People also leave 'white goods' (i.e., refrigerators, stoves, and other appliances) on the side of the road. The County informally picked up such goods on a regular basis. However, in the fall of 2005, the County informed Carrabelle that it would no longer provide this service. In order to address the aforementioned solid waste problems, in 2005 the City established a solid waste code-enforcement program. Initially, the program only enforced the removal of derelict debris from public right-of-ways, but it has now been expanded to enforce the removal of derelict debris left on private properties. Remarkable progress has been made in one year. The City is also moving forward with the adoption and implementation of a mandatory trash collection requirement and possibly a mandatory recyclables collection requirement. A final problem that the City must address is that most or all areas within the City limits have documented black bear populations and require bear-proof solid waste containers.

Recommendation: The City should consider seeking State and federal funding to acquire equipment to remove white goods. The City should continue to support, and consider the possibility of expanding, Franklin County's recycling program. Finally, the City should consider contracting with solid waste hauler that provides bear proof solid waste containers to its customers.

Section 3. Housing

- **Affordable Housing:** Based on the discussion regarding affordable housing in "Section 3, Housing", as well as the fact that the provision of workforce attainable and affordable housing was determined to be the third highest priority identified during the five public comprehensive planning workshops, it is clearly evident that the greatest housing need over the planning period is for more affordable housing.

Recommendation: The City should coordinate with Franklin County and the Northwest Florida Housing Authority in preparing applications and pursuing funding sources for affordable housing. Improved private-public coordination would provide a more stable, long-term base for addressing this issue. Additionally, the City should consider either partnering with the existing Franklin County Community Development Corporation (CDC), or establishing its own Community Land Trust program.

Section 4. Traffic Circulation

- **Road Improvements:** Previously, a verbal understanding existed between the Cities and the County by which the County received all State road funds and allocated them throughout the County according to priorities established by the County Commission. The City of Carrabelle has assumed responsibility for its own road improvements and receives Gas Tax funds to do so. However, there is a need for the ongoing joint review of existing County and State roadways to ensure their maintenance and improvement, as well as to ensure that impacts on shared facilities resulting from new developments adjacent to Carrabelle are adequately reviewed.

Recommendation: The City shall consider coordinating with FDOT and Franklin County in order to:

1. Address existing deficiencies, especially where there is potential for high accident frequency, such as the intersection of SE Avenue A, U.S. Highway 98, County Road 67, and Marine Street; and the intersections of U.S. Highway 98 and:
 - River Road (County Road 379)
 - Ryan Drive (County Road 67-A)

2. Address the possibility of relocating the truck route (County Road 67-A)
3. Address the evaluation of major evacuation routes (U.S. Highway 98 and County Road 67) and determine where deficiencies occur and where operational improvements can be made to maintain or reduce hurricane evacuation times.
4. Maintain and/or improve those County or State roads that were identified within the City's annual roadway maintenance review.
5. Prepare applications and pursue funding sources for roadway improvement projects.

Section 5. Recreation and Open Space

- **City/County Access to Recreational Facilities:** The City offers recreational programs that are open to all County residents.

Recommendation: In order to make a variety of recreational facilities available to the citizens in a cost-effective manner, the City and County should continue to coordinate the establishment and maintenance of recreational and open space opportunities and sufficient access to these facilities. In addition, the City should cooperate with Franklin County in preparing applications and pursuing funding sources for new recreational facilities, such as an area swimming pool.

Section 7. Coastal Management Element

- **Hurricane evacuation:** In order to ensure adequate evacuation of the coastline, the City has established coordination with Franklin County to create evacuation routes for City residents and visitors. In the event of a natural disaster, Franklin County would coordinate such an evacuation.

Recommendation: Coordination with the County has been effective in the past and should continue in the future. Due to the hurricane evacuation conditions discussed in "Section 7, Coastal Management", the City should coordinate with the Franklin County Emergency Management Director to ensure that County Road 67 is designated as the City's official primary hurricane evacuation route.

- **Nonpoint Source Pollution:** Stormwater runoff from the streets and highways of Carrabelle represents the main nonpoint source of pollutants entering the natural water and bay ecosystems.

Recommendation: The City should consider coordinating with Franklin County and the State in seeking the designation of the Crooked River, New River, Carrabelle River, and St. George Sound as Outstanding Florida Waters (OFWs).

Section 8. Conservation Element

- **Protecting Threatened and Endangered Species:** Franklin County is home to approximately sixty threatened and endangered species. These species have been documented in the Apalachicola River and Bay National Estuarine Preserve, but it can be assumed some of the species do cross over jurisdictional boundaries. The City does not formally coordinate with the Apalachicola River and Bay National Estuarine Preserve on the range or status of threatened or endangered species. The City depends upon the Apalachicola River and Bay National Estuarine Preserve for reporting the presence of threatened and endangered species.

Recommendation: The City should consider formally coordinating with the Apalachicola River and Bay National Estuarine Preserve on the range or status of threatened or endangered species.

Section 9. Capital Improvements Element

- **City/County Access to Recreational Facilities:** The City offers recreational programs that are open to all County residents.

Recommendation: In order to make a variety of recreational facilities available to the citizens in a cost-effective manner, the City and County should continue to coordinate the establishment and maintenance of recreational and open space opportunities and sufficient access to these facilities. In addition, The City should cooperate with Franklin County in preparing applications and pursuing funding sources for new recreational facilities, such as an area swimming pool.

- **Road Improvements:** There is a need for ongoing joint review of existing County and State roadways to ensure their maintenance and improvement, well as to ensure that impacts on shared facilities resulting from new developments adjacent to Carrabelle are adequately reviewed.

Recommendation: The City shall consider coordinating with FDOT and Franklin County in order to:

- 1) Address existing deficiencies, especially where there is potential for high accident frequency, such as the intersection of SE Avenue A, U.S. Highway 98, County Road 67, and Marine Street; and the intersections of U.S. Highway 98 and:
 - River Road (County Road 379)
 - Ryan Drive (County Road 67-A)
- 2) Address the possibility of relocating the truck route (County Road 67-A)
- 3) Address the evaluation of major evacuation routes (U.S. Highway 98 and County Road 67) and determine where deficiencies occur and where operational improvements can be made to maintain or reduce hurricane evacuation times.
- 4) Maintain and/or improve those County or State roads that were identified within the City's annual roadway maintenance review.
- 5) Prepare applications and pursue funding sources for roadway improvement projects.

7. COASTAL MANAGEMENT ELEMENT

The purpose of the Coastal Management Element is to plan for and, where appropriate, restrict development activities where such activities would damage or destroy coastal resources; and protect human life and limit public expenditures in areas that are subject to destruction by natural disaster.

A. Inventory

1. Existing Land Uses

Location: The coastal planning area for the City of Carrabelle consists of the entire City, pursuant to the requirements of Rule 9J-5.012, F.A.C.

Existing Land Uses: A detailed analysis of the existing developed and vacant land uses can be found in 'Section 1, Future Land Use Element'.

Conflicts Among Shoreline Uses: The developed section of the City's coastal area borders the Carrabelle River (parallel to U.S. Highway 98 through Carrabelle) and is primarily water-dependent or water-related in nature. In the past, a mix between recreation-oriented and commercial fishing-oriented businesses was maintained along the waterfront. Due to the high value of waterfront property in Carrabelle, the fishing-oriented businesses are under pressure from resort condominiums and other tourist-related activities. If the fishing industry in Carrabelle is pushed out by such development, it will impact shoreline habitat and water quality. Measures to minimize such environmental conflicts are discussed elsewhere in this Element.

Currently, the primary shoreline land use conflict in Carrabelle is incompatible land use, particularly the construction of high-density residential developments adjacent to the Carrabelle River. The paragraphs below discuss some of the negative impacts to Carrabelle's natural resources that can result from such development.

- **Current Use of On-Site Septic Tanks:** Although a majority of the citizens in the City utilize the City's wastewater collection system, concern remains in this land use area due to the use of septic systems. Even when properly designed, installed and maintained, these systems do not provide the level of treatment that wastewater treatment plants provide. Improperly functioning septic systems only add to the pollution loading in the form of nitrogen, phosphorus, and fecal coliform. The Franklin County Health Department has records of installed septic systems, but does not indicate how many septic systems remain in operation. It is anticipated that many of these septic systems are installed in locations with high water tables and unsuitable soil porosity, causing poor treatment performance, resulting in additional pollution loading.
- **General Impacts to Coastal Natural Resources:** Another form of activity that is incompatible with the protection of coastal natural resources is related to general adverse impacts created by human activity. Such activities include human encroachment (i.e., walking, bicycle, pets, etc.) adjacent to local waters that create water pollution, improper waste disposal from watercraft, wakes from watercraft that contribute to shoreline erosion, and other marine activities that adversely affect the fragile environment of the near shore waters, including water quality, marine fauna and flora, and quiet solitude along coastal or bayou shoreline.
- **Degradation of Water Quality:** The most evident impact of development in Carrabelle is the degradation of water quality within St. George Sound and the Apalachicola Bay. Development and human activity have contributed to the destruction of marine habitats and a decrease in fish populations. The Bay is a shellfish harvesting and propagation area for

shrimp, oysters, and clams. Poor water quality has impacted the health of the shellfish harvest, and thus the viability of the local fishing industry. Water quality, then, affects both the commercial fishermen and the recreational fishing guides who depend on marine resources for their livelihood.

Water-Dependent Uses: Rule 9J-5.003(144), FAC, defines water-dependent uses as activities that can be carried out only on, in, or adjacent to water areas because the use requires access to the water body. Water-dependent uses includes water areas needed for ports, recreation, electrical generating facilities, or water supply. Carrabelle does not have an energy source dependent upon water and none is presently contemplated. It does not have a port. Within Carrabelle these activities include public and private marinas; docks and piers fishing-related businesses; boating; and active and passive recreation.

Water-Related Uses: Rule 9J-5.003(146), FAC defines water-related uses as activities that are not directly dependent upon access to a water body, but which provide goods and services that are directly associated with water-dependent or waterway uses. Water-related uses in Carrabelle include boat storage, marine repair, retail boat and trailer sales, marine industrial (boat building, boat yards, hull work and painting, marine construction), and bait and tackle stores.

Table 7-1, below, provides a list of water-dependent and water-related businesses in Carrabelle.

Table 7-1. Water-Dependent and Water-Related Businesses in Carrabelle

Business Name
Bill's Seafood
The Boat House Boat Storage
BP Bait & Tackle
Brooks Upholstery (boat upholstery)
Carrabelle Boat Club LLC
Carrabelle Dive Charters, Inc.
Carrabelle Marina
Cat V Charters/Dog Island Water Taxi
C-Quarters Marina
Docks-4-Less
Dockside Marine
Dog Island Construction (materials transport to Dog Island)
Florida Fish & Wildlife Commission (Marine Patrol)
Frank's Bait & Tackle
Just Right Marine
Marine Systems
Marshall Marine
Millender & Sons Seafood
The Moorings/Sea Change
Parramore's Marine Service
R & L Shrimp, Inc. (Lycett's)
The Shrimp Shed
Towboat U.S.
West Marine Systems

Source: City of Carrabelle, 2006

Besides the water-dependent and water-related businesses listed in Table 7-1, employees of a local marina were able to readily identify 18 charter boats operating regularly out of the Carrabelle River, and another 14 with more sporadic business; despite the fact that the City of Carrabelle's business license records show only 7 charter boat licenses. Additionally, 136 licenses to sell commercial saltwater products and 13 clam leases (to farm clams) are held by City residents. Based on this information, it is apparent that many residents hope to derive part or all of their income from commercial fishing. The failure of many water-dependent business owners to license their businesses with the City may be due to

the fact that current ordinances prohibit home-operated businesses in most areas of the City. The City may wish to consider revising its ordinances to acknowledge current practice and both regulate and encourage small businesses operating within the City.

Economic Base: The primary uses of the commercial land designated on the Future Land Use Map are water-dependent/water-related and/or commercial seafood-oriented. These uses are consistent with what is considered to be the economic base of Carrabelle: seafood and outdoor recreation.

2. Public Access Facilities

Public access facilities are defined as sites that offer public access points to the beach or shoreline through public lands, private property open to the general public, or other legal means; parking facilities for beach or shoreline access; coastal roads and facilities providing scenic overlooks; marinas, boat ramps, and public docks; and fishing piers and other traditional shoreline fishing areas.

Capacity and Need for Public Access Facilities: The public access facilities that are located within Carrabelle primarily offer access to public and private marina and docking facilities. Table 7-2 lists the location, size and type of improved public access facilities in Carrabelle. Please see Figure 7-1 for a map of Carrabelle's improved and unimproved public access facilities.

Table 7-2. Improved Public Access Facilities in Carrabelle

Name	Location	Ownership	Access Facility Type
Carrabelle City Boat Ramp	W. 4 th St. & U.S. Hwy. 98	Public	1 boat ramp, 1 lane
Carrabelle Riverwalk Park	513 Marine St.	Public	2 fishing piers (155 linear ft), 4 picnic tables, 1 picnic shelter
Timber Island Boat Ramp	Timber Island Road	Public (County)	1 boat ramp, 1 lane
The Moorings/Sea Change	1000 U.S. Hwy. 98	Private	1 boat ramp; 120 slips (an additional 34 are currently under construction); 3 RV spaces
"C"-Quarters Marina	501 U.S. Hwy. 98	Private	No boat ramp, 67 slips
Dockside Marine	292 Graham Drive	Private	1 boat ramp, 16 slips

Source: Florida Dept. of Environmental Protection, Florida Recreation and Parks Facility Inventory, 2002
City of Carrabelle, 2005

During the public comprehensive planning workshops that were conducted in November 2005 through January 2006, the preservation and protection of public access to the waterfront was determined by the Carrabelle community to be the highest priority in regards to inclusion into the Comprehensive Plan. In response, the City has contracted with Environmental Consulting and Technology, Inc. (ECT) to study the possibility of building a City marina within the Carrabelle Redevelopment Area. Additionally, in order to increase the amount of public access to coastal resources consistent with estimated public needs, the City has incorporated the following policies into its Comprehensive Plan:

- Existing access for the public to the Carrabelle River and St. George Sound shall be maintained by new development. New riverfront development shall show on their site plans existing riverfront access ways, and the proposed development shall continue that access way, relocate it on the site with approval of the City Commission, or donate it to the City.
- The City shall pursue state or federal grant funds to develop 900 feet of public waterfront property adjacent to the Carrabelle River into a public marina.
- All public access facilities shall be accessible to a State, County, or City road and include parking facilities as feasible.

- The City shall accept donations of shoreline lands suitable for use as public access facilities.
- The City shall pursue grants to improve public waterfront access points.

3. Existing Infrastructure

Due to the fact that the coastal planning area for Carrabelle consists of the entire City, the data and analyses provided for the City's infrastructure within "Section 2, Public Facilities Element" and "Section 4, Traffic Circulation Element" is also relevant to the Coastal Management Element.

Roadways, Bridges, or Causeways: Please see "Section 4, Traffic Circulation Element" for a detailed discussion, including capacity and future needs, regarding the City's existing transportation infrastructure. Fiscal impact in terms of estimated costs, funding sources and phases of any needed improvements is addressed in "Section 9, Capital Improvements Element".

Sanitary Sewer System: Please see "Section 2, Public Facilities Element" for a detailed discussion (including the area served, the demand upon, the capacity of, and the future needs) regarding the City's existing sanitary sewer system. Fiscal impact in terms of estimated costs, funding sources and phases of any needed improvements is addressed in "Section 9, Capital Improvements Element".

Potable Water System: Please see "Section 2, Public Facilities Element" for a detailed discussion (including the area served, the demand upon, the capacity of, and the future needs) of the City's existing potable water system. Fiscal impact in terms of estimated costs, funding sources and phases of any needed improvements is addressed in "Section 9, Capital Improvements Element".

Drainage System: Please see "Section 2, Public Facilities Element" for a detailed discussion (including the area served, the demand upon, the capacity of, and the future needs) of the City's existing drainage system. Fiscal impact in terms of estimated costs, funding sources and phases of any needed improvements is addressed in "Section 9, Capital Improvements Element".

Public Coastal or Shore Protection Structures: The Florida Department of Environmental Protection has not identified any beaches or dunes within the City of Carrabelle. Seawalls, bulkheads, and retaining walls that border private property are the only shore protection structures in the City.

Beach Renourishment Projects: Due to the fact that there are no beaches within the City of Carrabelle, the City has no plans for beach renourishment projects.

4. Land Use Impacts on Natural Resources

A complete inventory of Carrabelle's natural resources can be found in "Section 8, Conservation Element". Overall, the major impact on water quality and living marine resources in Carrabelle will continue to come from pollution to St. George Sound that is associated with development adjacent to the Carrabelle River and St. George Sound. Point source discharge (i.e., from stormwater drains and septic tanks) and nonpoint source discharge (i.e., from urban stormwater runoff) have contributed to localized pollution in the immediate offshore areas around Carrabelle. Measures to minimize development impacts on water quality and living marine resources are discussed elsewhere in this Element.

Another concern related to the productivity of the New River basin deals with unpermitted dredge and fill operations. While many of the marshes in St. George Sound are protected, there remain significant quantities that are not. The Florida Department of Environmental Protection and the U.S. Army Corps of Engineers have jurisdiction over activities in these marshes. Considering the importance of these marshes as nursery areas, the strict enforcement of regulations and mitigative actions to offset losses is

necessary. Education and coordination between local, State and federal agencies is essential to inform developers and homeowners of the regulations governing wetlands and the reasons for these regulations.

In regards to the uplands habitat, a small loss of natural habitat within the Carrabelle coastal area, due to increased development, is not likely to cease. Upland habitats such as scrub and pine flatwood appear to be the most susceptible to alteration. Unlike Carrabelle's wetland areas, there are no local and State environmental regulations that restrict clearing in the scrub or pine flatwood habitats.

Please see the following Figures for maps of natural resources located within Carrabelle:

- Figure 7-2: Map of vegetative cover, including wetlands (FLUCCS wetlands map)
- Figure 7-3: Map of vegetative cover, including wetlands (NWI wetlands map)
- Figure 7-4: FNAI Potential Natural Areas map (includes living marine resources)
- Figure 7-5: Map of areas subject to coastal flooding (Storm Surge map)
- Figure 7-6: Map of wildlife habitats, Integrated Wildlife Habitat Ranking System

5. Beach and Dune Systems

The Florida Department of Environmental Protection has not identified any beaches or dunes within the City of Carrabelle. In addition, seawalls, bulkheads, and retaining walls that border private property are the only shore protection structures in the City. Therefore, this planning issue is not applicable to the City of Carrabelle.

6. Impacts of Development and Redevelopment on Historic Resources and Sites

As mentioned in "Section 1, Future Land Use Element", Carrabelle has no historical sites designated by the Florida Department of State, Division of Historical Resources, or the National Registry. However, several prehistoric sites of archaeological significance have been registered with the Division of Historical Resources. See Map I-4, Appendix A, for a map of these sites. One of the sites is located in a marshy area that is designated "Conservation" on the Future Land Use Map; therefore it is not expected to be impacted by land use. The other two sites are located within already developed areas and changes to the Future Land Use Map are not expected to impact these sites. Additionally, the City has committed to conducting a survey of historic resources within the City limits. If historic structures are identified that could potentially be impacted by development or redevelopment, the City shall address those impacts at that time.

7. Estuarine Pollution Conditions

This section of the Coastal Management Element discusses the water quality status of Carrabelle's rivers and estuaries, and includes the New River Basin and the St. George Sound.

General Estuarine Characteristics: The New River Basin is a small coastal basin, which adjoins the Apalachicola River basin. The basin drains about 569 square miles of Tate's Hell Swamp. Forestry and wetland areas are the predominant land uses in the basin. Only one (1) percent of the basin is within an urban area, principally the coastal community of Carrabelle. The Carrabelle River empties into the St. George Sound, a productive estuary that borders Carrabelle. The St. George Sound is considered part of the Apalachicola Bay system and extends from Bulkhead Shoal to the Carrabelle River and East Pass.

Known Existing Point and Nonpoint Source Pollution Problems:

- **Point Source Pollution:** Point source pollution in the Apalachee Region is usually related to wastewater effluent discharged from the pipes of municipal sewage treatment plants into rivers, streams, and lakes. The City of Carrabelle substantially upgraded the City's Wastewater Treatment Plant in 2006. This new Advanced Wastewater Treatment Plant has

significantly reduced the amount of wastewater effluent that enters the Carrabelle River and the St. George Sound. According to the draft *Stormwater Needs Assessment (March 2006)*, point source pollutants are not expected to be a major contributor to the degradation of water quality in Carrabelle.

- **Nonpoint Source Pollution:** The stormwater runoff from streets and highways of Carrabelle represents the main nonpoint source of pollutants entering the natural water and bay ecosystems. Carrabelle's land development regulations require new developments to plan for the treatment of stormwater before it leaves the development site. Unfortunately, this does not help correct problems resulting from existing development. In fact, according to the draft *Stormwater Needs Assessment (March 2006)*, the focal point for water quality in Carrabelle is to protect coastal waters by retrofitting the stormwater runoff treatment infrastructure of previously developed areas.

Impacts of Development and Redevelopment:

- **Residential Development and Redevelopment:** Residential properties are prime sources of non-point loading pollution. Pollutants from these land areas may include oils, greases, and acids from automobiles, sediments from bare soil areas, nitrogen and phosphorous from fertilizer applications, and multiple other pollutants. Water front properties with boating activity are subject to improper disposal of wastewater from septic holding tanks of boats. Although a majority of the citizens in the City utilize the City's wastewater collection system, concern remains in this land use area due to the use of septic systems. Even when properly designed, installed and maintained, these systems do not provide the level of treatment that wastewater treatment plants provide. Improperly functioning septic systems only add to the pollution loading in the form of nitrogen, phosphorus, and fecal coliform. The Franklin County Health Department has records of installed septic systems, but does not indicate how many septic systems remain in operation. It is anticipated that many of these septic systems are installed in locations with high water tables and unsuitable soil porosity, causing poor treatment performance, resulting in additional pollution loading.
- **Commercial Development and Redevelopment:** Many commercial properties are highly impervious, resulting in high volumes of stormwater runoff. This runoff flushes the oils, greases, fuels, and metals deposited by automobile traffic. Some commercial businesses may require the use of chemicals or other potential pollutants that, when improperly handled, stored, utilized, or discarded, may add to the pollution loading from this land use. Also, water front businesses with boating activity are subject to improper disposal of wastewater from septic holding tanks of boats. The City has incorporated a policy within the Comprehensive Plan to require all parcels that are being redeveloped to meet the current stormwater regulations of the State and City.

Impacts of Public Facilities Upon Water Quality, Circulation Patterns, and Accumulation of Contaminants in Sediments:

- **Potable Water Resources:** The Carrabelle potable water system was substantially upgraded in 2006 and is not anticipated to create an adverse impact upon water quality. For further details, please see "Section 2, Public Facilities Element".
- **Sewage Treatment:** Please see the discussion regarding sewage treatment in "Section 2, Public Facilities Element".
- **Traffic Circulation:** Based on the discussion provided in "Section 4, Traffic Circulation Element," no changes in the City's traffic circulation system are anticipated that will affect water quality or estuarine resources.

- **Estuarine Circulation Patterns:** This Comprehensive Plan proposes no new facilities that will alter the circulation patterns of the New River Basin. Maintenance dredging of the Carrabelle River will have the most significant influence on circulation in the system.
- **Accumulation of Contaminants in Sediments:** The amount of contaminants being added to the estuary's sediments from agricultural use are not expected to increase for two reasons. First, the Future Land Use Map no longer includes land designated for agricultural uses. Secondly, many of the pesticides that have contaminated the sediments in the past have been banned. Agricultural-related sediment contaminants from sources upriver which flow downward to the Apalachicola Bay cannot be determined. However, the estuary bottom under marinas can continue to expect to suffer additional contamination from hydrocarbons and heavy metals.

Actions Needed to Remedy Existing Pollution Problems:

- **Continue to Monitor Marinas:** Marinas are a source of pollution to the estuaries. Marinas should be designed to allow the maximum flushing of the boat basin. The use of dry storage should be encouraged, as this reduces the amount of heavy metals and petroleum products released to the estuary. The water of the marina and surrounding waters should be of sufficient depth to allow the operation of boats without stirring up bottom sediments. The City's Critical Shoreline Ordinance and Comprehensive Plan includes a number of regulations and requirements pertaining to the siting of new marinas and multi-slip docking facilities. Therefore, marinas should continue to be monitored for compliance with State and City marina standards.
- **Curb Stormwater Runoff:** Baskerville Donovan's draft *Stormwater Needs Assessment* report recommends that the City of Carrabelle address its water quality via the adoption and implementation of a City Stormwater Master Plan, to be prepared by December 2006.
- **Seek an Outstanding Florida Waters (OFW) Designation:** The City plans to seek designation of the Crooked River, New River, Carrabelle River, and St. George Sound as OFWs. In the meantime, the City has incorporated more stringent stormwater standards, requiring all new development to submit a stormwater plan for approval by the City Commission or its designee in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs)
- **Phase-out the use of Septic Tanks:** The City requires all new development to connect to the central sanitary sewer. The City should also strive to connect all existing residential dwelling units within the City limits to the central sanitary sewer system.

State, Regional or Local Regulatory Programs to Maintain or Improve Estuarine Quality: The Florida Department of Environmental Protection (FDEP), the Florida Department of Health (FDOH), the Northwest Florida Water Management District (NFWFMD), and the Franklin County Health Department all administer regulatory programs to maintain or improve estuarine quality.

- **Florida Department of Environmental Protection (FDEP):** State pollution regulation is largely vested in the FDEP. The FDEP regulates dredge and fill of waters of the State and adjacent wetlands. Dredge and fill permitting is done in accordance with similar Federal permitting by the U.S. Army Corps of Engineers. The FDEP also regulates the discharge of pollutants into natural or artificial bodies of water. The FDEP establishes wastewater quality standards, sets minimum treatment requirements, issues permits, licenses operations of wastewater treatment plants, administers construction grants for sewage treatment plants, and regulates discharges of stormwater. A special permit program can be used to obtain long-term permits for dredging deepwater ports. The FDEP is also responsible for selling or leasing State-owned submerged

lands if the sale or lease is “not contrary to the public interest”. The proposed use of the conveyed or leased submerged land must not “interfere with the conservation of fish, marine or wildlife, or other natural resources”. Deeds or leases may contain restrictions on dredging and filling. Additionally, FDEP is responsible for managing the Apalachicola Bay Aquatic Preserve, established in 1969 by the State. Special requirements pertaining to the sale or lease of State-owned submerged land within the aquatic preserve and all development proposed for the preserve must meet strict State land and water use restrictions. A management plan for the Apalachicola Bay Preserve has been created. Finally, the State of Florida designated the lower Apalachicola River an Outstanding Florida Water (OFW) in 1979 and included the upper Apalachicola River in 1983. The OFW designation was put in place to preserve the ambient water quality at the time of designation and does not allow any degradation. Stringent standards are applied regarding proposed alterations or potentially damaging activities planned for these waters.

- **Florida Department of Health (FDOH):** The FDOH administers the Bureau of Onsite Sewage Program, which develops statewide rules and provides training and standardization for Franklin County Health Department employees responsible for permitting the installation and repair of onsite sewage treatment and disposal systems (OSTDS) within Carrabelle. The Bureau licenses septic tank contractors, approves continuing education courses and course providers for septic tank contractors, funds a hands-on training center, and mediates OSTDS contracting complaints. The Bureau also manages a State-funded research program, prepares research grants, and reviews and approves innovative products and septic tank designs.
- **Northwest Florida Water Management District (NFWFMD):** The NFWFMD, along with FDEP, regulates the withdrawal, diversion, storage and consumption of water. The NFWFMD is responsible for most of the permitting and operational aspects of the City’s potable water system.
- **Franklin County Health Department:** The Franklin County Health Department is responsible for permitting the installation and repair of onsite sewage treatment and disposal systems (OSTDS) within Carrabelle.

B. Natural Disaster Planning

1. Coastal High Hazard Area

Location of the Coastal High Hazard Area: According to 9J-5.003, FAC, the Coastal High Hazard Area (CHHA) is defined as the evacuation zone for a Category 1 hurricane as established in the regional hurricane evacuation study applicable to the local government. Based on the *Apalachee Region Transportation Analysis* (August 2004), which is the regional hurricane evacuation study applicable to the City of Carrabelle, the CHHA in Carrabelle consists of all land seaward of County Road 30-A and all land seaward of U.S. Highway 98 starting where U.S. Highway 98 intersects with County Road 30-A along the Carrabelle River.

During the public comprehensive planning workshops conducted in November 2005 through January 2006, the Carrabelle community opted to expand the above definition of the City’s Coastal High Hazard Area to include the following areas:

- Areas west of 12th Street West, as identified on the SLOSH Map (see Map I-15 of the Future Land Use Map series);
- Areas waterward of County Road 379 (River Road);
- Areas waterward of County Road 30-A (Gulf Avenue and Marine Street); and
- Areas waterward of U.S Highway 98 (beginning where U.S. Highway 98 intersects with County Road 30-A along the Carrabelle River)

Please see Map I-14, Appendix A, for a map of the CHHA in Carrabelle.

Future Land Uses within the Coastal High Hazard Area: Carrabelle's Coastal High Hazard Area consists of approximately 607.9 acres. Table 7-3 reflects the distribution of future land uses within the Coastal High Hazard Area.

Table 7-3. Future Land Uses within the Coastal High Hazard Area

Future Land Use	Acres Within the Coastal High Hazard Area
Commercial	86.0
Conservation	209.2
Low Density Residential	85.9
Military	30.8
Very Low Density Residential	37.9
Public Facilities	5.6
Residential	152.5
Total Acreage	607.9

Source: WilsonMiller GIS Department, 2005

Infrastructure within the Coastal High Hazard Area: Growth in the CHHA puts public infrastructure, as well as the residential population, at risk. Public expenditures for roads, sewers, water and other infrastructure subsidizes growth and increases vulnerability to storm events. The demand upon, and capacity of, transportation and public facilities are inventoried within their respective Elements. "Section 9, Capital Improvements Element" further analyzes future needs and fiscal impacts related to necessary improvements. The following paragraphs generally describe the systems, planned improvement, and vulnerability of Carrabelle's infrastructure located within the CHHA.

- **Transportation:** The roads within the CHHA of Carrabelle include the following: U.S. Highway 98, County Road 376, Marine Street South of Avenue E and Highway 30-A. "Section 4, Traffic Circulation Element" identifies levels of services, existing deficiencies and planned roadway improvements.
- **Sanitary Sewer System:** There is one wastewater treatment plant in Carrabelle. The capacity of the plant and projected demands are presented in "Section 2, Public Facilities Element". The facility is not located in the CHHA, although there are service lines extending into the CHHA.
- **Potable Water System:** The capacity and projected demands of the potable water system are presented in "Section 2, Public Facilities Element". There are no potable water wellfields or treatment plants within the CHHA, although water lines are in place throughout the City, including areas within the CHHA.
- **Drainage Systems:** The City topography consists of low coastal plains varying from sea level to fifteen (15) feet. Natural channels and man-made canals are the principal outlets for drainage. All the drainage facilities are gravity systems. Within the CHHA there are a number of drainage pipes that run north-south under U.S. Highway 98. Drainage pipes also run north-south on County Road 30-A, opening into culverts on the south side of the highway.
- **Public Buildings:** There are no City-owned public buildings within the CHHA.

Relocation of Threatened Infrastructure: Since 1992, no public infrastructure facilities have been located within Carrabelle's CHHA.

2. Hurricane Evacuation

Storm Surge: According to the Florida Division of Emergency Management (FDEM), a storm surge is defined as water that is pushed toward the shore by the force of the winds swirling around the storm. This advancing surge combines with the normal tides to create the hurricane storm tide, which can increase the mean water level fifteen (15) feet or more. In addition, wind driven waves are superimposed on the storm tide. This rise in water level can cause severe flooding in coastal areas, particularly when the storm tide coincides with the normal high tides. Because Carrabelle's coastline lies less than ten (10) feet above mean sea level, the danger from storm tides is tremendous. In fact, although Hurricane Dennis (July 2005) made landfall approximately 160 miles west of Carrabelle, the City experienced extremely high storm surge levels, on the order of 8-10 feet above normal elevations. (See Figure 7-5 for a storm surge map of Carrabelle).

Hurricane Classification: Hurricanes are classified as Categories 1 through 5, based on their maximum sustained speeds (see Table 7-4):

Table 7-4: Saffir-Simpson Hurricane Scale

Storm Category	Wind Velocity (mph)	Damage
1	74-95	Minimal
2	96-110	Moderate
3	111-130	Extensive
4	131-155	Extreme
5	155+	Catastrophic

Source: Franklin County Local Mitigation Strategy, 2004
U.S. Army Corp of Engineers 1995, 2-2

Hurricane Vulnerability Zone: According to 9J-5.003, the hurricane vulnerability zone is defined as the area "delineated by the regional or local hurricane evacuation plan as requiring evacuation". As mentioned previously, the *Apalachee Region Transportation Analysis* (August 2004) is the regional hurricane evacuation study applicable to the City of Carrabelle. One result of the study was the development of evacuation "traffic zones", the purpose of which is to target areas that will be asked to evacuate by local emergency management for select tropical cyclone scenarios. The boundaries of each zone were developed in relation to well-known man-made or natural features, census boundaries, roadways, and SLOSH (Sea, Lake and Overland Surge Heights) model storm surge areas. The City of Carrabelle is located in Traffic Zone 5, the boundaries of which follows U.S. Highway 98 (see Figure 7-7). This means that the entire City of Carrabelle must be evacuated during a Category 3 storm.

It is important to note that there is a difference between Traffic Zone 5 and Carrabelle's CHHA. While Traffic Zone 5 is delineated as all land seaward of U.S. Highway 98, Carrabelle's CHHA has been delineated as all land seaward of County Road 30-A and all land seaward of U.S. Highway 98 starting where U.S. Highway 98 intersects with County Road 30-A along the Carrabelle River (see Figure 7-8). Therefore, during a Category 1 storm, all persons located within the CHHA must be evacuated, and during a Category 3 storm, all persons located within Traffic Zone 5 must be evacuated.

During the public comprehensive planning workshops conducted in November 2005 through January 2006, the Carrabelle community opted to expand the above definition of the City's hurricane evacuation zone to include the following:

The City shall encourage all persons living within the City Limits to evacuate in the event of a Tropical Storm or Category 1 hurricane. In addition, the City has established a Hurricane Evacuation Zone in order to identify, notify, and facilitate the timely evacuation of those persons living within the higher flood risk areas of the City. The Hurricane Evacuation Zone encompasses the following:

- Areas waterward of County Road 379 (River Road);
- Areas waterward of County Road 67-A (Ryan Drive); and

- Areas south of U.S. Highway 98

The Hurricane Evacuation Zone for the City of Carrabelle is also illustrated in Map I-16 of the Future Land Use Map series, included within Appendix A of the data and analysis.

Persons Requiring Evacuation: Table 7-5 shows the number of residents and tourists in Franklin County estimated to leave their dwelling units in the event of an evacuation. Using the trip generation model of PBS&J's battery of hurricane programs, total evacuating people and vehicles produced by each evacuation traffic zones were calculated and split by general destination type (trip purpose). The four general destination types are in-county public shelter, in-county hotels/motels, in-county home of a friend or relative, and out-of-county. This was accomplished for the 2004 base year, the various storm intensities, and for two levels of assumed tourist occupancy: low tourist occupancy and high tourist occupancy. Low tourist occupancy was assumed to be 35% and high tourist occupancy was assumed to be 95%. The number of people involved in an actual evacuation will likely total less than these figures due to the assumed 100 percent participation rate of people from units in storm surge vulnerable areas and mobile homes for each evacuation scenario. Even with door-to-door evacuation notification, it will be difficult to convince all who should leave to do so, even for the most intense storm threats.

Table 7-5. Evacuating People Statistics by Category, Franklin County

Scenario	Year 2004 Estimated Permanent Population*	Maximum People/Vehicles Evacuating	Maximum Public Shelter Demand	Local Public Shelter Capacity ¹
Low Tourist Occupancy	12,057 People (Includes 4,331 mobile home residents countywide)	Includes up to 1,560 seasonal people countywide		
Category 1		8,657/3,826	480 People	0 People
Category 2-5		13,612/5,901	976 People	0 People
High Tourist Occupancy		Includes up to 4,235 seasonal people countywide		
Category 1		11,330/4,761	480 People ²	0 People
Category 2-5		16,285/6,835	976 People ²	0 People

Source: ARPC *Evacuation Transportation Analysis*, August 2004

* All socioeconomic data developed by PBS&J using Year 2000 US Census and 2002 Florida Statistical Abstract data for input into the transportation and analysis effort. The totals presented in this table are for the entire County.

¹ Shelter capacity figures from 2004 Statistical Emergency Shelter Plan and include only ARC 4496 compliant "Risk" shelter spaces

² No difference in low and high tourist occupancy shelter use numbers is a reflection that no tourists are assumed to elect to use public shelter, favoring instead to evacuate out of County.

Figure 7-9 reflects the evacuating population for a Category 1, Low Tourist Occupancy scenario for Franklin County. The City of Carrabelle is located in Traffic Evacuation Zone 5. According to FIGURE 7-9, less than 300 persons within Traffic Evacuation Zone 5 are projected to evacuate in this particular scenario.

Figure 7-10 reflects the evacuating population for a Category 2-5, High Tourist Occupancy scenario for Franklin County. The City of Carrabelle is located in Traffic Evacuation Zone 5. According to Figure 7-10, less than 500 persons within Traffic Evacuation Zone 5 are projected to evacuate in this particular scenario.

Hurricane Shelter Demand and Availability: In the event of an approaching hurricane, many residents of both coastal and inland Counties will seek refuge in public shelters. According to the Apalachee Region Planning Council, the number of spaces available in public shelters in each County is constantly

changing as a result of a number of factors that may be different for each hurricane, including: season, storm intensity (tropical storm through Category 5 hurricane), storm direction, landfall projection, availability of shelters, and availability of qualified shelter operators. Because of these many factors, it is important to note that not all shelters will be open for use for every hurricane. Additionally, shelter space in coastal Counties is generally only available for lesser intensity hurricanes. For example, Franklin County will not open shelters for Category 2-5 hurricanes. Franklin County also does not have American Red Cross (4496) compliant shelters within its jurisdiction. Therefore, all residents, including those located in Carrabelle, must evacuate the County, in the event of evacuation notification. According to Table 7-4, a maximum of 480 people would require shelter during a Category 1 scenario and 976 people would require shelter during a Category 2-5 scenario for both the low and high tourist occupancy scenarios in Franklin County. No difference in low and high tourist occupancy shelter use numbers is a reflection that no tourists are projected to elect to use public shelter, favoring instead to evacuate out of County. Tourist demand for public shelters in Franklin County is assumed to be zero since no public shelter facilities are available.

Figure 7-11 reflects the public shelter demand for a Category 1, Low Tourist Occupancy scenario for Franklin County. The City of Carrabelle is located in Traffic Evacuation Zone 5. According to Figure 7-11, ten persons within Traffic Evacuation Zone 5 are projected to demand occupancy in a public shelter in this particular scenario.

Figure 7-12 reflects the public shelter demand for a Category 2-5, High Tourist Occupancy scenario for Franklin County. The City of Carrabelle is located in Traffic Evacuation Zone 5. According to Figure 7-12, no persons within Traffic Evacuation Zone 5 are projected to demand occupancy in a public shelter in this particular scenario.

Evacuation Routes: U.S. Highway 98 and County Road 67 have been designated as the hurricane evacuation routes within the City of Carrabelle. The directional traffic service volumes (based on the number of lanes and facility type) in the event of an evacuation established for these roadways is less than 750 vehicles per hour (see Figure 7-13). Table 7-6 illustrates the number of vehicles evacuating Franklin County by roadway and next receiving County.

Table 7-6. Exiting Evacuation Traffic By Route and By Storm Scenario, Franklin County

Originating County	Evacuation Scenario	Exiting Vehicles by Evacuation Roadway and Next Receiving County			
		US 98 EB	US 319	SR 65	CR 67
Franklin County		To Wakulla	To Wakulla	To Liberty	To Liberty
	CAT 1, low occupancy	1,630	1,313	246	30
	CAT 1, high occupancy	2,133	1,531	256	33
	Low CAT 2-5, occupancy	2,472	2,189	444	51
	CAT 2-5, high occupancy	3,059	2,501	476	58

Source: ARPC Evacuation Transportation Analysis, August 2004

Transportation and Hazard Constraints on the Evacuation Routes: There are large portions of the Counties in the Apalachee planning region that do not enjoy the benefits of an extensive or robust road system. Therefore, the evacuation roadway network tends to channel most evacuees to the same road segments, thereby increasing the likelihood of local and regional bottlenecks. Segments with the highest travel demand (evacuating vehicles to service volume ratio) are considered the “critical links” for a particular evacuation scenario. These congested roadway segments control the flow of evacuation traffic during a hurricane evacuation and are key areas for traffic control and monitoring. Located approximately 5.38 miles east of Carrabelle, U.S. Highway 98 through Lanark Village to the U.S. Highway 19 split (segment L) is one of the critical roadway segments in Franklin County that will control the flow of evacuation traffic.

Figure 7-14 and Figure 7-15 illustrate potential evacuation traffic congestion areas by roadway segment and by storm category. The City of Carrabelle is located in Traffic Evacuation Zone 5. Based on these maps, it appears that the segments of U.S. Highway 98 that run through Carrabelle (Segments J and K) are projected to have Light congestion (2-4 vehicle congestion) during a Category 1, Low Tourist Occupancy scenario and Moderate congestion (4-8 vehicle congestion) during a Category 2-5, High Tourist Occupancy scenario. Additionally, Segments of U.S. Highway 98 between Eastpoint and Carrabelle are in close proximity to the shoreline and could be subject to critical erosion during a storm. . Due to these facts, the City would like to encourage its residents to evacuate via County Road 67. Therefore, the City considers County Road 67 as its *primary* evacuation route and U.S. Highway 98 as its *secondary* evacuation route.

Evacuation Clearance Times: According to the ARPC's *Evacuation Transportation Analysis* (2004), clearance time is one of two major considerations involved in issuing an evacuation order or advisory. The other time aspect that must be weighed is the arrival of sustained tropical storm winds. Another very important factor in evacuation decision-making is the time of day that the order is issued. The time of day will determine the response curve that should be used when selecting the most appropriate clearance time to use in decision-making.

Clearance time is the time required to clear the roadway of all vehicles evacuating in response to a hurricane situation. Clearance time begins when the first evacuating vehicle enters the road network and ends when the last evacuating vehicle reaches an assumed point of safety. Clearance time includes mobilization time, which is the time required by evacuees to prepare for evacuation and enter the road network; travel time, which is the time needed to travel along the road network; and queuing delay time, which is the cumulative times for all stops caused by traffic congestion. Clearance time does not relate to the time any one vehicle spends traveling on the road network and does not include time needed for local officials to assemble and make a decision to evacuate. The evacuation clearance times for the City of Carrabelle is 12 hours for a Tropical Storm, Category 1, 2, 3, 4, and 5 storms. These are the same hurricane evacuation times developed for Franklin County.

Projected Impact of Future Population Density on Hurricane Evacuation Clearance Times: Development and redevelopment is currently occurring along Carrabelle's waterfront area and is expected to continue throughout the planning horizon. It should be noted that several factors are currently in place that could substantially affect the future growth of the City of Carrabelle, but are not presently quantifiable. These factors include the Franklin Correctional Institute, which will be a major employer and attractor for new residents; the City's ability, through recent and ongoing major upgrades to sanitary sewer and potable water facilities, to provide critical services to the coastal areas adjacent to the City; and future development by the St. Joe Company, of the area adjacent to and east of the City. Therefore, it will be necessary for the City to monitor and reevaluate projections to track the developmental and associated population changes through the short-term planning horizon (five years) in order to accurately project the impact of the anticipated population on hurricane evacuation clearance times.

Special Needs of the Elderly, Disabled, or Hospitalized: There are no hospitals located in Carrabelle. The Harbor Breeze Retirement Center is the only group home located in Carrabelle. It is licensed to serve thirty (30) persons and is currently home to twenty-four (24) persons. All assisted living facilities licensed in the State of Florida are required to submit an emergency management plan that meets the minimum criteria as required in Chapter 400.441, F.S. and Rule 58A-5, F.A.C. The Harbor Breeze Retirement Center's emergency management plan is on file at the Franklin County Emergency Management Office. The plan contains basic information concerning the facility; provides a hazard analysis for the facility; and defines policies, procedures, responsibilities and actions that the facility will take before, during, and after any emergency situation, including evacuation notification, direction and control, and sheltering. Harbor Breeze Retirement Center would evacuate its residents outside of the County upon being notified of the need to evacuate.

Possible Measures to Maintain or Reduce Hurricane Evacuation Times: The City of Carrabelle has already adopted several measures into its Comprehensive Plan to maintain or reduce hurricane evacuation times, including:

- A policy that limits the density of new residential development within the CHHA to a maximum of two dwelling units per gross acre;
- A policy that prohibits the approval of new development orders for mobile home projects within the CHHA if the project is within a FEMA rated V-zone;
- A policy that prohibits City-funded public structures from being built in the CHHA, unless the structure is for public access or resource restoration;
- A policy that limits the expenditure of City funds for infrastructure within the CHHA;
- A policy that requires structures in coastal areas needing redevelopment after a disaster, which were nonconforming in terms of flood elevation and which suffered damage in excess of fifty percent of their appraised value during a natural disaster, shall not be allowed to rebuild except in compliance with land use and in accordance with FEMA elevation requirements; and
- A policy that states that the City shall adopt into its land development regulations the most recent amendments to the 1985 edition of Southern Standard Building Code by December 2007.

Other policy measures that the City should consider adopting in order to maintain or reduce hurricane evacuation times include:

- Requiring subdivisions in vulnerable areas to set aside the most susceptible parts of their parcels for non-intensive uses, such as recreation facilities;
- Creating disincentives for development in highly vulnerable areas, such as considering the levy of impact fees for development that will increase the cost of emergency services and/or the cost of infrastructure repair or replacement;
- Providing incentives for development outside vulnerable areas;
- Adopting or participating in public education programs dealing with response to the hazards affecting the community, protective actions, and ways to reduce potential damage; and
- Adopting a policy within the Comprehensive Plan that establishes County Road 67 as Carrabelle's primary hurricane evacuation route.

3. Post-Disaster Redevelopment

Hazard Reduction Measures and Post-Disaster Redevelopment: Hazard mitigation measures are in place to reduce the probability of exposure to hazards. Included are guidelines to manage development and protect life and property through building codes, land use, flood prevention, hurricane evacuation planning, and other activities. These activities fall into two government functions: emergency management, which is operations-oriented; and development management, which focuses on longer-term development conditions. Emergency management operations are described in the Franklin County Emergency Operations Plan. The plan is used whenever the County or Cities must prepare for and/or react to any natural or man-made disaster. It is oriented to hurricanes, floods, and tornadoes, which are the disasters that the County is most susceptible to. Management of development generally relies upon floodplain management measures contained in the City's land development regulations to reduce the risk of storm damage. Construction is regulated under the Standard Building Code and requirements of the National Flood Insurance Program (NFIP).

- **The Flood Hazard Prevention Ordinance**, contained in the Carrabelle's land development regulations, regulates coastal construction in all areas of special flood hazard, consistent with Chapter 161, F.S., and the National Flood Insurance Program (NFIP). Special construction standards are required for new service areas vulnerable to flooding. The standards are intended to minimize impacts on natural features and to allow structures to withstand the forces of the 100-year storm. All new habitable structures must be constructed with the lowest floor above a base flood elevation. As existing buildings that are below the base flood elevation are expanded or

replaced, they will have to meet the new flood requirements. Eventually all buildings will meet the new strict requirements for building in a flood zone.

Variances to the flood requirements are approved by the Board of Adjustment and are subject to certain qualifying conditions that justify the request for variance. The City maintains a record of all appeal actions and reports any variances to the Federal Emergency Management Agency (FEMA), upon request. Failure to substantially comply with the NFIP can result in a community being put on probation, with the liability of being suspended from the program if deficiencies remain uncorrected.

- **Zoning regulations** within the land development regulations classify types of allowable development. The type of uses permitted corresponds with the level of risk. For example, heavy industrial uses with a high risk for hazardous substances or activities are not located in areas susceptible to velocity wave action. In addition, the density of residential uses is considered. For example, low-density uses are the predominant zoning classification in the CHHA. The zoning regulations also provide for bringing non-conforming structures and uses of land into compliance with zoning requirements. Compliance with the zoning regulations is limited to restrictions on area, lot coverage, height, or other characteristics of the zoning district.
- **Subdivision regulations** within the land development regulations help to reduce the risk of flood damage by requiring plat information for review of marshes, preservation areas, and other conditions affecting the development potential of the site.
- **Protection of coastal vegetation** minimizes flood and erosion hazards and helps buffer development from the direct impact of storms. Setbacks for waterfront development and preservation of coastal vegetation are required under the Critical Shoreline Ordinance of the City's land development regulations and site plan process, as well as State and federal environmental permitting.
- **Federal, State, Regional, and Local Organizations** that facilitate post-disaster mitigation and redevelopment:

Table 7-7. Post-Disaster Mitigation Organizations: Federal, State, Regional, and Local

Organization	Mitigation Functions
Federal	
Federal Emergency Management Agency	Post-disaster relief and assistance; National Flood Insurance Program; Community Rating System; Hazard Mitigation Grant Program; Repair and Restoration of Disaster-Damaged Historic Properties Program; Hazardous Materials Training Program for Implementation of the Superfund Amendment and Reauthorization Act
U.S. Army Corps of Engineers	Dam maintenance; Dredge and fill permitting; Wetland permitting; Emergency protection from erosion caused by flooding
U.S. Department of Defense	Post-disaster relief and assistance
U.S. Department of Commerce	Offers Small Business Administration loans for individual relocation and repair or flood-proofing; Offers Fisheries Development and Utilization Research and Development Grants and the Cooperative Agreements Program, which offers grants for the enhancement of sustainable fishing industries
U.S. Department of Agriculture	The Soil Conservation Service is a possible source for Wetland Reserve program, flood hazard studies, and levee infrastructure improvement funds. The Rural Development program provides low cost loans to rural communities for public services and infrastructure.
State	
Florida Department of Community Affairs	Local planning assistance and review; Comprehensive Plan amendments and evaluation; Disaster preparedness, response, recovery, and mitigation

Table 7-7. Post-Disaster Mitigation Organizations: Federal, State, Regional, and Local

Emergency Management Preparedness and Assistance Trust Fund	Provides competitive grants to state or regional agencies, local governments, and private non-profit organizations to implement projects that will further state and local emergency management objectives.
Florida National Guard	Post-disaster relief and assistance
Flood Mitigation Assistance	Federally funded State program providing 75% of cost to elevate or relocate repetitively damaged properties in NFIP communities.
Regional	
Apalachee Regional Planning Council	Local planning assistance; Grant writing assistance; and Grant program administration
Local Emergency Planning Committee	Planning, regional coordination, education and awareness regarding hazardous materials public safety issues; organized in conjunction with the Regional Planning Council.
Capitol Area Chapter of the American Red Cross	Disaster planning, disaster awareness, disaster response training, and post-disaster assistance
Salvation Army	Post-disaster assistance
Local	
City of Carrabelle	Local land use planning and a conduit for local hazard information
City of Carrabelle Police Department	Enforce laws, maintain order, coordinate with City Commission and County Emergency Management
County Planning Department	Local land use planning and a conduit for local hazard information
Franklin County Building Department	Enforcement of local building codes including anchoring of manufactured housing, registration of mobile homes, elevation of structures in flood zones, and site design to minimize stormwater.
County Sheriff's Department	Law enforcement, evacuation support, and traffic control
Emergency Management	Coordination of local disaster preparation, response, recovery, and mitigation activities
County Road Department	Local road repair, culvert maintenance, and debris removal

Source: Franklin County Local Mitigation Strategy, 2004

- Local Land Development Regulations:** Structures constructed below required base flood elevations and those located in the velocity zone have the highest potential for damage. Because of their susceptibility to hurricane force winds, mobile homes are also at high risk of storm damage. Standards for anchoring and blocking mobile homes are contained in the City's Flood Hazard Prevention Ordinance. Furthermore, the flood ordinance prohibits the placement of mobile homes in the velocity zone.

Most of the damage from hurricanes occurs in areas with structures built prior to, and not in conformance with, present local, State and federal standards. Waterfront homes constructed on grades below base flood elevation were built before the 1983 Flood Insurance Rate Map (FIRM), in which the Federal Emergency Management Agency (FEMA) identified areas of special flood hazard in the City. In accordance with the flood prevention ordinance, these structures could be re-built to pre-disaster conditions provided that the cumulative cost of modifications during anyone year do not exceed 50% of current market value. Improvements exceeding the 50% threshold are termed substantial improvements and would necessitate conformance with more recent and stricter building standards approved in 1983 and amended in 1987.

- Land Acquisition:** There are two federal programs that provide funds for acquisition of insured properties that have been seriously damaged by flooding or undermined by erosion, so as to be in imminent danger of collapse or subsidence. Section 1362 of the National Flood Insurance Act empowers the Federal Insurance Administration (FIA) to purchase insured properties, move the damaged structure and transfer the land as open space to a State or local government agency. The Housing and Community Development Act of 1987 provides for claim payments to relocate or demolish buildings subject to "imminent collapse or subsidence" as a result of erosion.

Federal assistance under both programs is limited and reserved for special situations where damage is severe or imminent and the property owner and local government agree to participate.

- **Completed or Ongoing City of Carrabelle Mitigation Measures:** Some of the mitigation measures that the City has completed or is currently undergoing include the placement of shutters on critical public facilities; the placement of a County health department branch located within Carrabelle; and upgrades to the Carrabelle sanitary sewer and potable water systems.

C. Marina Siting

The marina siting standards that have been adopted into the Goals, Objectives, and Policies of the Coastal Management Element of the City's *2020 Comprehensive Plan* are the same standards as those adopted into Franklin County's *Comprehensive Plan* (2004).

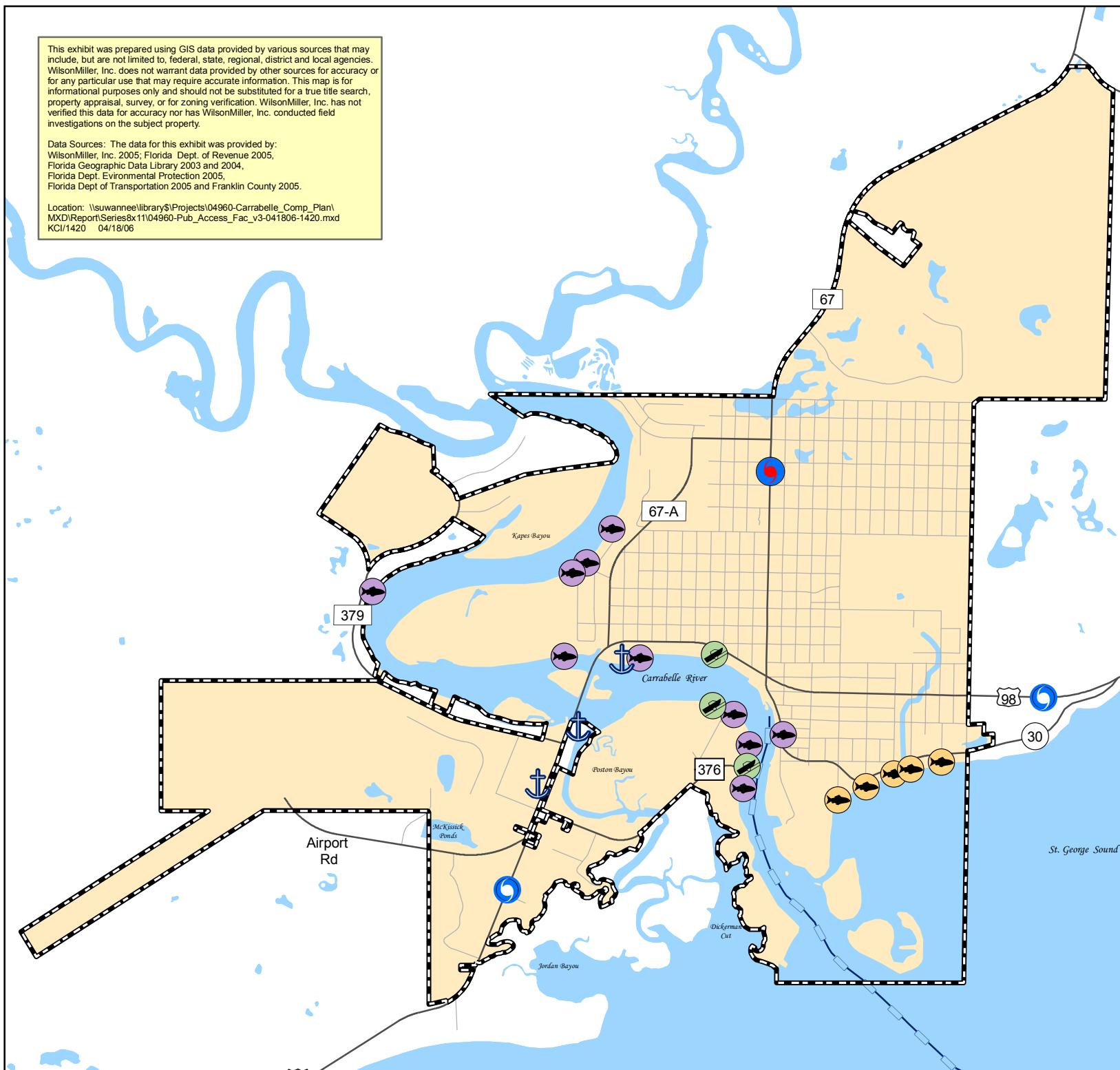
D. Port Master Plans for Deepwater Ports

Technically, the City of Carrabelle has an established Carrabelle Port and Airport Authority. However, it is currently defunct. According to 9J-5.013(k), the Coastal Management Element is required to include a component that includes the comprehensive master plan prepared by each deepwater port listed in s. 311.09(1), F.S. (which includes the ports of Jacksonville, Port Canaveral, Fort Pierce, Palm Beach, Port Everglades, Miami, Port Manatee, St. Petersburg, Tampa, Port St. Joe, Panama City, Pensacola, Key West, and Fernandina). Due to the fact that the port of Carrabelle is not classified as a deepwater port and is not included in s. 311.09(1), F.S., the City is exempt from having to include this component.

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Coastal Management Element Figure 7-1

Public Access Facilities Map

April 2006

City of Carrabelle, Florida

Legend

- City Limits
- Major Roads
- Minor Roads
- Ferry
- Hurricane Evacuation Route**
 - Primary Route
 - Secondary Route
- Rivers, Lakes, and Bays
- Marine Facilities**
 - Boat Ramp
 - Marina
 - Public Fishing Access (Improved)
 - Public Fishing Access (Unimproved)

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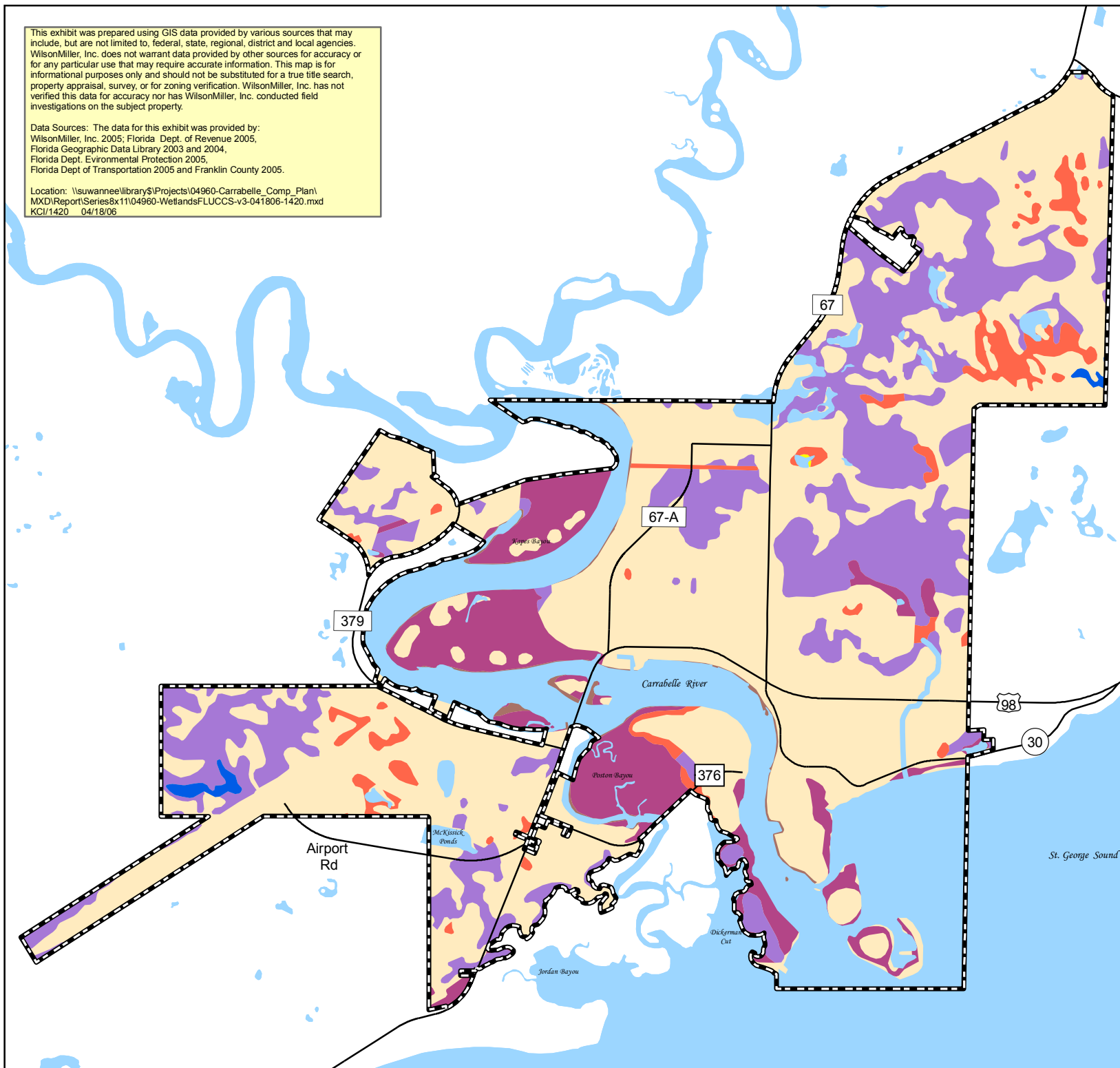
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Coastal Management Element Figure 7-2 FLUCCS Categories of Wetlands Map

April 2006

City of Carrabelle, Florida

Legend

- City Limits
- Major Roads
- Rivers, Lakes, and Bays
- Cypress
- Non-vegetated Wetlands
- Streams and Waterways
- Vegetated Non-forested Wetlands
- Wetland Forested Mixed
- Wetland Scrub Shrub

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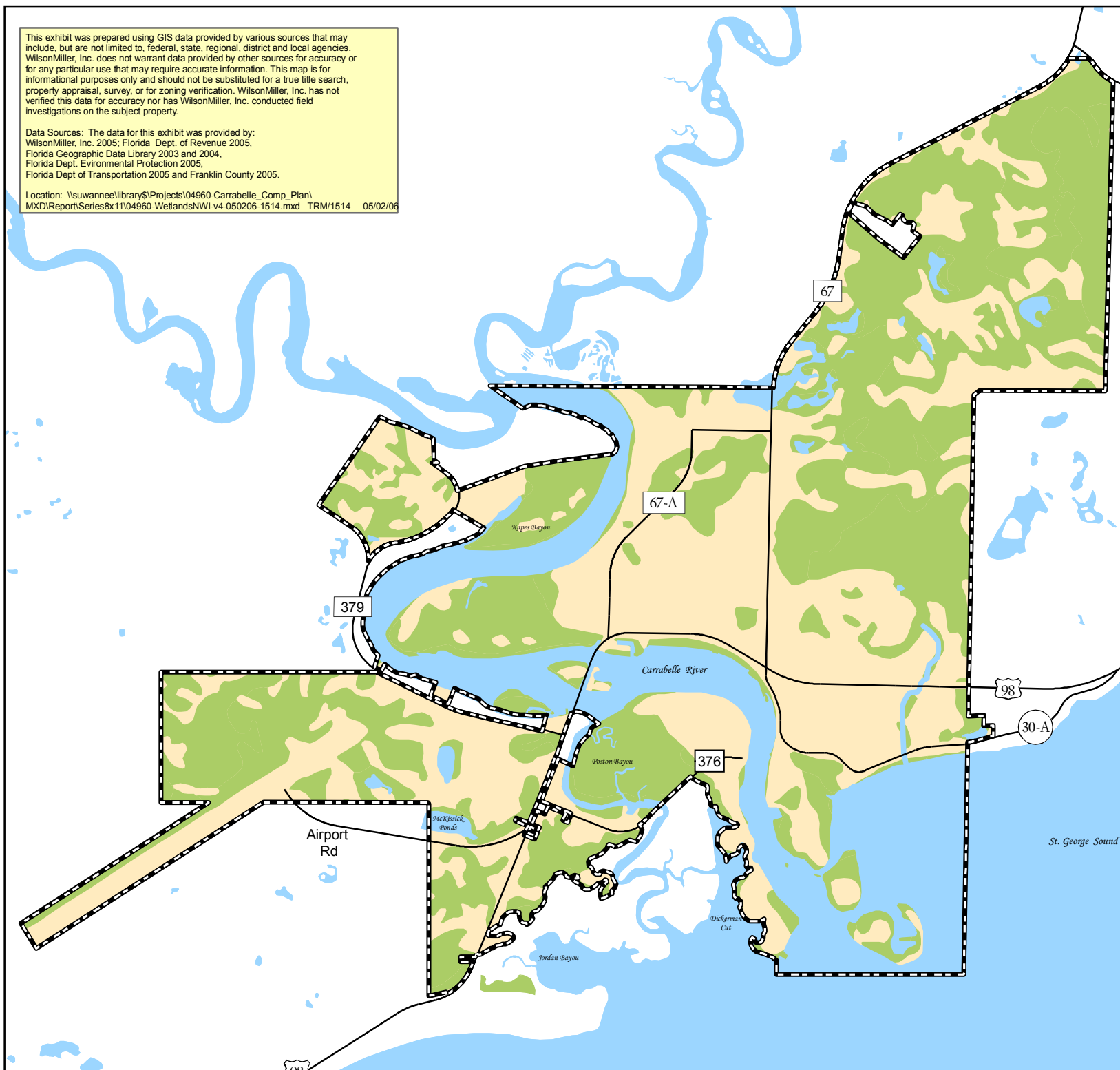
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
Coastal Management Element Figure 7-3

NWI Wetlands Map

May 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
-  NWI Wetlands

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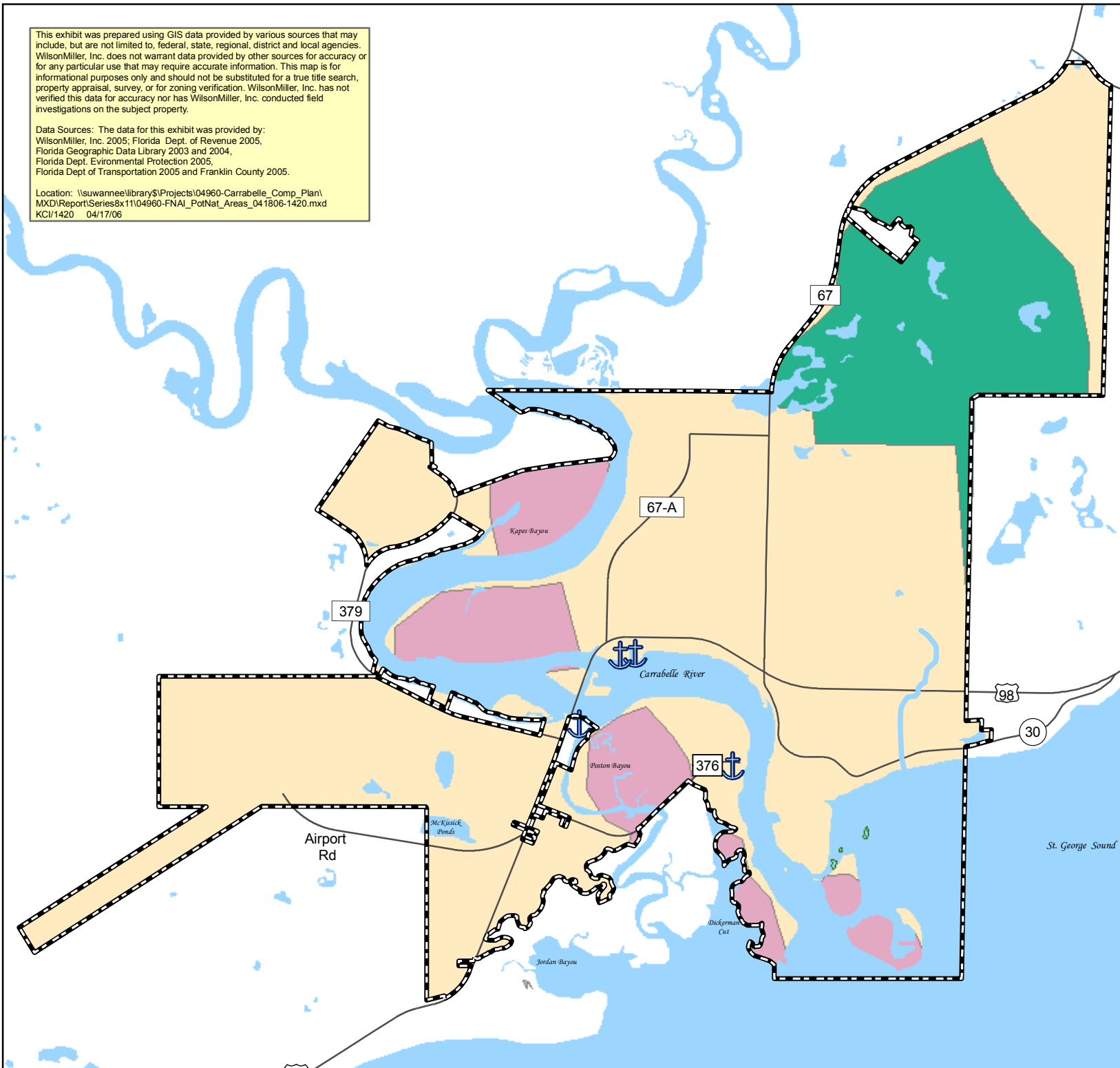
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

Coastal Management Element Figure 7-4

FNAI Potential Natural Areas Map



April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Marina
-  Major Roads
-  Rivers, Lakes, and Bays
-  Oysters Beds

FNAI Potential Natural Areas

-  Low to medium quality mosaic of wetlands and flatwoods
-  Mostly estuarine tidal marsh with spoil islands, some coastal mesic flatwoods or scrub.

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




Coastal Management Element Figure 7-5

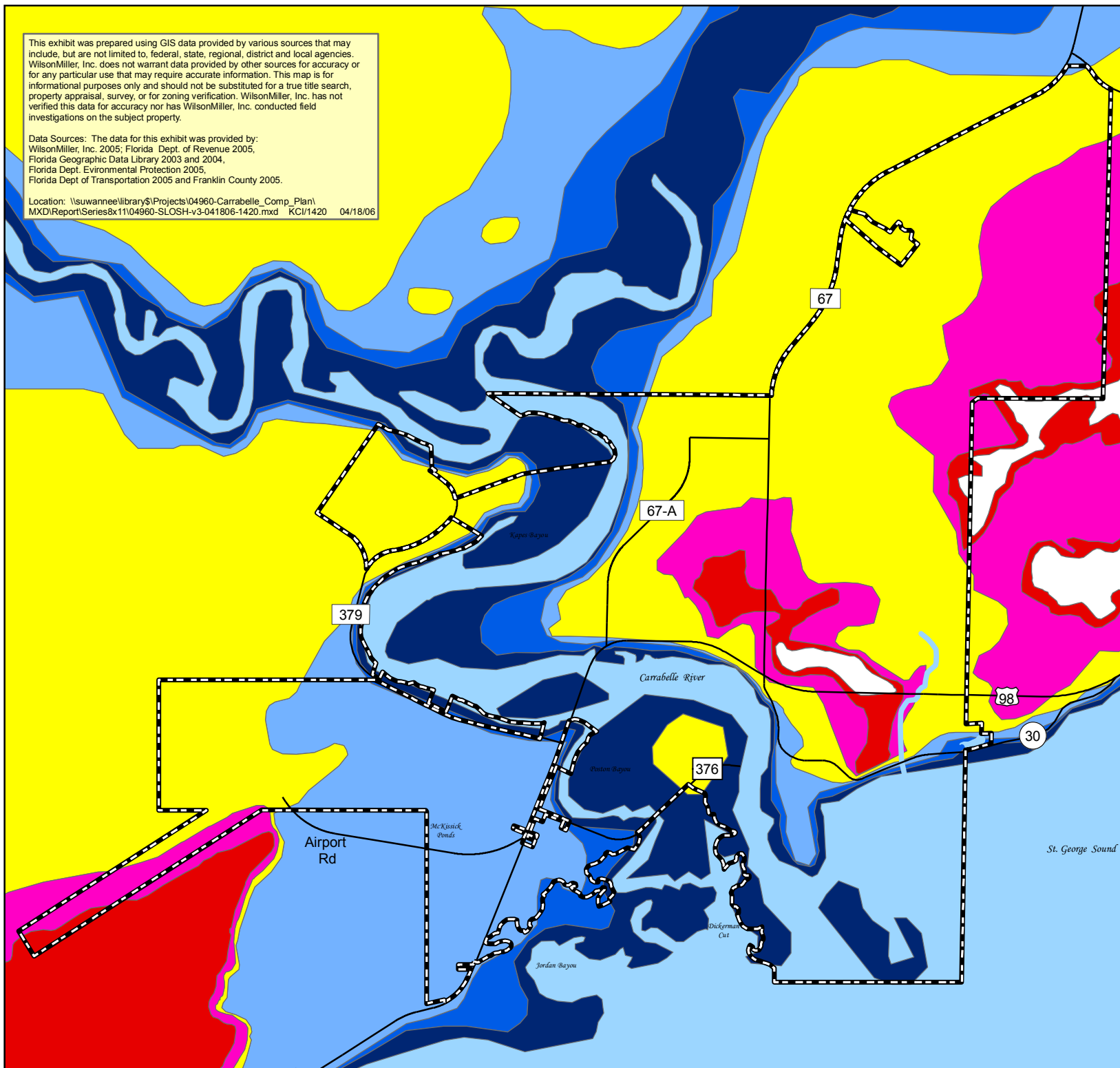
SLOSH Map

April 2006

City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
- SLOSH Categories**
-  Tropical Storm
-  Category 1
-  Category 2
-  Category 3
-  Category 4
-  Category 5
-  No Category



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
Coastal Management Element Figure 7-6

Integrated Wildlife Habitat Ranking System











April 2006

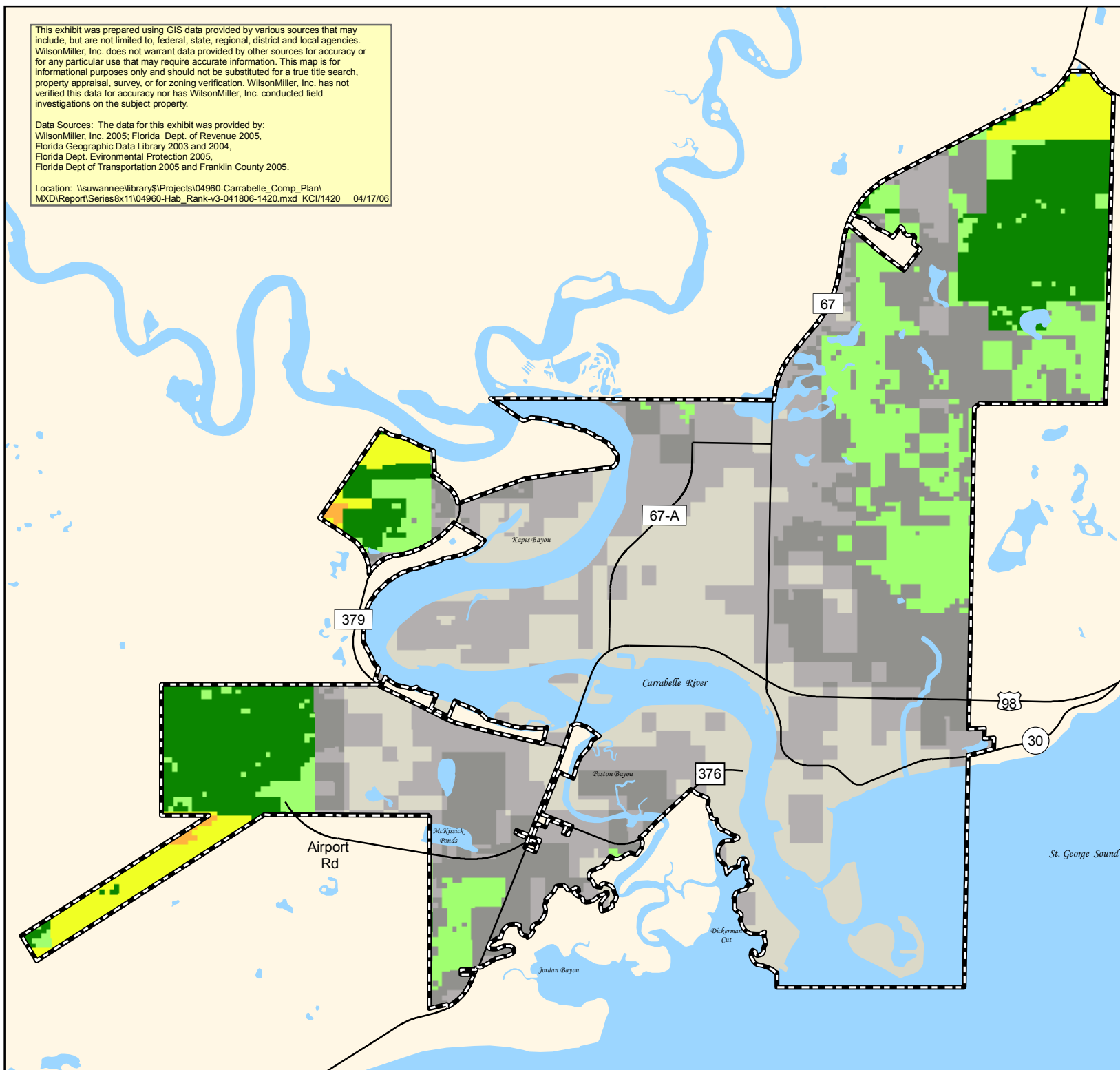
City of Carrabelle, Florida

Legend

-  Carrabelle City Limits
-  Major Roads
-  Rivers, Lakes, and Bays

Habitat Value

-  1 - worst
-  2
-  3
-  4
-  5
-  6
-  7
-  8
-  9
-  10 - best



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



Coastal Management Element Figure 7-8

Coastal High Hazard Area Map



April 2006

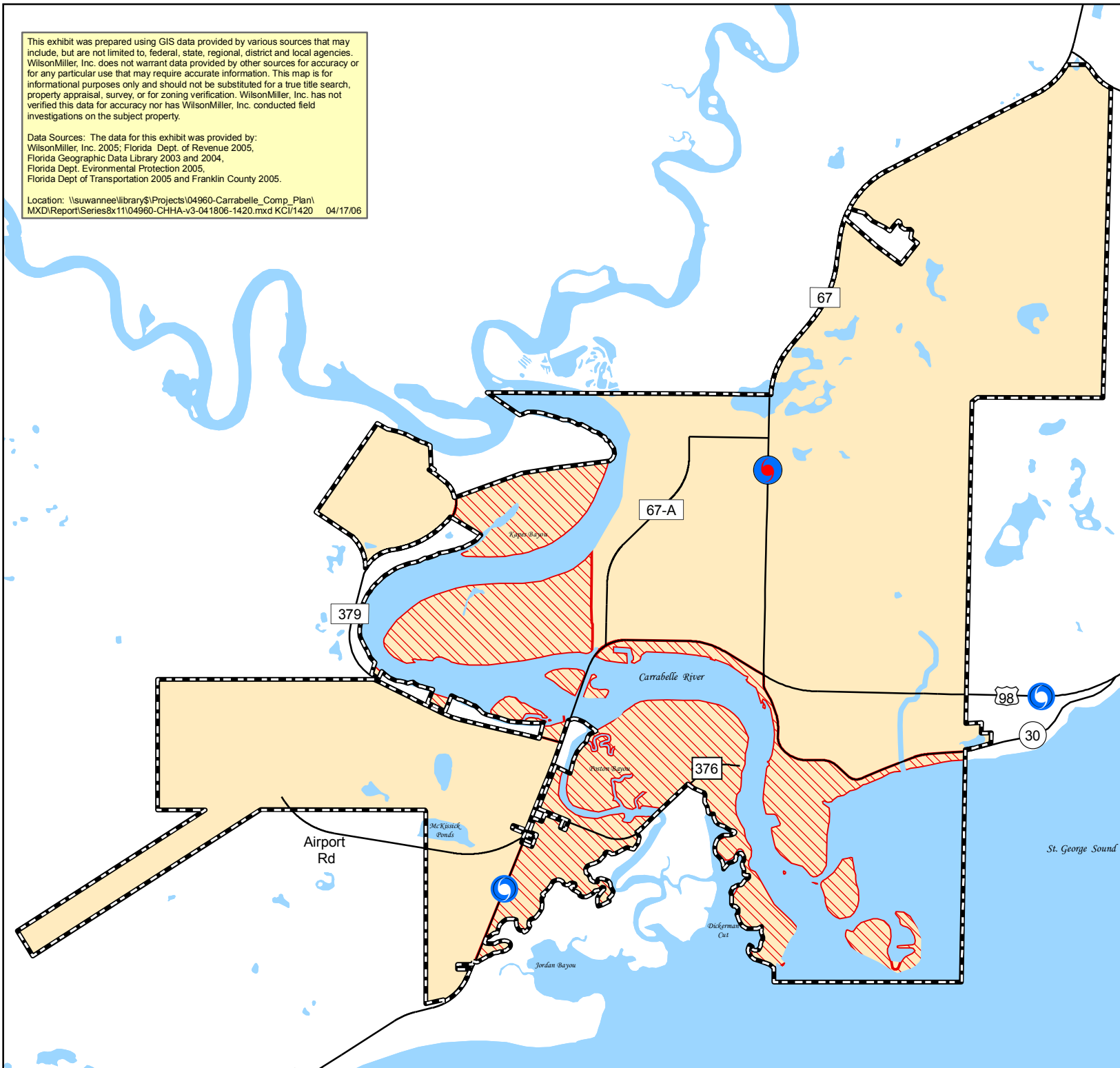
City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
-  Coastal High Hazard Area

Hurricane Evacuation Route

-  Primary Route
-  Secondary Route



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0 0.15 0.3 0.6 Miles



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

Coastal Management Element Figure 7-16

Hurricane Evacuation Zone Map



May 2006

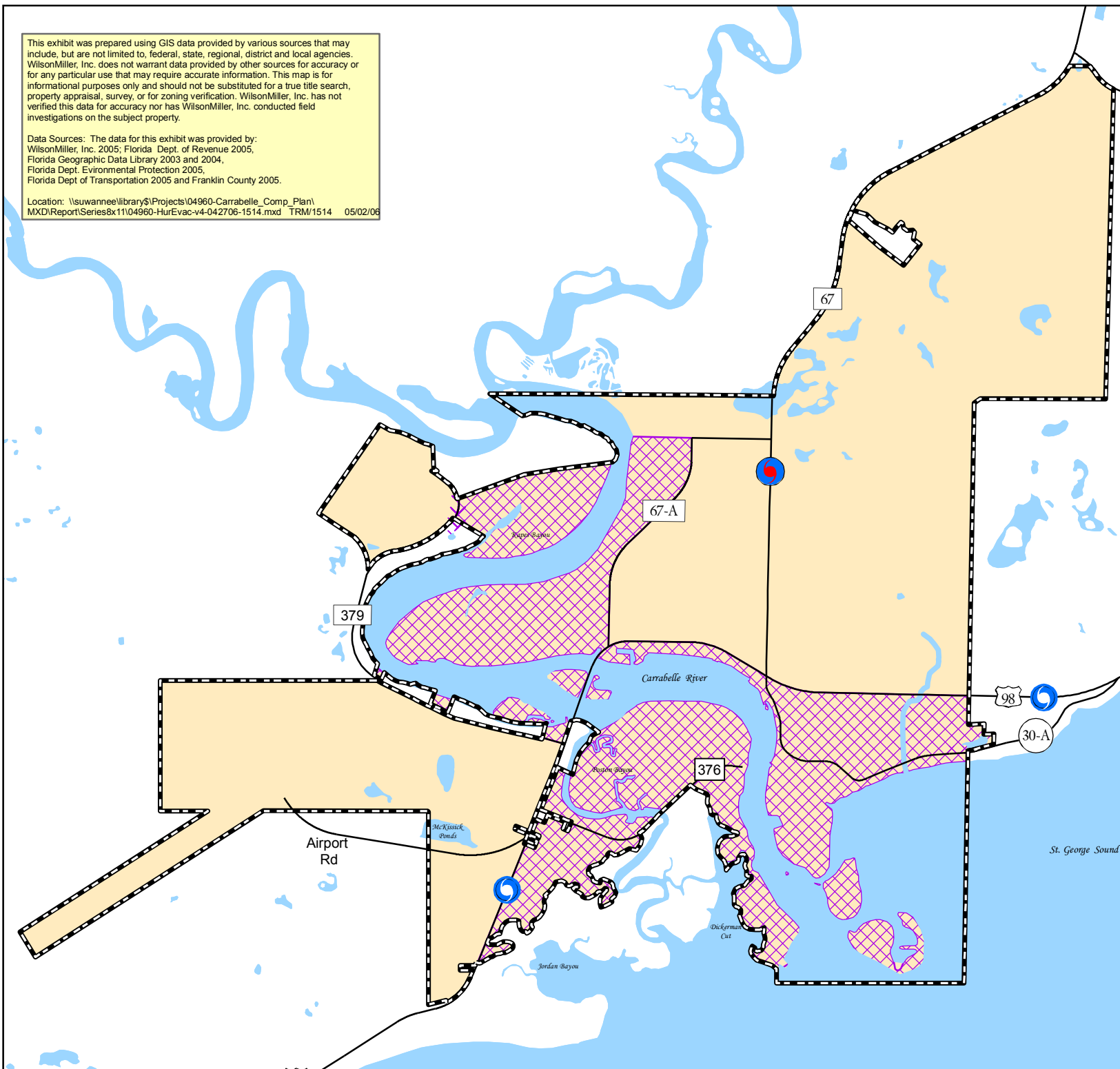
City of Carrabelle, Florida

Legend

-  City Limits
-  Major Roads
-  Rivers, Lakes, and Bays
-  Hurricane Evacuation Zone

Hurricane Evacuation Route:

-  Primary Route
-  Secondary Route



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0 0.15 0.3 0.6 Miles 

8. CONSERVATION ELEMENT

The purpose of this Element is to promote the conservation and protection of natural resources within the City of Carrabelle. This Element will analyze the current and future demand for natural resources and will serve as a means of protecting these natural resources as growth occurs throughout the City.

A. Existing Conditions

Carrabelle is located at the mouth of the Carrabelle River. The entire City falls within the New River Basin and there are three basic ecosystems within and adjacent to Carrabelle: the St. George Sound habitat, the Carrabelle Riverine and Floodplain habitat, and the Upland habitat. The New River basin provides valuable services to Carrabelle, including the storage of groundwater, the accommodation of floodwater, the stabilization of runoff, the provision of a habitat for wildlife, and the reduction or prevention of erosion. The periodic flooding of the New River, Crooked River, and Carrabelle River provides exchanges of waterborne nutrients and detritus, which form the basis of food chains in both the upland and estuarine waters. The freshwater overflows and tidal interactions provide extensive nursery and foraging areas for many varieties of fish and shellfish in the rivers and St. George Sound. The river floodplain also serves as an important travel corridor for many species of wildlife and is also an excellent area for commercial forestry. In addition, there are two spring-fed lakes within the City, both of which are located just west of the Carrabelle River on a tract known as McKissick parcel.

1. St. George Sound Habitat

The Carrabelle River empties into the St. George Sound, a productive estuary that borders Carrabelle. Considered part of the Apalachicola Bay system, the St. George Sound extends from Bulkhead Shoal to the Carrabelle River and East Pass. Numerous oyster bars, lumps, shoal areas, and channels fill the St. George Sound. Its average depth is about nine feet and, like Apalachicola Bay, gets deeper toward the barrier islands with a maximum depth of twenty feet. East Pass, a broad opening between St. George Island and Dog Island, has an average depth of fourteen feet and connects the St. George Sound with the Gulf of Mexico. Dog Island Sound and Alligator Harbor are included in the geographical boundaries of the estuary, and it is likely that the Carrabelle River affects both of them to a certain extent. For further discussion on estuarine water quality, please see "Section 7, Coastal Management Element".

- **Open Water:** Open water is the simplest habitat to physically define and one of the hardest to measure. This habitat is simply the water that occupies the estuarine basin and is in contact with the Gulf and the River. The St. George Sound covers an area of approximately 30,000 acres. This makes open water the largest habitat in Carrabelle's natural resources system. It is estimated that three-fourths of the commercial catch in Franklin County is dependent on the estuarine habitat and condition of Apalachicola Bay. These species include true estuarine forms that use the estuary part of their life cycle for feeding and as a nursery ground, and migratory fresh and saltwater fish, which enter the estuary when conditions are appropriate.
- **Oyster Bars:** Oysters are important and common inhabitants of the St. George Sound. Aggregations of live oysters and empty shells are called oyster bottoms, beds, banks, reefs, or bars, although these expressions are not well defined biologically and are used interchangeably. Oyster bars referred to in this system are subtidal and form raised aggregations covering thousands of acres of bay bottom. The American oyster is the dominant component on the bars. The St. George Sound provides one of the best habitats for oysters in the system and the main concentrations of commercially important bars are located in these areas. The entire Apalachicola Bay system provides many of the necessary requirements, as evidenced by the fact that approximately seven (7) percent of the entire aquatic area in the estuary is covered by oyster bars. Approximately forty (40) percent of the entire aquatic area has been estimated as suitable for oyster bar development (Whitfield and Beaumariage, 1977).

Because of the abundance of cavities, food, and optimal conditions on oyster bars, they provide a significant habitat for a variety of organisms. Other organisms that inhabit the bars include the mussel, mud crab, flat crab, horse oyster, gastropods, blennies, and the roadfish. This is only a partial list and does not include commercially important temporary residents or transitory organisms such as shrimp, crabs, and fish. It also does not include predator organisms that are associated with Apalachicola bay oyster bars.

- **Submerged Vegetation:** The submerged vegetation found in the Apalachicola Bay system (including the St. George Sound) includes fresh water, brackish water, and marine species. Submerged vegetation covers approximately ten (10) percent of the aquatic area in the Apalachicola Bay system. Within the St. George Sound, there are approximately 1,000 acres of submerged vegetation, with the majority of it located in regions of high salinity and low turbidity. Seagrass ecosystems create a diversity of structured habitats. Blue crabs, pink shrimp, and grass shrimp are the dominant macroinvertebrates in the grass bed community and vary in numbers significantly. The dominant fish inhabiting the grass beds are silver perch, pigfish, and spotted seatrout in the summer, and spot in the late winter and spring. The fresh and brackish water submerged species also provide habitat and nursery areas for numerous organisms. Dominant organisms associated with these beds include polychaetes, amphipods, chironomid larvae, snails, amphipods, mysids, crabs and shrimp, rainwater killifish, pipefish, silversides and gobies (Livingston, 1984).
- **Tidal Flats:** Tidal flats are located on the bayward sides of the barrier islands, along the mainland, and in shallow water areas associated with salt and freshwater marshes. These unvegetated expanses of mud or sand are exposed at low tide and submerged at high tide. Organisms associated with tidal flats vary with the salinity regime and the type of substrate, as well as depth of water and time of exposure. The most visible organisms associated with tidal flats behind the barrier islands are oysters. Because of the increased stress in the flat environment, these oysters remain small and do not reach the large size of those growing subtidally on bars. They are commonly called “coon oysters” and have been used in replanting programs on the subtidal bars. Tidal flats provide important feeding grounds for finfish at high tide, as well as habitat for a wide variety of crabs, snails, worms and algae. They also provide important feeding and loafing areas for plovers, sandpipers, gulls, ducks, and other birds that find a wide variety of food to eat left by the tide (Taylor et al, 1973).
- **Soft Sediment:** The largest benthic habitat type found in the Apalachicola Bay system is soft sediment, comprising approximately seventy (70) percent of the estuarine area (Livingston, 1984). This habitat is devoid of vegetation due to high turbidity and color values that limit light penetration. The soft sediment habitat in the St. George Sound provides an important source of food for some of the more dominant fish in the system. Many of the commercially important benthic invertebrates are harvested from this habitat. Shrimp and blue crabs are not restricted to this environment, but feed and burrow extensively here when they leave the protection of the marshes as they mature. The soft sediments contain nutrients and detritus brought in from the river, as well as providing an ideal substrate from bacteria. The Atlantic croaker and spot also feed extensively in this habitat.
- **Wetlands and Marshes:** There is an extensive marsh and wetland system in and adjacent to Carrabelle. Based on National Wetland Inventory (NWI) data, there are an estimated 2,233.2 acres of marsh and wetlands within the City limits. In other words, seventy-nine (79) percent of the total land in Carrabelle is wetlands. Please see Appendix A, Maps I-7, I-8, and I-9 for maps that reflect the NWI Wetlands, the FLUCCS Categories of Wetlands, and the Tidal Flats & Saltwater Marshes (Marine Wetlands) for the City of Carrabelle, respectively. As indicated on both the Existing Land Use Map and the Future Land Use Map, most of Carrabelle's wetlands are

designated as “Conservation” and are thereby secure through the planning period from adverse development impacts. Because of the importance of this habitat as a nursery area, organisms are typically grouped into permanent and transitory categories. Permanent residents include invertebrates such as insects, polychaete worms, amphipods, mollusks, larger crustaceans, and other omnivorous groups, which play an important role in the breakdown of organic matter. Year-round residents also include mammals such as muskrats, and birds such as the clapper rail and great blue heron. Transitory residents include such species as blue crabs, penaeid shrimp, anchovies, largemouth bass, striped mullet, spotted and sand seatrout, and leptomids (Livingston, 1984). These and other important estuarine organisms use the marsh habitat as a nursery ground, breeding area, or feeding zone. The summer and fall in Apalachicola Bay is the most critical period when the marsh is used as a nursery area. The marsh is also important to wildlife such as river otters, raccoons, alligators, and turtles. Transitory birds in marshes comprise one of the larger herbivorous groups and are also significant top carnivores in the system. Northeastern Gulf of Mexico marshes support summer nesting species, migrants, casual feeders, and summer visitors (Stout, 1984). Birds of prey that utilize the marsh system include hawks, owls, ospreys, and bald eagles, which not only feed on fish but also small rodents found in the marsh.

In order to protect the wetlands, the City has enacted a Critical Shoreline Ordinance within its land development regulations, which requires the following standards within the 150-foot Critical Shoreline District (see Map I-16 for a map of the Critical Shoreline District):

- No habitable or impervious development shall occur within 50 feet of the mean high water line of the waters of the state in areas designated “V” on the FEMA FIRM panels unless located within the Commercial Fishing District C-2, which is waterfront dependent;
- Reasonable access to the water shall apply;
- Dredge-and-fill activities shall be prohibited except for maintenance dredging and when no other alternative exists;
- Septic tanks and drainfields, percolation ponds, or polishing ponds shall be set back 150-feet from the shoreline;
- Aerobic treatment units may be allowed within 75 feet of mean high water or jurisdictional wetlands;
- Impervious surfaces and lot coverage within the Critical Shoreline shall be limited to 20 percent;
- All new development shall be required to obtain a FDEP stormwater permit or letter of exemption;
- Residential development shall require a stormwater plan be approved by the City Commission or its designee in conformance with the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs); and
- Docks, pervious walkways and elevated walkways may be permitted to allow access to the water.

Marshes are unique, multifaceted natural systems, which are valuable for food and nutrient sources, faunal habitats, water purification, shoreline stabilization, storm buffers, and recreation. These systems have been viewed as having little value or use until recent times; therefore, many thousands of acres have been enhanced over the years to more productive uses by dredging and filling to convert them to open water or upland areas. The Apalachicola Bay system has escaped major alteration of the marsh system so far, although threats from pollution, watershed modification, construction, and dredge and fill activities continue to destroy small parcels of this important habitat even as regulatory measures to protect these areas are implemented.

2. Carrabelle Riverine and Floodplain Habitat

The Carrabelle River originates at the confluence of the Crooked River and New River. The Carrabelle River runs directly through the City limits. Riverine habitats can be generally subdivided based upon the physical cover provided for organisms. This physical cover is dependent not only on the substrate composition, but also on the shoreline features associated with the substrate (Bass, 1983). These two factors combine to help determine the amount and type of food available, the type of species that will use the habitat, and its adequacy as a spawning and nursery area. Several distinctive habitat types are located along the shoreline of the Carrabelle River. Those habitat types include: steep natural bank, gently sloping natural bank, sandbar, and submerged vegetation.

- **Steep Natural Bank:** The steep natural bank habitat comprises a large percentage of the riverine habitat on the Carrabelle River. This habitat is characterized by a clay substrate with snags, roots, and submerged logs. The slope is greater than 45 degrees, which indicates a water depth usually greater than six feet. This habitat is typically found on the outside of river bends where stream bank cutting occurs. Therefore, currents are usually swift and soil erosion is apparent. Species commonly found on steep natural bank habitats include redear sunfish, black crappie, common carp, grayfin redhorse, channel catfish, and weed shiner.
- **Gentle Sloping Natural Bank:** The gently sloping natural bank habitat currently comprises another habitat type found in the Carrabelle River. The substrate in this habitat is a mixture of clay, mud, and fine sand, and typically contains overhanging trees with many snags and submerged logs. Water depth is generally less than four feet with a slope less than 45 degrees. This habitat is typically found in the coastal lowlands and on either side of point sandbars; therefore, currents are generally slow. The gently sloping natural bank habitat is found throughout the river, but usually predominates in the lower river. Species commonly found on gently sloping natural bank habitats include redear sunfish, spotted sunfish, spotted gar, bowfin, gizzard shad, common carp, grayfin redhorse, channel catfish, striped mullet, threadfin shad, coastal shiner, and weed shiner.
- **Submerged Vegetation:** The submerged vegetation habitat is only found in the lower river section near the Bay. The vegetation characteristic of this habitat is *Vallisneria American*, and is usually found in bands 10 to 100 feet wide, parallel to the shoreline. Water depth is shallow and few snags or overhanging vegetation are present. Water velocity is also slow, again a characteristic of submerged vegetation habitats. This habitat is only found in the lower miles of the river. Species commonly found in the submerged vegetation habitat include chain pickerel, spotted sunfish, spotted gar, bowfin, common carp, and golden shiner. Others may include gulf menhaden, brown bullhead, sea catfish, golden topminnow, starhead topminnow, rainwater killifish, bluespotted sunfish, leather jacket, pinfish, silverperch, spot, and Atlantic croaker. The presence of so many marine species can be explained by salinity variations. Habitat preferences may be indicated by the fact that these species have not been collected from gently sloping natural bank habitats or sand bars and disposal site habitats in the same areas.
- **Sandbar:** The sandbar habitat found in the Carrabelle River consists of two types, the natural sandbar, of which few probably still exist, and the dredged material disposal sites which are already numerous and continue to increase in size and number. The sandbar habitat is found throughout the River with approximately fifty (50) percent of the total in the middle section. This habitat is characterized by shallow water less than four feet, slow to moderate water velocities, the absence of snags, and an unstable, shifting, sand substrate. Natural sandbars traditionally form on the inside of river bends. Species commonly collected on sandbar (disposal site) habitat include sunshine bass, blue gill, redear sunfish, largemouth bass, longnose gar, gizzard shad, common carp, quillback, spotted sucker, grayfin redhorse, channel catfish, bluestripe shiner, and hogchoker. The channel catfish utilize the sandbar habitat nocturnally.

3. Upland Habitat

The Carrabelle uplands are comprised of seven generalized communities as discussed below.

- **Sandhills:** Sandhills represent a xerophytic pine forest community occurring on hilltops and slopes of rolling hills. The sandhill community is common and widespread. Sandhill vegetation consists of widely spaced longleaf pines, which form an open canopy allowing sunlight to reach the ground, enhancing the growth of the understory and ground cover. Deciduous oaks such as turkey oak, bluejack oak, southern red oak, and sand post oak are the most common understory species. The low, dense ground cover is very high in species richness. Wiregrass, pineywoods dropseed, bracken fern, and blueberry are just a few of the many herbaceous and woody plants that form this nearly continuous ground cover. Myrtle oak and sand-live oak, two evergreen xerophytic oaks that are usually associated with sand pine scrub, are also understory oaks of the coastal scrub oak phase. Sand post oak, although not forming a phase representative of the sandhill community, is abundant along the edges of bluffs where moisture is plentiful (Clewell, 1986).

Sandhills provide year-round or seasonal habitat for approximately 30-40 invertebrates and vertebrates, many of which are endangered, threatened, or species of special concern (Landers and Speake, 1980). Typical animals of sandhill communities are the Eastern diamondback rattlesnake, Eastern indigo snake, pine snake, gopher frog, spadefoot toad, gopher tortoise, red-cockaded woodpecker, pocket gopher, fox squirrel, cotton mouse, cotton rat, Eastern cottontail, and Eastern mole (Landers and Speake, 1980; Snedaker and Lugo, 1972). Many of these vertebrates are found mainly in longleaf pine communities and have adapted to the hot summers and cool winters through the use of burrows, which are created by the gopher tortoise, a species of special concern (FGFWFC, 1987). Many of the vertebrates listed above use gopher burrows for nesting, feeding, and escape cover from predators and fire (Landers and Speake, 1980). The gopher frog, a species of special concern (FGFWFC, 1987), is rarely found outside the burrows and is therefore dependent on the gopher tortoise and its habitat requirements. The threatened Eastern indigo snakes distribution in the State is limited to areas with extensive sandhills interspersed with wetland habitats, such as drainage ways, rivers, swamps, and cypress ponds (Landers and Speake 1980). Other common residents of the burrows are the oldfield mouse, cotton mouse, cotton rat, and Eastern cottontail. Many kinds of invertebrates are residents and are found exclusively in tortoise burrows.

The red-cockaded woodpecker, an endangered species (FGFWFC, 1987), prefers old-growth longleaf pine forests. It is a highly specialized, non-migratory, cavity-dwelling species and is the only woodpecker to roost in cavities of live pines (Labisky et. al., 1983). It also needs extensive pine and pine hardwoods for its foraging requirements. Of all the inhabitants of longleaf pine forests, the red-cockaded woodpecker is probably in the greatest danger of extinction because of the drastic loss and decline of its habitat.

- **Scrub:** Scrub is a dense shrub forest or a dense shrub-pine forest. It is probably the least fertile and one of the most xeric plant communities in Franklin County. In the Panhandle, scrub is common near the coast, west of the Ochlockonee River. Within the Apalachicola Drainage Basin, scrub occurs on dunes and beach ridges near the coast, with small isolated stands existing inland on relic shoreline features (Clewell, 1986). Scrub consists of various evergreens, scrub oaks and shrubs making up a thick, often clumped understory. These plants vary in size from low shrubs a few inches tall to small trees as tall as ten feet. Major understory species of scrub are myrtle oak, Chapman's Oak, staggerbush, sand live oak, rosemary, and *Conradina canescens*. Saw Palmetto is also typical of scrub. Rosemary grows in open areas and has a distinctive zone of unvegetated white sand around each bush. Scrub contains little or no herbaceous ground cover.

Those species that do exist grow as individuals or in patches rather than as a distinct stratum. *Cladonia leporina* and *Cladonia evansii*, which are capable of forming a very dense ground cover, are the most common species of lichens found in scrub communities.

- **Pine Flatwoods:** Flatwoods are abundant and widespread throughout the Panhandle and are particularly common in the Coastal Lowlands (Clewell, 1986). Patches of flatwoods also occur in the lowlands around Marianna and in the Tallahassee Red Hills (Hubbell et al, 1956). Wet flatwoods or boggy flatwoods are particularly characteristic of the Tate's Hell region of Franklin County (Clewell, 1986). Pine flatwoods are also referred to as pine savannahs, low flatwoods, mesic flatwoods, wet flatwoods, pine barrens, slash pine flatwoods, longleaf pine flatwoods, or pond pine flatwoods. The overstory of flatwoods consists of three pine types, which separate flatwoods into three phases. These include: longleaf pine flatwoods, slash pine flatwoods, and pond pine flatwoods (Hubbell et al, 1956; Clewell, 1971, 1986). Each of these pine species typically dominates a particular flatwood community. However, mixed stands of longleaf pine and slash pine can be found. Clewell (1986) identifies this as a fourth phase. Longleaf pines and/or slash pines may also be present in pond pine flatwoods. The pines in flatwood communities are usually widely spaced and form an open canopy. Flatwoods, depending on successional stage and management activities, generally have a high diversity of wildlife populations. Various animals live within the ecotones, or boundaries between flatwoods and associated communities. Flatwoods and ecotones surrounding them provide an extensive source of wildlife food, nesting, and escape cover. Animals characteristic of flatwood communities include black bear, white-tailed deer, raccoon, bobcat, fox, opossum, striped skunk, cotton rat, cotton mouse, black racer, pine warbler, red-shouldered hawk, southeastern kestrel, oak toad, and chorus frog.
- **Mixed Hardwoods:** Mixed hardwood forests range from being nearly xerophytic to nearly hydrophytic communities containing a variety of mixed deciduous and evergreen upland hardwoods. These forests are well developed and generally have closed canopies. In the Panhandle, hardwood forests originally were restricted to riverine habitats and occasionally to protected habitats along the coast and around some lakes and sinks (Clewell, 1986). However, with fire protection and other human disturbances, hardwood forests have spread into other areas and habitats (pine communities). Dominant overstory species of southern mixed hardwoods include beech, Southern magnolia, pignut hickory, mockernut shortleaf pine, white oak, diamond-leaved oak, water oak, swamp-chestnut oak, maple, and basswood. Understory species characteristic of hardwood forests include dogwood, Eastern redbud, sparkleberry, ironwood, wild olive, sweet leaf, and witch-hazel. Ground cover is usually sparse.

Southern mixed hardwood forests are found on a variety of soils. They occur on sands and loams covered with leaf litter. These soils are closely associated with limestone outcrops or sub-surface limestone or with exposed calcium-bearing Miocene clastics along river bluffs (Clewell, 1971). Some mesic hammocks occur along spring fed rivers, on the sides of sinks, and on bluffs near these limestone outcroppings. Species such as cabbage palm, southern red cedar, and redbud favor the calcareous habitats (Clewell, 1986). The wildlife present in mixed hardwood forests varies with the successional stage of the forest. Animals characteristic of early succession forests include broadly adapted generalists such as cottontail rabbit, quail, and bobcat. More narrowly adapted species like the pileated woodpecker, turkey, and grey squirrel are typical of later successional stages (Gatewood and Hartman, 1977). Other animals characteristic of hardwood forests include the grey rat snake, coral snake, rough green snake, red-bellied snake, box turtle, eastern glass lizard, broadhead skink, ground skink, slimy salamander, green anole, grey tree frog, bronze frog, wood rat, cotton mouse, grey fox, shrews, moles, white-tailed deer, barred owl, red-bellied woodpecker, and woodcock (FHAI, 1986).

- **Titi Swamps, Bayheads, and Shrub Bogs:** Titi swamps occur as strands or depressions in flatwoods or along the borders of some alluvial swamps in north Florida. Broad-leaved shrubs

and small trees comprise the principle element of the vegetation. The vegetation is usually very dense. At least one of the three species of titi (black titi, swamp cyrilla, little-leaf cyrilla) will be present and dominant. Their presence, dominance, and distribution vary between stands. Myrtle-leaf holly sometimes replaces titi as the principal dominant in small swamps at the heads of minor drainages. Black titi is usually more abundant than the two cyrillas and tends to occupy slightly higher sites than swamp cyrilla (Clewell, 1971). Pond pine and slash pine may be present as overstory species with the understory being dominated by titi. Understory species characteristic of titi swamps include fetterbush and large gallberry, which are often abundant. Other shrubs usually present include odorless wax myrtle, staggerbush, sweet pepperbush, cane, Virginia willow, bayberry, chokeberry, and swamp honeysuckle. Woody vines such as bamboo-vine, muscadine grape, and yellow jasmine may also be present (Clewell, 1986). The water table of titi swamps is generally near the surface except during droughts. Therefore, the soils are generally saturated but are not inundated for long periods of time after rains. Fire frequency is variable but usually does not exceed twenty years. Fires generally do not occur except under extreme burning conditions (drought, high winds, and low humidity).

Bayheads or bay swamps occur in shallow depressions, particularly in pine flatwoods. Broad-leaved evergreen trees typically dominate bayheads. Typical species include sweetbay, swamp bay, and loblolly bay. Sweetbay is usually present and is the dominant overstory species except when slash pine is present. Slash pine may be dominant and sometimes forms a semi-closed canopy. Loblolly bay occupies drier sites than sweetbay. Blackgum may be abundant in wetter bays, but is usually represented by a few individuals. Less common species include pond cypress, white cedar, red maple, diamond-leaf oak, water oak, sweetgum, and popash. These tend to be present when bays are adjacent to cypress swamps, cedar swamps or hardwood forests (Clewell, 1986). Understory species in bayheads are usually those found in titi swamps, including all species of titi. The understory is quite dense, and where openings occur, the ground cover is usually sphagnum moss. Other ground cover species include Virginia and netted chain ferns. Sedges and grasses may be scattered and cane may be prominent in openings. The water table of bayheads is within about four feet of the soil surface at all times (Clewell, 1971). The soil is moist and generally wetter than those soils supporting titi swamps. Bayheads have a fire frequency of about 15 to 50 years (Clewell, 1986).

Shrub bogs usually do not have a well-defined understory or overstory. The trees and shrubs may be dense or they may form rather open canopies. The vegetation of shrub bogs may consist of various combinations of ground cover, often with sedges dominating. They probably burn more frequently than most acid swamps. Common species include sweetbay, blackgum, slash pine, wax-myrtle, pond cypress, popash, and occasionally white cedar. Shrubs and vines found in shrub bogs include fetterbush, sweet pepperbush, bamboo-vine, highbush blackberry, and titi. The soils of shrub bogs are often saturated, but are usually not saturated for long periods of time. However, they may be inundated for longer periods of time where they occur in shallow sloughs or stringers. The fire frequency of shrub bogs is about 5 to 20 years (Clewell, 1986).

Titi swamps, bayheads, and shrub bogs support various wildlife populations. Animals use these communities for refuge and cover. However, with the exception of reptiles and amphibians, few animals are permanent residents. Transient animals include raccoon, deer, hog, bear, wood, ducks, and others.

- **Cypress Swamps:** Cypress swamps are characterized as shallow, forested wetlands that have water at or just below the surface of the ground, and are dominated by either pond cypress or bald cypress. These swamps may be located along stream or lake margins. They may also be interspersed throughout other habitats, such as flatwoods and savannahs, where they may be represented as circular depressions called domes or heads. Cypress swamps located along shallow drainage systems are referred to as strands or sloughs. Pond cypress occurs in cypress

heads or domes, and strands or stringers. In the lower Apalachicola River region, including Tate's Hell, these strands or stringers are common. Cypress forests in these strands are usually open with a turf of sedges beneath. Cypress trees will extend into adjacent savannahs and boggy flatwoods (Clewell, 1986). Cypress domes or heads are generally characterized by taller, larger cypress trees growing in the deeper water in the interior and smaller trees growing in the shallower waters along the periphery.

Pond cypress and bald cypress are the dominant overstory species present in cypress swamp communities, however they generally do not occur together. When they do occur together in the same stand, rarely are both species to equal dominance. Tree diversity in cypress strands tends to be higher than that of cypress heads. Associated trees and shrubs include swamp tupelo, slash pine, blackgum, red maple, sweetbay, wax myrtle, and buttonbush. Other typical plants include dahoon holly, swamp bay, lobolly bay, pond apple, Virginia willow, fetterbush, chain fern, netted chain fern, poison ivy, Spanish moss, cinnamon fern, orchids, swamp titi, St. John's-Wort, sphagnum, and buttonbush. Various marsh plants are often found in the open water within these swamps (Gatewood and Hartman, 1977; Clewell, 1986; FHAI, 1986).

The fauna of cypress swamps is not well studied, however they are important habitats for a variety of species. Species found would vary between those ponds with permanent standing water and those that are seasonally inundated. Bullfrogs and newts tend to utilize permanent bodies of water for breeding, while toads and most salamanders tend to utilize temporary bodies of water for breeding. Fish such as the mosquito fish, killifish, pygmy sunfish, and other small minnows are commonly found in those ponds with permanent bodies of water (Wharton et al, 1977). Many insects also use cypress ponds for various stages of development. There are very few permanent residents of cypress swamps. However, large aggregations of salamanders, frogs, insects, and birds may be observed during their breeding seasons. Many of these species are common residents of surrounding flatwood communities. Cypress swamps also provide valuable nesting and feeding habitats for ospreys, eagles, and wading birds. During drought periods, cypress strands may be the only source of water for many animals. Typical animals found in cypress swamps include the wood duck, swallow-tailed kite, Mississippi kite, great-crested flycatcher, wood stork, alligator, snapping turtle, mud turtle, stinkpot, Eastern Mud snake, cottonmouth, barred owl, prothonotary warbler, and pileated woodpecker.

- **Seepage Bogs:** Bogs are low energy wetlands consisting mainly of grasses, sedges, orchids, insectivorous plants, and an abundance of wildflowers. Seepage bogs are common in the western half of the panhandle near the coast and towards the base of slopes. They are commonly found between bay swamps along creeks or rivers and in pine flatwoods. Seepage bogs also occur along the Cody Scarp and other escarpments where groundwater seeps to the surface. These habitats were once extensive in the western Panhandle, but many have been converted to pine plantations (Clewell, 1986). Seepage bogs have no distinct overstory or understory, but a few trees and large shrubs may be widely scattered or in small thickets. Species within the overstory and understory include slash pine, pond pine (uncommon), pond cypress, blackgum, white cedar, sweetbay, swamp bay, titi, large gallberry, and myrtle-leaf holly (Clewell, 1986).

The ground cover is the prominent vegetation stratum in seepage bogs. Wiregrass is the dominant grass, but is less abundant or even absent in wetter sites where species of *Rhynchospora* may replace it (Clewell, 1986). A variety of herbaceous helophytes are found in seepage bogs. At various seasons they produce remarkable floral displays these include crow poison, meadowbeauty, *Sebatia* sp., and several species of *Polxgala*, *Xyris*, and *Eriocaulon*. Carnivorous plants such as the pitcher plants (*Sarracenia*) are the most noticeable. Other carnivorous flora includes sundews, bladderworts, and butterworts (Folkerts, 1982; Clewell, 1986). Herbs are more conspicuous than shrubs. Rush-featherling and Barbara's buttons are

indicators of this community and are rare or absent from the floristically similar savannahs (Clewell, 1986). Except for the insect species associated with pitcher plants of the genus *Sarracenia*, the fauna of the bogs is poorly known. Pitcher plants have special adaptations that allow them to entrap, detain, and digest prey. The plants contain a decomposing mass of entrapped prey, which is a potential food source for other organisms (Folkerts, 1982). Species that have evolved the ability to inhabit pitcher plants without being entrapped or digested include species of mosquitoes, the larvae of sarcophagid flies, larvae of some species of flies, species of moths, aphids, and several species of mites.

4. Sources of Commercially Valuable Minerals

The development of mineral commodities in the Carrabelle area has not been conducted on a large scale. Clayey sand in Franklin County is used mostly for road fill material. The sporadic need for road base materials provides an insufficient market for commercial mining. Therefore, the supply for this use is County-owned. The sand is also used locally as foundation fill for small buildings. Peat exists in small, localized beds near the surface at many random locations. Any potential use of these deposits would be dependent on investigations of specific tracts, not regional studies. Finally, heavy mineral deposits may exist along the coastal spits and bars, but the ability to mine them would be restricted by strict environmental regulations.

5. Soils and Soil Erosion

Please see "Section 2, Public Facilities Element" for a detailed discussion of the soils in Carrabelle and their effect on sewage collection and treatment and the use of septic tanks. Soil erosion is common along the Carrabelle River in areas where the river makes a particularly tight bend and erosion along the river is worsened by the close shore dredging of the channel. "Cut bank" erosion is a natural occurrence and erosion control structures along the river also contribute to a hastening of erosion on adjacent river property. See Map 1-13, Appendix A, for a map of soil erosion susceptibility in Carrabelle.

6. Air Quality

Carrabelle's low population density and minimal urban development and transportation system are all contributors to the preservation of high ambient air quality (Apalachee Regional Plan, 1987). Carrabelle shows no violation of Federal and State clean air standards. In fact, of the six categories of air contaminants monitored by the State of Florida (carbon monoxide, lead, nitrogen dioxide, ozone, sulfur dioxide and total suspended particles), the Carrabelle area has consistently been labeled an "attainment" area. Furthermore, the region is not considered to have problems with sulfur dioxide and nitrogen oxide emissions at this point in time. The major potential source of non-point pollution in the region is from vehicles emitting carbon monoxide (CO). In the near to immediate future, CO emissions appear not to be a threat to the Franklin County environment.

7. Threatened and Endangered Plants of the New River Basin

Because the New River drainage basin contains such a diversity of habitats and has contributions from neighboring areas, it may have more species of plants and animals than anywhere else in temperate North America. The high species richness of the area includes many rare, endangered, threatened and endemic species. Appendix C lists many of the endangered and threatened plants of the basin. However, this list is not complete and the numbers have probably increased since these lists were made. Species of special concern or those species under review for listing are not included on this list.

8. Threatened and Endangered Species of the New River Basin

The moist, shaded environment of the New River floodplain, along with the large accumulation of detrital material, provides an ideal habitat for amphibians and reptiles. Appendix D lists those species that may be found in the New River Basin. As there are no studies that list the New River plant and wildlife species, the following information was excerpted from the Florida Fish and Game Fresh Water Commission's *Resource Inventory of the Apalachicola Bay Basin* (1987) and adapted to the New River Basin, as applicable. Although not all of these are found within the City limits of Carrabelle, they are reflective of the species present basin-wide. The distribution of amphibians and reptiles within the floodplain is controlled by the hydrologic conditions of the varied environments. Aquatic or wet species are found in the tupelo-cypress and tupelo-cypress with mixed hardwood areas, while species less tolerant to water range from the pine- to mixed- hardwood associations. There also is considerable overlap and movement through zones depending on environmental conditions, breeding requirements and seasonal changes.

B. Impacts to Natural Resources

The three basic ecosystems outlined above will be impacted by future use of the natural resources. The following is a discussion of the impacts, which are likely to be felt within the Bay system, Carrabelle's River system, and Carrabelle's upland system. This section also analyzes some of the measures the City has already undertaken, as well as those that could be taken, to minimize impacts to the resources.

1. Impacts to the St. George Sound

The major impact on natural resources in the St. George Sound will continue to come from pollution to the Apalachicola Bay associated with development adjacent to the Carrabelle River and Apalachicola Bay areas. Point source discharge (from stormwater drains and septic tanks) and nonpoint source discharge (from urban stormwater run-off) have contributed to localized pollution in the immediate offshore areas around Carrabelle. According to a 2000 study conducted by the Northwest Florida Water Management District, a large part of Carrabelle's residential section is drained by a single channel that runs in a southwestern direction and discharges into the St. George Sound. In 2005, Baskerville Donovan, Inc. (BDI) conducted a *Stormwater Needs Assessment* to address Carrabelle's stormwater drainage issues. As part of the assessment, BDI created a stormwater map of Carrabelle, which was then used to divide the City and surrounding areas into drainage basins. Basins usually are divided by naturally occurring ridgelines or highways and each basin is uniquely comprised of varying features such as drainage area, stormwater infrastructure, soil type, and land use. The draft *Stormwater Needs Assessment (March 2006)*, identified seven drainage basins, which emptied either directly into the Carrabelle River or indirectly into St George Sound and the Gulf of Mexico.

In order to help control the amount of pollutants discharged into the Apalachicola Bay from new development, Carrabelle has enacted land development regulations that restrict the use of land within the Critical Shoreline District. For example, septic tanks and drainfields, percolation ponds, or polishing ponds are required to be set back 150-feet from the shoreline and aerobic treatment units may be allowed within 75 feet of mean high water or jurisdictional wetlands; order to help alleviate septic tank seepage into the Apalachicola Bay, the City has enacted a septic tank ordinance that requires owners of faulty septic systems to correct their systems and hook up to the central sewer system when service becomes available. In order to alleviate stormwater run-off from new development, the City's land development regulations require stormwater management plans for all new development. These plans must ensure that the stormwater peak discharge rate, volume and pollutant load is no greater after development than before development. The City also requires new development within the Critical Shoreline District to obtain a FDEP stormwater permit or letter of exemption prior to obtaining a local building permit.

In addition, all new development within this district must install a site suitable stormwater management system and obtain approval by the City or its designee. The stormwater system must meet the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs). The City also plans to seek designation of the Carrabelle River as an OFW within this planning period. Finally, BDI's draft *Stormwater Needs Assessment* report recommends that the City of Carrabelle address its water quality via the adoption and implementation of a City Stormwater Master Plan, to be prepared by December 2006.

Another concern related to the productivity of the St. George Sound habitat deals with unpermitted dredge and fill operations. While the jurisdictional marshes of the St. George Sound are protected to a certain degree by restrictive regulations, there are many nonjurisdictional marshes within the Sound, which are not. Considering the importance of these marshes as nursery areas, it is necessary to ensure strict enforcement of regulations and require mitigative actions to offset losses. Education and coordination between local, State, and federal agencies is essential to inform developers and homeowners of the regulations governing wetlands and the reasons for these regulations.

Marinas, even those designed properly, also cause water quality degradation. The Florida Department of Environmental Protection automatically closes all oyster beds that are located within a specified radius of any marina. The distance is calculated based on the size of the marina, flushing rates, and the facilities provided by the marina. Types of pollution from marinas include toxic chemicals (contained in some marine paints), petroleum discharges, heavy metals, and bacterial contamination. In order to reduce the possibility of water quality degradation, any marina located within the St. George Sound should provide an advanced design, safeguards against contamination, strict regulations, and methods to enforce these regulations prior to being permitted. The City's Critical Shoreline Ordinance and Comprehensive Plan includes a number of regulations and requirements pertaining to the siting of new marinas and multi-slip docking facilities.

2. Impacts to the Carrabelle River Floodplain Habitat

The extensive amount of flood-prone acreage in Carrabelle creates many limitations to development, including the placement of restrictions on building density in flood-prone areas; an increase in building costs associated with modifications necessary to prevent flooding; and increased development costs associated with the design and layout of adequate drainage systems. As discussed in "Section 2, Public Facilities Element", the soil composition of the City's floodplain also necessitates the use of development restrictions, which results in increased development costs. Finally, the potential harm associated with hurricane winds and floods indicate the need to consider this aspect in development planning for coastal areas with limited access. The City has enacted a Flood Hazard Prevention Ordinance within its land development regulations to help protect the important ecological and economic assets of the City's floodplain areas. Among the specific standards required within the Ordinance, the regulations require that any structure built in a flood-prone area must have its first floor raised to or above the level of the 100-year floodplain.

3. Impacts to the Uplands Habitat

The inevitable loss of natural habitat within Carrabelle, due to an influx of people and construction of vacation homes, is not likely to cease. Upland habitats such as scrub, pine flatwoods, and mixed hardwoods appear to be most susceptible to alteration. Outside of the Critical Shoreline District (150 feet landward of mean high water), there are no constraints concerning clearing in the scrub or pine flatwoods habitats. This loss of scrub and pine flatwood habitats will undoubtedly reduce the nesting and escape cover available to migratory and resident bird species, which utilize these areas.

C. Water Resources

1. Water Quantity

The City of Carrabelle depends on the Floridan Aquifer for its potable water supply. In June 1998, the Northwest Florida Water Management District (NFWFMD) completed the first District-wide water supply assessment, which contained projections for water use. In 2003, the District conducted a five-year update of the water supply demand projections through 2025 (NFWFMD 2003). The 2003 update determined that current water sources are adequate to meet projected needs through 2025 for Franklin County, while sustaining water resources and natural systems. Additionally, the NFWFMD has stated that the City of Carrabelle is not required to adopt water supply facility work plan (WSFWP) amendments due to the fact that it is not located within a Regional Water Supply Plan (RWSP) area. However, the City has adopted policies within the Comprehensive Plan to adopt, by December 1, 2006, a water supply plan that will reflect and be consistent with the Northwest Florida Water Management District's most recent *District Water Management Plan*. The City's plan will include a work plan covering at least a ten-year planning period for building water supply facilities that are identified as necessary to serve existing and new development.

2. Water Quality

In terms of the protection of water quality, the City has enacted a Wellfield Protection Ordinance, the purpose of which is to regulate well construction and related aspects of land uses and development in the vicinity of any well that supplies water to the City's potable water system. The Wellfield Protection Ordinance area adopted by the City of Carrabelle consists of two zones requiring different levels of protection:

1. *Primary Protection Zone*: The innermost zone surrounding the wellhead that requires the strictest restrictions. Within the Primary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 200 feet of a public wellfield. The following uses are prohibited within the Primary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities;
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities; and
 - e. Septic tanks
2. *Secondary Protection Zone*: The zone surrounding the Primary Protection Zone. Within the Secondary Protection Zone, no person shall discharge a hazardous substance (including herbicide and pesticide applications) to the soils, groundwater, or surface water within 1,000 feet of a public wellfield. The following uses are prohibited within the Secondary Protection Zone:
 - a. New sanitary landfills;
 - b. The use, handling, productions, and storage of hazardous substances;
 - c. Feedlots or other concentrated animal facilities; and
 - d. Wastewater treatment plants, percolation ponds, dredge spoil deposits and similar facilities

As mentioned previously, in order to help control the amount of pollutants discharged into the Apalachicola Bay from new development, Carrabelle has enacted land development regulations that restrict the use of land within the Critical Shoreline District. For example, septic tanks and drainfields, percolation ponds, or polishing ponds are required to be set back 150-feet from the

shoreline and aerobic treatment units may be allowed within 75 feet of mean high water or jurisdictional wetlands. In order to help alleviate septic tank seepage into the Apalachicola Bay, the City has enacted a septic tank ordinance that requires owners of faulty septic systems to correct their systems and hook up to the central sewer system when service becomes available. In order to alleviate stormwater run-off from new development, the City's land development regulations require stormwater management plans for all new development. These plans must ensure that the stormwater peak discharge rate, volume and pollutant load is no greater after development than before development. The City also requires new development within the Critical Shoreline District to obtain a FDEP stormwater permit or letter of exemption prior to obtaining a local building permit. In addition, all new development within this district must install a site suitable stormwater management system and obtain approval by the City or its designee. The stormwater system must meet the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs). The City also plans to seek designation of the Carrabelle River as an OFW within this planning period. Finally, BDI's draft *Stormwater Needs Assessment* report recommends that the City of Carrabelle address its water quality via the adoption and implementation of a City Stormwater Master Plan, to be prepared by December 2006.

9. CAPITAL IMPROVEMENTS ELEMENT Data and Analysis

This Element is designed to evaluate the economic and fiscal feasibility of the public facilities identified within the other Elements of the Comprehensive Plan, to estimate the cost for which the City has fiscal responsibility, and to guide the funding and scheduling of the necessary capital improvements such that the improvements are provided when required.

A. Inventory

1. Needs Derived From Other Elements

The analyses performed in the preceding City of Carrabelle Comprehensive Plan Elements have identified facility improvements needed to meet the demands of existing and future development. Pursuant to the City's land development regulations, future development permits will not be issued in areas that do not have infrastructure unless the developer can provide infrastructure prior to obtaining development permits. Therefore, this inventory is concerned with those needed improvements which are of relatively large scale, are of generally non-recurring high cost, and which may require multi-year financing. A financial criterion used by the City classifies non-recurring improvements as \$25,000 or more for the construction, acquisition or installation of facilities. The following list highlights needed improvements identified within the preceding Elements:

- **Future Land Use Element:** This Element does not establish any deficiencies requiring capital improvements.
- **Public Facilities Element:** The Carrabelle water and sewer systems are currently undergoing extensive capital improvements. In regards to the Carrabelle water system, four improvement projects have been completed and two are currently in progress (see Table 9-1). In regards to the Carrabelle sanitary sewer system, eight projects have been completed and five are currently in progress (see Table 9-2). All improvements will cover the City through the planning period. Further details of these improvement projects are discussed within "Section 2, Public Facilities Element" and the five-year schedule of capital improvements.

Table 9-1. Carrabelle Water System, Recent Projects

Recent Projects	
1	Line Extension – Hwy 67
2	Hwy 67 North Treatment Plant <ul style="list-style-type: none"> • Well • Ground Storage Tank • High Service Pump Station
3	Well at DOC FCI Site* <ul style="list-style-type: none"> • Modify Pump* • Piping to Hwy 67 North Plant*
4	North Elevated Water Storage Tank (at DOC FCI site)
5	Computer Hydraulic Model of Water System*
6	West Elevated Water Storage Tank (near Airport)**
7	West Water Transmission Mains**

Source: Baskerville-Donovan, Inc., 2005; *Construction in progress, ** Design in progress

Table 9-2. Carrabelle Wastewater System, Recent Projects

Recent Projects	
1	Vacuum Sewers Phase 1
2	Vacuum Sewers Phase 2
3	Wastewater Treatment Facility 1.2 MGD
4	Master Lift Station at Timber Island
5	Master Lift Station at DOC FCI Site
6	Force Main Sewer from St. James Bay
7	Force Main Sewer from DOC FCI Site
8	Reuse Water (treated wastewater effluent) to St. James Bay
9	Reuse Water (treated wastewater effluent) to DOC FCI Site
10	Three Rivers Road/River Road Area Sewers*
11	Master Lift Station at Three Rivers Road*
12	Carrabelle Beach Area Sewers**
13	Master Lift Station at Rivers Road (Anglers Harbor)

Source: Baskerville-Donovan, Inc., 2005; *Construction in progress, **Design in progress

The Carrabelle water and sanitary sewer system improvements have been primarily funded through an FDEP grant and loan package with the grant covering 85% of the eligible expenses. Additionally, the Florida DC funded \$1,800,000 for the water and sewer facilities serving the FCI. In 2000-2005 alone, the City was awarded approximately \$25 million in grant money to help pay for the water and sewer system improvements (see Table 9-3). The remainder of the water and sewer improvements are being funded by City tap fees.

Table 9-3. Carrabelle Water and Wastewater System Grants, 2004-2005

Federal Grantor/Pass Through Grantor	Program Title	Program Amount (\$)
U.S. Department of Agriculture, Rural Utility Service	Water and Waste Disposal Systems for Rural Communities	1,163,800
Florida Department of Environmental Protection	Small Disadvantaged Community Grant	24,747,996
Total Grant Awards		25,911,796

Source: James Moore & Co., P.L. Certified Public Accounts and Consultants, 2004

The City has also recently received a Legislative appropriation of \$100,000, which will be used for stormwater management improvements.

- **Housing Element:** This Element does not establish any deficiencies requiring capital improvements.
- **Traffic Circulation Element:** This Element does not establish any deficiencies requiring capital improvements. All of the roads will operate at or above the adopted level of service (LOS) standard. Although improvements will be made, they are not necessary for maintaining the adopted LOS standard. The improvements to be made generally consist of re-paving roads or paving existing unpaved roads. Since these improvements are not related to the maintenance of a LOS standard, they are not ranked. Rather, they are decided by the County Commission at the time the Florida Department of Transportation (FDOT) funds are available. However, the City has requested that FDOT funds be used to provide left turn lanes at St. James Bay and at Timber Island Road during this planning period.

Additionally, the FDOT 2006-2010 Adopted Work Program includes two projects that are partly located within the City of Carrabelle. These projects will be funded by FDOT and are identified in Table 9-4.

Table 9-4. Florida Department of Transportation 2006-2010 Adopted Work Program

Transportation System	Description	Length (miles)	Type of Work	Fiscal Year	Amount
Non-intrastate State Hwy	SR 65 from SR 30 (US 98) to Liberty County line	24.284	Resurfacing	2006	\$6,768
Non-intrastate State Hwy	SR 30 (US 98/319) From Carrabelle River Bridge to SR 377 (US 319)	10.76	Resurfacing	2008	\$7,336,214

Source: Florida Department of Transportation, 2005

Although the Traffic Circulation Element does not establish any deficiencies requiring capital improvements, in 2004 the City was awarded grant money from the U.S. Department of Agriculture (USDA), Rural Economic Development Initiative (REDI), to make improvements to the Carrabelle-Thompson Airport and to add sidewalks and a bike path along C Street/Grey Avenue and 12th & 5th Avenues (see Table 9-5 for details).

Table 9-5. U.S. Department of Agriculture, Rural Economic Development Initiative Grants

Improvements	Grant Amount
Carrabelle-Thompson Airport - Airport Master Plan/Airport Layout Plan	\$50,000
Carrabelle-Thompson Airport – ARFF Facility Construction	\$36,000
Carrabelle-Thompson Airport – Instrument Approach Aids	\$30,000
Carrabelle-Thompson Airport – Instrument Approach Aids	\$45,000
Carrabelle-Thompson Airport – Instrument Approach Aids	\$90,000
Carrabelle-Thompson Airport - Airport Master Plan/Airport Layout Plan	\$50,000
Carrabelle Sidewalks – C Street/Grey Avenue; 12th & 5th Avenues – Bike Path	\$9,000

Source: Florida Department of Transportation Annual Report, 2004
Rural Economic Development Initiative

- **Recreation and Open Space Element:** This Element does not establish any deficiencies requiring capital improvements. However, over the past ten years, the City has successfully applied for grant money from the Florida Department of Environmental Protection (FDEP) and the Florida Department of Community Affairs (FDCA). Most recently, the City has been awarded \$300,000 from FDEP to make improvements to Tillie Miller Park and \$144,000 from FDCA to provide a wildlife park located in the northeast corner of Carrabelle (see Table 9-6 for details).

Table 9-6. FDEP Grants

Improvements	Grant Amount
Carrabelle Riverwalk Park	\$100,000
Carrabelle Riverwalk Park	\$100,000
Carrabelle Riverwalk Park	\$100,000
Tillie Miller Park	\$150,000
Tillie Miller Park	\$150,000
John David Patton Wildlife Park	\$144,000

Source: City of Carrabelle, 2005

- **Coastal Management Element:** This Element does not establish any deficiencies requiring capital improvements.
- **Conservation Element:** This Element does not establish any deficiencies requiring capital improvements.

2. Service Area for Public Education and Health Systems

Public Education System: The Franklin County School Board administers public education. Carrabelle High School (serving kindergarten through twelfth grade) is located on Gray Avenue. The school serves all children within the City limits, Alligator Point, St. James Bay, State Road 67, Carrabelle Beach, and

EastPoint and St. George Island children who have attained the seventh grade. Some college courses and adult education classes are also offered at Carrabelle High School for the same geographic area. A new Franklin County consolidated public school will be built during the planning period, located between Carrabelle and EastPoint. The eventual use of the Carrabelle High School property is unknown at this time.

Public Health System: Health services are provided by the Franklin County Department of Health within the City limits. This medical center primarily serves Carrabelle and Lanark residents, however anyone who enters may receive services. The George E. Weems Memorial Hospital, located in Apalachicola, provides emergency room and in-patient services. No new public health facilities are projected during this planning period.

3. Existing Revenue Sources

In order to plan for capital improvements, the following is an inventory of major funding sources available to the City of Carrabelle. The list includes all major revenue sources available to the City and is not limited to those sources that will be used for capital improvement projects included within the five-year Schedule of Improvements.

Local Sources

- **Property Taxes (Ad Valorem):** Property taxes are based on a millage rate (one mill is the equivalent of \$1 per \$1,000 of assessed value or 0.1%) that is applied to the total taxable value of all real property. Depending upon local policy established by the City Commission, revenue from ad valorem taxes may be used to fund both operating costs and capital projects. The millage rate for (2005) was 5.00.
- **Public Utility or User Charges:** These charges are derived from the operation of publicly owned and operated utilities, such as water and sewer.
- **Other Taxes, Fees and Charges:** This category includes special assessments, various administrative fees, and other user charges for services and facilities operated by the City. Examples include: sales of public documents, utility service taxes, professional and occupational licenses, permits, land sales, franchise fees, rentals, interest earnings gifts, and all private contributions to the City.
- **Special Sources of Revenue:** Depending upon priorities assigned by the City Commission and the availability of other revenue sources, it may be necessary to seek additional funding mechanisms. General obligation bonds and revenue bonds represent options available to the City to finance required capital improvements. The City is currently utilizing a water revenue bond.

State Sources

Carrabelle depends on annual disbursements from the State to supplement its operating and capital budget revenues. This section addresses those funds which are generated locally, but collected and later returned by State agencies to the County; adopted as a local option tax or license fee, collected and returned by the State; or, shared by the State in the form of grants to the local government, but originated from State general revenues. Amounts available from these sources may vary widely from year to year, depending upon legislative action.

- **Intergovernmental Revenue:** Each year, the City receives revenue from mobile home licenses, cigarette taxes, sales taxes, motor fuel taxes, and beverage license taxes. The County rotates the

sharing of funds from motorboat licenses. Additionally, the County has a municipal services benefits tax that is used to subsidize the volunteer fire departments, from which Carrabelle receives a share.

- **Borrowed Funds:** The City currently has long-term debt obligations for both governmental and business-type activities. Details of these obligations can be found in 'Section B, Fiscal Assessment'.
- **Federal and State Grants and Loans:** Federal and State funding may be secured through competitive grants. For further information on grants the City has currently received, please see Tables 9-3, 9-4, 9-5, and 9-6.

4. Accounting System

The City of Carrabelle uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. All of the funds of the City can be divided into two categories: governmental funds and proprietary funds. Governmental funds are used to account for governmental activities, while proprietary funds are special purpose funds associated with utilities that are operated as an enterprise fund. The City of Carrabelle uses enterprise funds to account for its water and sewer operation and its port and airport authority operation. The following is a brief description of the major funds, which the City has established for capital improvement financing:

Major Governmental Fund:

- **General Fund:** This fund is the basic operating fund of the City. All ad valorem tax revenues that are not accounted for in other funds are accounted for in the General Fund. These funds generally provide for the operation of the City's various departments and the Capital Improvements Program.

Major Proprietary Funds:

- **Water and Sewer Fund:** Accounts for the activities of the City's water distribution and sanitary sewer collection activities.
- **Port and Airport Authority Fund:** Accounts for the activities of the City's port and airport operations.

5. Local Policies and Practices

Local policies and practices will be used to guide the location and timing of land development in support of the goals, objectives, and policies of the Comprehensive Plan. State agencies and Franklin County influence many of these policies and practices.

Level of Service Standards: Level of service (LOS) standards indicate the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. The LOS standards indicate the capacity per unit of demand of each public facility. They are, in short, a summary of existing or desired public facility conditions. Chapter 163, F.S., and Chapter 9J-5, F.A.C., require LOS standards to be included for public facilities addressed by local governments in their Comprehensive Plans. LOS standards can affect the timing and location of development by encouraging development in areas where facilities may have excess capacity. On the other hand, development will not be permitted unless needed facilities and services are provided. Such provision and development may occur in a phased sequence over time. Table 9-7 reflects the City's adopted LOS standards within its Comprehensive Plan:

Table 9-7. Adopted Minimum LOS Standards

Public Facility	Minimum Adopted LOS Standard		
Potable Water	266 gallons per Equivalent Residential Unit (ERU) per day		
Sanitary Sewer	250 gallons per Equivalent Residential Unit (ERU) per day (for DEP purposes, actual will be 180 +/-)		
Solid Waste	5 pounds per capita per day		
Transportation	LOS C		
Recreation & Open Space	Facility	Unit of Measure	LOS
	Basketball Court	1 court	Per 1,500 persons
	Baseball/Softball Field	1 field	Per 1,500 persons
	Boat Ram	2 lanes	Per 1,500 persons
	Camping	1 acre	Per 1,500 persons
	Community Building	1 building (12,000 square feet minimum)	Per 1,500 persons
	Fishing Pier	800 linear feet (minimum)	Per 5,000 persons
	Football/Soccer Field	1 field	Per 4,000 persons
	Playground	1 acre	Per 1,500 persons
	Community Swimming Pool	1 pool (4,860 square feet minimum)	Per 8,700 persons
	Tennis Court	1 court	Per 1,500 persons
	Hiking Trail	1 mile	Per 1,500 persons
Drainage	The facilities shall accommodate the 25-year, 24-hour storm duration with the runoff from the first 1.5 inches of rainfall retained, and the facilities shall be designed in accordance with the specifications described in Chapter 65-25, F.A.C. so that the receiving water quality is not degraded and complies with water quality standards established in Chapter 17-302, F.A.C. In addition, stormwater facilities shall also meet the same standards required for direct stormwater discharge into Outstanding Florida Waters (OFWs). If the ongoing stormwater study determines additional treatment is required to meet the adopted level of service, those additional treatment standards shall be incorporated into the plan. There shall be no exception to the application of Chapter 65-25, F.A.C., or the OFW standards.		

Source: City of Carrabelle, 2005

Capital Improvements Program (CIP): The Capital Improvements Program will be consistent with the Capital Improvements Element of the local Comprehensive Plan, as it will reflect the goals, objectives, and policies of the Element and its implementation strategies, including the five-year Schedule of Capital Improvements. However, the CIP is more inclusive, as it contains those projects that are of relatively small scale and low cost (less than \$25,000) which are generally recurring and do not require multi-year financing. Also, unlike the Capital Improvements Element, the CIP is not limited to those public facilities addressed in the Comprehensive Plan, as the Capital Improvements Element is constrained. The time periods covered by a CIP may range from short-term to long-term (5 years). The first year of the CIP is converted into the annual budget. The annual capital budget encompasses enacting appropriations for projects each budget year and is reviewed on an annual basis. The City evaluates and ranks proposed capital improvement projects in order of priority according to the guidelines and weights listed in Table 9-8, below.

Table 9-8. Priority of Capital Improvement Projects

Guideline	Weight
Local budget impact and level of service standards: Whether the project increases efficiency of use of existing facilities and furthers the redevelopment of areas with existing infrastructure; promotes in-fill development; prevents or reduces future improvement cost, provides services to developed areas lacking full service	50%
Whether the project is needed to protect public health and safety, to fulfill the City's legal commitment to provide facilities and services, or to preserve or achieve full use of existing facilities	25%
Whether the project represents a logical extension of facilities and services within a designated urban service area	25%

Source: City of Carrabelle Comprehensive Plan, 1992

Impact Fees: Impact fees are imposed by many local governments on new development to offset the cost of new facilities necessitated by that development. These fees are a natural outgrowth of the Capital Improvements Element and are a rational basis for developing an Impact Fee Ordinance. Impact fees may be used to affect the timing of infill development. Infill development usually occurs in areas with excess capacity of capital facilities. If the municipality chooses not to recoup the costs of capital facilities in underutilized areas, infill development may be encouraged by the absence of impact fees on development in other service areas. Carrabelle does not have an impact fee at this time, however the City is currently considering whether or not to impose impact fees on new development in the future.

User Charges and Connection Fees: User charges and connection fees recoup the costs of public facilities by charging those who benefit from them. The City collects user charges and connection fees for sanitary sewer and potable water. A surcharge is also collected on telephone, gas, and electric services.

Adequate Facilities Ordinance: An Adequate Facility Ordinance controls the timing and location of development by conditioning development approval upon a showing that sufficient facilities and services are present, or will be provided, to maintain LOS standards. It may implement the 1985 legislative mandate, which requires that public facilities be available to support development. The ordinance makes development approval contingent upon the local government's ability to provide facilities and services. This type of ordinance supports consistency of the Capital Improvements Element with the Future Land Use Element; provides for the orderly expansion of public facilities; stabilizes capital improvements expenditures and taxing structure for capital improvements; and reduces the possibility of damage to the environment from the use of overburdened facilities. In addition, the Adequate Facility Ordinance interacts with the development approval process by conditioning zoning, subdivision or planned unit development approval on demonstrated compliance. The ordinances may control development in areas that are already approved but not as yet built-out, such as pre-platted lands. The City's land development regulations provide that the developer must pay a fair share of the infrastructure costs to maintain LOS standards. In addition, the City has adopted a policy within the Comprehensive Plan which states that additional property for development will not be annexed unless the developer agrees to pay 100% of the infrastructure costs; the developer must also provide irrevocable credit for 125% of all costs up front.

Mandatory Dedications or Fees In Lieu Of: The City may require, as a condition of plat approval, that developers dedicate a portion of land in the development to be used for public purposes such as roads, and parks. Mandatory dedications or fees in lieu of are required by the City's land development regulations.

Moratoria: A moratorium, or stop-gap ordinance, may temporarily halt or freeze development for a specified period of time on an emergency basis. It may be imposed on building permits, development approvals, or governmental services such as potable water connections and sanitary sewer extensions or hook-ups. Moratoria may generally be imposed for a "reasonable time" to allow for necessary planning activities pending Comprehensive Plan preparation, adoption, or amendment. The City has imposed no moratoria at this time.

B. Fiscal Assessment

1. Ability to Finance Capital Improvements Based Upon Anticipated Population & Revenues

The improvements that are currently being made to the Carrabelle water and sewer systems are the only capital improvement projects that the City has committed to that will not be totally funded by grant money. The City will cover these capital improvement projects through the planning period by using a combination of grant money and tap fee revenues. For example, the estimated total cost of the new advanced wastewater treatment and collection system projects is \$29,000,000 and in addition to the previously mentioned SDCG of almost \$24,000,000 the City received four legislative appropriations totaling \$3,000,000. Additionally, the Florida Department of Corrections has agreed to fund all of the water system improvements and a portion of the sewer system improvements, as they are related to providing service to the new Franklin County Correctional Institute. The total Department of Corrections (DC) commitment is \$1,800,000. Any capital improvements that cannot be covered by grant money will be paid for by a State Revolving Fund loan, which the City will finance through tap fee revenues. Although the permanent population of Carrabelle is not anticipated to grow significantly through the year 2020, Carrabelle has experienced recent development pressure due to the current demand for second homes and resort condominiums. This increase in development will result in a significant increase in tap fee revenues.

Due to a lack of data, a five-year revenue and expenditure forecast and tax base projections are not available. However, Carrabelle's fiscal health can be assessed in other ways. For example, a study of net assets may serve over time as a useful indicator of a government's financial position. In the case of Carrabelle, net assets exceeded liabilities by \$16,420,629 at the close of the 2004 fiscal year. The largest portion of Carrabelle's net assets (54%) reflects an investment in capital assets (e.g., land, buildings, machinery, and equipment), less any related debt used to acquire those assets that is still outstanding. Carrabelle uses these capital assets to provide services to citizens. An additional portion of the City's net assets (36%) represents resources that are subject to external restrictions on how they may be used. The remaining balance of unrestricted net assets, \$1,706,323, may be used to meet the government's ongoing obligations to citizens and creditors. Please see Table 9-9 for further details.

Table 9-9. Statement of Activities for the Year Ended September 30, 2004

		Program Revenues (\$)			Net (Expense) Revenue & Changes in Net Assets (\$)		
Functions/ Programs	Expenses (\$)	Charges for Service	Operating Grants & Contributions	Capital Grants & Contributions	Governmental Activities	Business- Types Activities	Total
Governmental Activities							
General Government	287,845	9,203	-	-	(278,642)	-	(278,642)
Public Safety	225,092	40,203	-	-	(184,889)	-	(184,889)
Transportation	128,320	3,800	-	-	(124,520)	-	(124,520)
Culture & Recreation	1,198	-	-	-	(1,198)	-	(1,198)
Physical Environment	7,500	-	3,000	-	(4,500)	-	(4,500)
Interest on Long-term Debt	16,691	-	-	-	(16,691)	-	(16,691)
Total Governmental Activities	666,646	53,206	3,000	-	(610,440)	-	(610,440)
Business-type Activities							
Water & Sewer	520,650	699,179	-	2,550,000	-	2,728,529	2,728,529
Port & Airport Authority	17,167	-	-	266,000	-	248,833	248,833

Table 9-9. Statement of Activities for the Year Ended September 30, 2004

Functions/ Programs	Expenses (\$)	Program Revenues (\$)			Net (Expense) Revenue & Changes in Net Assets (\$)		
		Charges for Service	Operating Grants & Contributions	Capital Grants & Contributions	Governmental Activities	Business- Types Activities	Total
Total Business-type Activities	537,817	699,179	-	2,816,000	-	2,977,362	2,977,362
Total Government	1,204,463	752,385	3,000	2,816,000	(610,440)	2,977,362	2,366,922
General Revenues:							
Property Taxes					446,890	-	446,890
Intergovernmental Revenue					316,484	-	316,484
Rent & Other					352,394	-	352,394
Unrestricted Investment Earnings					12,142	65,146	77,288
Total General Revenues					1,127,910	65,146	1,193,056
Change in Assets					517,470	3,042,508	3,559,978
Net Assets, Beginning of Year					1,206,028	11,654,623	12,860,651
Net Assets, Ending of Year					1,723,498	14,697,131	16,420,629

Source: James Moore & Co., P.L. Certified Public Accounts and Consultants, 2004

Another useful indicator of a government's financial position is to examine its long-term debt obligations. At the end of fiscal year 2004, Carrabelle had approximately \$10 million in capital investment debt outstanding, to be amortized by year 2029 (see Table 9-10 and Table 9-11). Once a month, money is taken from the City's General Fund and placed into funds specifically created to pay off this debt.

Table 9-10. Governmental Activities, Maturities of Notes Payable

Year Ending September 30,	Principal (\$)	Interest (\$)
2005	26,560	2,436
2006	13,557	3,626
2007	11,930	3,051
2008	12,516	2,465
2009	13,130	1,851
2010-2014	24,567	1,736
Total	102,260	15,165

Source: James Moore & Co., P.L. Certified Public Accounts and Consultants, 2004

Table 9-11. Business-Type Activities, Maturities of Notes Payable

Year Ending September 30,	Principal (\$)	Interest (\$)
2005	263,230	166,107
2006	-	166,026
2007	374,466	166,026
2008	374,466	170,671
2009	374,466	162,571
2010-2014	1,872,330	699,647
2015-2019	1,872,330	507,585
2020-2024	1,872,330	316,650
2025-2029	2,070,569	86,644
Total	9,074,187	2,441,927

Source: James Moore & Co., P.L. Certified Public Accounts and Consultants, 2004

In addition, Carrabelle had approximately \$1,114,800 of outstanding debt in water revenue bonds at the end of fiscal year 2004 (see Table 9-12). As the name of the bond reflects, the City pledges income derived from constructed water system assets to pay its debt service.

Table 9-12. Water Revenue Bonds - Annual Debt Service Requirements

Year Ending September 30,	Principal (\$)	Interest (\$)
2005	18,000	36,231
2006	18,000	35,646
2007	19,000	35,061
2008	19,000	34,444
2009	20,000	33,826
2010-2014	110,000	158,926
2015-2019	129,000	139,914
2020-2024	150,000	117,619
2025-2029	177,000	91,553
2030-2034	208,000	60,809
2035-2039	246,800	24,733
Total	1,114,800	768,762

Source: James Moore & Co., P.L. Certified Public Accounts and Consultants, 2004

2. Five-Year Schedule of Capital Improvements 2005-2010

As previously mentioned, the improvements that are currently being made to the Carrabelle water and sewer systems are the only capital improvement projects that the City has committed to that will not be totally funded by grant money. The City will cover these capital improvement projects through the planning period by using a combination of grant money and tap fee revenues. Please see the City's five-year schedule of capital improvements for further details (Table 9-13).

Table 9-13. Five-Year Schedule of Capital Improvements (2005-2010)

Type/Location of Project	Cost (\$)	Revenue Source			Consistent with Other Elements
		Grantor/ Funding Source	SRF Loan Amount (\$)	Grant Amount (\$)	
SANITARY SEWER					
Three Rivers Rd/River Rd. Area Sewers	2,400,170.35	FDEP/TF	2,400,170.35	2,040,144.70	Yes
Timber Island Sewers	1,801,893.00	FDEP/TF	1,801,893.00	1,531,609.00	Yes
Carrabelle Beach Sewers	1,000,000.00	FDEP/TF	1,000,000.00	850,000.00	Yes
POTABLE WATER					
FCI Well Pump	107,354.00	DOC	0.00	0.00	Yes
FCI Raw Water Piping	100,242.00	DOC	0.00	0.00	Yes
Renovation of Water Tower I	217,000.00	TF	0.00	0.00	Yes
Upgrade Downtown Well & Plant	500,000.00	TF	0.00	0.00	Yes
Transfer DC Well #2 to City System	150,000.00	TF	0.00	0.00	Yes
Upgrade 67North Plant	100,000.00	TF	0.00	0.00	Yes

*FDEP allowed eligibility up to 34.3% for the loan program and 85% of that amount for the grant program

Acronyms: FDEP=FL Dept. of Environmental Protection; FDOC=FL Dept. of Corrections; TF=Tap Fees

Source: Baskerville Donovan, Inc., 2005; City of Carrabelle 2005

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APPENDIX A: FUTURE LAND USE MAP SERIES

Map Number and Title
Map I-1a: Existing Land Use Map & Map I-1b: Existing Land Use Map: Public Facilities
Map I-2: Future Land Use Map
Map I-3: Adjacent Land Uses Within One Mile of Carrabelle Map
Map 1-4: Historic Resources Map
Map I-5: Potable Water Wells and Wellhead Protection Map
Map I-6: FEMA 100-Year Flood Plain Map
Map I-7: NWI Wetlands Map
Map I-8: FLUCCS Categories of Wetlands Map
Map I-9: Marine Wetlands Map
Map I-10: Stratigraphy Map
Map I-11: Soils Map (Simple)
Map I-12: Soils Map (Detailed)
Map 1-13: Soil Erosion Susceptibility Map
Map I-14: Coastal High Hazard Area Map
Map I-15: SLOSH Map
Map I-16: Critical Shoreline District Map
Map I-17: Hurricane Evacuation Zone Map
Map I-18: Carrabelle Redevelopment Area Map

APPENDIX B: FUTURE TRAFFIC CIRCULATION MAP SERIES

Map Number and Title
Map II-1: Transportation Facilities Map
Map II-2: Functional Classification Map
Map II-3: Maintenance Responsibility Map
Map II-4: Average Annual Daily Trips Map
Map II-5: Average Annual Daily Trips Map-Projected 2012
Map II-6: Road Status Map

APPENDIX C: THREATENED AND ENDANGERED PLANTS OF THE NEW RIVER BASIN

Threatened (T) and Endangered (E) Plants of the New River Basin

Scientific Name	Common Name	Status	Habitats
<i>Aristolochia tomentosa</i>	Wooly dutchman's pipe	T	
<i>Aquilegia canadensis</i>	Columbine	E	Calcareous woods
<i>Asclepias viridula</i>	Southern milkweed or Green milkweed	T	Flatwoods
<i>Asplenium platyneuron</i>	Ebony spleenwort	T	Hammocks
<i>Asplenium resiliens</i>	Blackstem spleenwort		Hammocks
<i>Aster spinulosus</i>	Pinewoods aster	T	Flatwoods
<i>Azolla carolinians</i>	Mosquito fern, Water fern	T	Swamps
<i>Botrychium biternatum</i>	Southern grapefern	T	Hammocks
<i>Bumelia lycioides</i>	Buckthorn	T	Hammocks
<i>Callirhoe papaver</i>	Poppy mallow	T	Pine-oak-hickory wood
<i>Callopogon barbatus</i>	Bearded grass pink	T	Flatwoods, bogs
<i>Callopogon pallidus</i>	Pale grass pink	T	Flatwoods, bogs
<i>Callopogon tuberosus</i>	Grass pink (unnamed)	T	Flatwoods, bogs, marshes around cypress ponds
<i>Cleistes divaricata</i>	Rosebud orchid or spreading pogonia	T	Flatwoods
<i>Conradina glabra</i>	Apalachicola rosemary or Panhandle rosemary	T	Sandhill
<i>Cryptotaenia canadensis</i>	Honeywort	T	
<i>Epidendrum Conopseum</i>	Greenfly orchid	T	Hammocks, sinks, gum, and swamps
<i>Epigaea repens</i>	Trailing arbutus	E	Dry hammocks
<i>Gentiana pennellians</i>	Wiregrass gentian	E	Flatwoods
<i>Habenaria repens</i>	Water spider orchid or creeping orchid	T	Marshes, cypress, swamps
<i>Harperocallis flava</i>	Harper's beauty	E	Bogs
<i>Hedeomagraveolens</i>	Mock pennyroyal	E	Sandhill, flatwoods
<i>Hexastylis arifolia</i>	Heartleaf	T	Bluffs, hammocks
<i>Hypericum lissoploeous</i>	Smooth-barked St. John's Wort	E	Sinks, pond margins
<i>Ilex ambigus</i>	Carolina holly, sand holly	T	Sandhill, scrub
<i>Ilex decidua</i>	Possum haw	T	Dry upland forests
<i>Illicium floridanum</i>	Purple anise	T	Creek swamps, seepages on bluffs
<i>Isoetes flaccida</i>	Florida quillwort	T	Swamps, ponds
<i>Leitneria floridana</i>	Florida corkwood	T	Coastal hammocks
<i>Liatris provincialis</i>	Godfrey's blazing star or Godfrey's gayfeather	E	Dunes, sandhill
<i>Lilium catesbaei</i>	Catesby lily	T	Flatwoods, bogs
<i>Linum westii</i>	West's flax	T	Bogs, cypress, pond margins
<i>Lobelia cardinalis</i>	Cardinal flower	T	Coastal hammocks

Threatened (T) and Endangered (E) Plants of the New River Basin

Scientific Name	Common Name	Status	Habitats
<i>Lupinus westianus</i>	Gulfcoast lupine	T	Sandhill, scrubs
<i>Lycopodium appressum</i>	Southern clubmoss	T	Bogs, moist flatwoods
<i>Macbridea alba</i>	White birds-in-a-nest	E	Bogs, flatwoods
<i>Malus angustifolia</i>	Crab apple	T	Bluffs, hammocks
<i>Nolina atopocarpa</i>	Florida beagrass	E	Flatwoods
<i>Cnoclea sensibilis</i>	Sensitive fern	T	Moist hammocks
<i>Ophioglossum petiolatum</i>	Stalked Adder's-tongue	T	Moist roadsides
<i>Opuntia stricta</i>	Prickly pear	T	Disturbed sands near coast
<i>Oxypolis greenmanii</i>	Giant water-dropwort; Giant water cowbane	E	Acid swamps
<i>Parnassia grandifolia</i>	Grass-of-parnassus	E	Boggy cypress strands
<i>Phlebodium aureum</i>	Golden polypody	T	Epiphytic in cabbage palms
<i>Pinckneya bracteata</i>	Hairy fevertree	T	Creek swamps, titi swamps, bogs
<i>Pityopsis flexuosa</i>	Panhandle golden aster	E	Sandhill
<i>Platanthera blephariglottis</i>	White fringed orchid	T	Marshes, cypress, swamps
<i>Plantanthera cristata</i>	Crested fringed orchid or Southern rein-orchid	T	Cypress swamps
<i>Plantanthera flava</i>	Southern rein-orchid	T	Spring-fed river swamp
<i>Plantanthera integra</i>	Orange rein orchid	T	Flatwoods
<i>Plantanthera nivea</i>	Snowy orchid	T	Bogs
<i>Pogonia ophioglossoides</i>	Rose pogonia	T	Flatwoods, bogs
<i>Polygonella macrophylla</i>	Large-leaved jointweed	T	Dunes, scrubs
<i>Rhexia lutes</i>	Meadow beauty	T	Flatwoods, bogs
<i>Rhexia parviflora</i>	Small-flowered meadow-beauty or Apalachicola meadowbeauty	E	Margins of cypress swamps
<i>Rhododendron systrinum</i>	Florida flame azalea	T	Flatwoods, titi and bay swamps
<i>Rhododendron serrulatum</i>	Swamp honeysuckle	T	Bogs, coastal flatwoods
<i>Ruellia noctiflora</i>	Night-flowering ruellia	T	Bogs, coastal flatwoods
<i>Sabal minor</i>	Dwarf palmetto or bluestem	T	Wet hammocks, bluffs
<i>Sarracenia leucophylla</i>	White-top pitcher-plant	E	Bogs, creek swamps
<i>Sarracenia psittacina</i>	Parrot pitcher-plant	T	Flatwoods, bogs
<i>Sarracenia apoda</i>	Meadow spikemoss	T	Stream banks
<i>Selaginella arenicola</i>	Sand spikemoss	T	Sandhill, dunes, scrubs
<i>Spiranthes cernua</i> <i>varodorata</i>	Nodding ladies' tresses	T	River swamps, bogs
<i>Spiranthes gracilis</i>	Slender ladies' tresses	T	Flatwood, sandhill
<i>Spiranthes ovalis</i>	Lesser ladies' tresses	T	Bogs, moist hammocks

Threatened (T) and Endangered (E) Plants of the New River Basin

Scientific Name	Common Name	Status	Habitats
<i>Spiranthes praecox</i>	Grass-leaved ladies' tresses	T	Flatwoods, pinelands
<i>Spiranthes vernalis</i>	Spring ladies' tresses	T	Flatwoods, cypress swamps
<i>Taxus floridana</i>	Florida yew	E	Hammocks, cedar swamps of Apalachicola River
<i>Thelypteris dentata</i>	Downy shield fern	T	
<i>Thelypteris interrupta</i>		T	Coastal hammocks
<i>Thelypteris palustris</i>	Marsh fern	T	Stream banks
<i>Tillandsia bartramii</i>	Wild pine, air plant	T	Moist woods
<i>Verbesina chapmanii</i>	Chapman's crownbeard	T	Savannahs, bogs, flatwoods
<i>Woodwardia areolata</i>	Netted chain-fern	T	Acid swamps, lime sinks
<i>Xyris longisepala</i>	Karst pond yellow-eyed grass	E	Margins of sandhill
<i>Xyris scabrifolia</i>	Harper's yellow-eyed grass	T	Bogs

Source: Resources Inventory of the Apalachicola River and Bay Drainage Basin, 1987

**APPENDIX D: THREATENED, ENDANGERED, AND SPECIES OF SPECIAL CONCERN
FOUND IN FRANKLIN COUNTY**

Threatened (T), Endangered (E) and Species of Special Concern (SSC) Found in Franklin County

Scientific Name	Common Name	Status	Coastal Area Location
Amphibians and Reptiles			
<i>Rana Areolata</i>	Gopher Frog	SSC	Upland
<i>Caretta Caretta Caretta</i>	Atlantic Loggerhead Turtle	T	Marine
<i>Gopherus polyphemus</i>	Gopher Tortoise	SSC	Upland
<i>Lepidochelys kemp</i>	Atlantic Ridley	E	Marine
<i>Maccroclemys temminckii</i>	Alligator snapping turtle	SSC	River
<i>Pseudomys concinna suwanninsis</i>	Suwannee Cooter	SSC	River
<i>Alligator Mississipienis</i>	American Alligator	SSC	River/Wetlands
<i>Drymarchon c. cooperi</i>	Eastern Indigo snake	T	Upland
<i>Pituophis melanoleucus</i>	Pine snake	SSC	Upland
	Green turtle		Marine
Mammals			
<i>Felis concolor cosyi</i>	Florida panther	E	Upland
<i>Ursus americanus floridanus</i>	Florida black bear	T	Upland
<i>Trichechus manatus latirostris</i>	West Indian Manatee	E	Marine
Birds			
<i>Pelicans occidentalis</i>	Brown pelican	SSC	Marsh, Bay
<i>Egretta thula</i>	Snowy egret	SSC	Marsh, Bay
<i>Egretta caervea</i>	Little blue heron	SSC	Floodplain, Marsh, Bay
<i>Egretta tricolor</i>	Tricolored heron	SSC	Floodplain, Marsh, Bay
<i>Egretta rufescens</i>	Reddish egret	SSC	
<i>Mycteria americana</i>	Woodstork	E	Wetlands
<i>Falco sparverius paulus</i>	Southeastern Kestrel	T	Coastal
<i>Halineetus levcocephalus</i>	Bald eagle	T	Coastal
<i>Falco peregrinus</i>	Peregrine falcon	E	Coastal
<i>Aramus quaravina</i>	Limpkin	SSC	Floodplain
<i>Charadrius a. tenuirostris</i>	Southeastern Snowy Plover	T	Coastal
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	T	
<i>Charadrius melodus</i>	Piping plover	T	Barrier Island
<i>Haematopus palliatus</i>	Oyster catcher	SSC	Barrier Island
<i>Sterna antillarum</i>	Least Tern	T	Coastal
<i>Picoides borealis</i>	Red-Cockaded Woodpecker	T	Upland
<i>Cistotherus palustris marianae</i>	Marian's Marsh Wren	SSC	Wetlands
<i>Ammodramus m. junciolus</i>	Wakulla Seaside Sparrow	SSC	Coastal

Source: Resources Inventory of the Apalachicola River and Bay Drainage Basin, 1987