

**RESOLUTION NO. 2008 - 171**

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA APPROVING AND ADOPTING THE ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY PLAN.

**WHEREAS**, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery of hazardous events occurring in St. Johns County; and

**WHEREAS**, the St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

**WHEREAS**, the St. Johns County Local Mitigation Strategy Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Division of Emergency Management as meeting the criteria for such plans and was last approved by the St. Johns County Board of County Commissioners in 2005; and

**WHEREAS**, St. Johns County in accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended (42 U.S.C 5121-5206) shall prepare and adopt a jurisdiction wide Local Mitigation Strategy Plan as a condition of receiving project grant funds under the Hazard Mitigation Grant Program; and

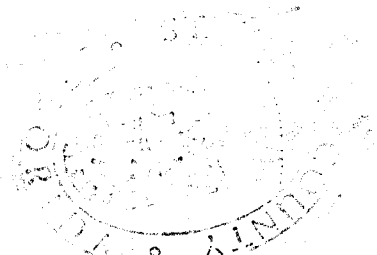
**WHEREAS**, the Local Mitigation Strategy Taskforce accepted the revised Plan by unanimous vote on February 21, 2008;

**NOW THEREFORE, BE IT RESOLVED** by the Board of County Commissioners of St. Johns County that:

The Local Mitigation Strategy Plan attached and incorporated herein as Exhibit A is hereby approved and adopted effective immediately.

The St. Johns County Director of Emergency Management is hereby directed to timely notify the State Division of Emergency Management of the date of the County's approval and adoption of the Local Mitigation Strategy Plan.

**PASSED AND ADOPTED** by the Board of County Commissioners of St. Johns County, State of Florida, this 24<sup>th</sup> day of June, 2008.



BOARD OF COUNTY COMMISSIONERS  
OF ST. JOHNS COUNTY, FLORIDA

By: \_\_\_\_\_

Chairman

*[Handwritten Signature]*

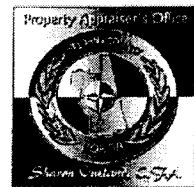
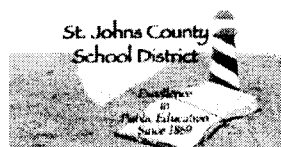
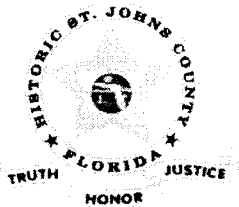
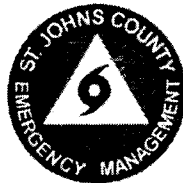
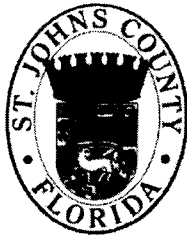
ATTEST: CHERYL STRICKLAND, CLERK

By: \_\_\_\_\_

*[Handwritten Signature]*  
Deputy Clerk

RENDITION DATE 6/27/08

# St. Johns County Local Mitigation Strategy



Prepared By:

St. Johns County LMS Task Force, St. Johns County Emergency Management, and the Northeast Florida Regional Council



### **Current Participating Agencies**

City of St. Augustine Fire Department  
City of St. Augustine Planning and Building  
City of St. Augustine Police Department  
City of St. Augustine Beach Public Works  
Diversified Engineering International, Inc.  
Flagler Estates Road and Water District  
Flagler Hospital  
Florida Department of Agriculture and Consumer Services – Division of Forestry  
Northeast Florida Regional Council  
South Anastasia Community Association  
St. Johns County Board of County Commissioners  
St. Johns County Emergency Management  
St. Johns County Engineering Department  
St. Johns County Fire and Rescue  
St. Johns County Health Department  
St. Johns County Planning Department  
St. Johns County Property Appraisers  
St. Johns County Public Works  
St. Johns County Road and Bridge Department  
St. Johns County School Board  
St. Johns County Sheriffs Department  
St. Johns County Utilities Department  
Town of Hastings  
University of Florida – IFAS Extension

### **Founding Participating Agencies**

Anastasia Mosquito Control District  
City of St. Augustine  
City of St. Augustine Beach  
Diversified Engineering International, Inc.  
Flagler College  
Flagler Estates Road and Water District  
Northeast Florida Regional Council  
St. Johns County Airport Authority  
St. Johns County Board of County Commissioners  
St. Johns County Building Department  
St. Johns County Department of Emergency Management  
St. Johns County Fire/Rescue  
St. Johns County Health Department  
St. Johns County Planning Department  
St. Johns County Property Appraisers Office  
St. Johns County Sheriff's Office  
St. Johns County Utilities Department  
Town of Hastings

## St. Johns County Local Mitigation Strategy Table of Contents

<b>Section I - Introduction</b>	
A. Local Mitigation Strategy	1
B. Planning Process	1
C. Community Participation	3
D. Private Sector Participation	3
E. Use and Incorporation of Existing Documents	4
F. Incorporation of LMS into other Documents	4
G. Reevaluation Criteria	5
H. Submission of Plan to SHMO	5
I. Conflict Resolution	5
<b>Section II - Goals and Guiding Principles</b>	
A. Goals	7
B. Guiding Principles	7
*Guiding Principles Matrix	9
C. Government Coordination	32
<b>Section III - Hazard Identification and Vulnerability Assessment</b>	
A. County Description	34
B. Population and Housing	34
C. Income and Earnings	35
D. Land Uses and Development Trends	36
*County Future Land Use Maps	37
E. Hazards Identification	38
1. Hurricanes	38
2. Storm Surge	39
- Storm Surge Maps	40
3. High Winds	43
4. Tornadoes	43
- High Winds	44
- Tornado Risk Map	47
5. Freshwater Flooding	48
6. Floodplains	48
- Flood Maps	49
7. Wildfires	51
8. Hazardous Materials	51
- Wildfire Threat Map	52
9. Terrorism	53
-Critical Facilities Map	55
10. Earthquakes	56
11. Tsunamis	56

12. Landslides/Sinkholes	56
13. Dam/Levee Failure	56
- Earthquake Threat Map	57
- Tsunami Threat Map	58
- Sinkhole Threat Map	59
14. Drought/Heat Wave	60
15. Winter Storm/Freeze	60
F. Summary	61
<b>Section IV – Vulnerability and Loss Estimates</b>	
A. Repetitive Loss Data	62
*Repetitive Loss Table	63
B. Critical Facilities Inventory	64
C. Other Vulnerable Facilities	65
D. Loss Estimates	65
<b>Section V – Initiative Selection</b>	
A. Project Selection and Submission Criteria	67
B. Scoring and Prioritization	67
C. Project Prioritization Methodology	68
*Points Table	72
D. Project Implementation	73
<b>Section VI - Mitigation Initiatives</b>	
A. Mitigation Initiatives	74
<b>Section VII - Funding</b>	
A. Potential Funding Sources	75
<b>Appendices</b>	
Appendix A – Hazards Quick Reference Table	
Appendix B – References	
Appendix C – Dispute Resolution Document	
Appendix D - Resolutions	

## **Section I - Introduction**

### **A. Local Mitigation Strategy**

In the spring of 1998, the Florida Department of Community Affairs (DCA) initiated a program to assist local governments in developing plans to reduce or eliminate risks to people and property from natural and man-made hazards. This program is known as the Local Mitigation Strategy or the LMS.

Hazard Mitigation has gained increased attention over the past few years due to the large number of natural hazards which have occurred throughout the world and the in the U.S. in particular. A main area of concern is the rapid rise in the costs associated with disaster recovery. It has become apparent that money spent prior to an event to harden the community and reduce the impacts of a disaster can result in substantial savings in life and property following the event. The benefit cost ratios are extremely advantageous. As a result, the Federal Emergency Management Agency (FEMA) and the State of Florida have recently developed National and State Mitigation Strategies respectively and funding is increasingly becoming available to support hazard mitigation efforts.

The advantages of developing a local LMS program are numerous including guidance in developing pre and post disaster mitigation plans; identifying priority projects and programs for funding; and increasing the likelihood of Federal and state funding for pre and post disaster, hazard mitigation projects.

### **B. Planning Process**

On May 14, 1998, the Northeast Florida Regional Council (NEFRC) contracted with St. Johns County to facilitate in developing the LMS. Through a Memorandum of Agreement the Strategy developed is intended to provide one unified program for the County and its incorporated municipalities. Through the process of developing a unified Mitigation Strategy, it is intended that the local governments preserve, protect, and improve the safety and durability of their communities. The primary objective of the Local Mitigation Strategy is to remove if possible, otherwise to limit the losses of life and property due to a disaster. The Regional Council role as a facilitator allowed communities to provide unrestricted input regarding local mitigation needs, without appearing biased. The resulting LMS provides the best fit for St. Johns County, and is based countywide agreement.

In August of 1998, a countywide LMS Task Force was organized with members from a broad cross section of the County including elected officials, County Department heads, County staff, representatives from the cities of St. Augustine, Hastings, St. Augustine Beach, Flagler County's Marineland, and local businesses and business people. The LMS Task Force has been meeting on a quarterly basis since August 1998. The Task Force has been responsible for developing all work products for the LMS including the development of a set of guiding principles; identification of potential hazards affecting the community; identification of people and infrastructure which are vulnerable to hazards; identification of critical facilities which are necessary for maintaining health, safety and welfare of residents before, during, and after a catastrophic event; and the development of a prioritized list of pre and post hazard mitigation initiatives (projects) eligible for funding. The work of the Task Force continues; meeting

schedules are created for a permanent committee responsible for reviewing new initiatives and ranking them.

The Florida Department of Community Affairs (DCA) has assisted in the effort by providing St. Johns County with computer generated data showing projected wind speeds, detailed structural damage estimates, and amount of debris generated by hazards such as hurricanes. These estimates are made using the TAOS (The Arbitrator of Storms) computer model and have been used during the hazards identification process. In addition the data includes information on 100 and 500-year floodplains, critical facilities and evacuation routes for each County. Additional information has been developed using the SLOSH (Sea, Lake and Overland Surges from Hurricanes) computer model. Complete details regarding the storm surge threat are available from these two sources the TAOS model currently in use by the State of Florida through the Division of Emergency Management and the SLOSH model currently in use by the National Weather Service and the National Hurricane Center. A comparison of data from the two sources does not show resoundingly different results for the minor storm events, differences are greater for data on major storm events, but both models are respected in the response community. However, the SLOSH model has a longer proven record and is used in this analysis for storm surge vulnerability levels.

Since the creation of the first LMS document, St. Johns County has continued to work with the Northeast Florida Regional Council to continuously maintain and update the LMS as needed and to add new mitigation initiatives as projects get completed and new projects are initiated. Through this planning process, St. Johns County has been able to get many projects initiated, funded, and completed through the guidance of the LMS. The Task Force continues this process in addition to working to bring the LMS into compliance with Federal Emergency Management Agency regulations for County LMS documents. Regular maintenance of the LMS is coupled with updates to reach FEMA compliance. The Task Force continues to meet on a regular basis to discuss the LMS.

The Northeast Florida Regional Council staff in conjunction with the St. Johns County Emergency Management representatives served to facilitate the meetings during the 2002-2006 planning and updating of the Local Mitigation Strategy. As of 2007 St. Johns County Emergency Management has taken over these tasks. These planning efforts include expanding the list of people and organizations invited to participate, expanding the list of participants actively encouraged to participate, revising portions of the local mitigation strategy that currently do not meet requirements set by the Disaster Mitigation Act of 2000, performing a more detailed risk assessment and damage loss estimate analysis, holding meetings approximately every 90 days, and setting up public information workshops and meetings among other planning activities.

St. Johns County Emergency Management performs the data collection, analysis and revisions to the Local Mitigation Strategy with the assistance of the Task Force members. Revisions are made to the document and brought forth to the Task Force for review, discussion and approval.

A final copy of the original document was presented to the St. Johns County Commission, City of St. Augustine, City of St. Augustine Beach, and the Town of Hastings for their approval and adoption once the revisions were made to meet the newly set requirements. Since the Local



Mitigation Strategy was updated and approved by the State of Florida and the Federal Emergency Management Agency, the role of the County and the Regional Council Staff has been to review and adjusted accordingly.

### **C. Community Participation**

Recent federal mandates regarding Local Mitigation Strategies require increased public participation and documentation of solicitation for public involvement. All LMS Task Force Meetings are advertised in a newspaper of general circulation at least 10 days prior to the date of the meeting. This is to assure that the public is informed of meetings and given a chance to participate if interested. Increased efforts are made to solicit ideas, comments, and information from the general public. These efforts include providing access to the LMS document upon request, allowing the public an opportunity to comment at regular Task Force meetings, public information workshops, and presentations at County Commission Meetings. As specific outreach activities are conducted, more details of such meetings or efforts are added to the information provided in the Local Mitigation Strategy.

At least one public meeting/workshop was held once the draft of the updated Local Mitigation Strategy was complete. This workshop was held in order to solicit ideas and comments from the general public to incorporate into the final copy of the plan before it is submitted for review to State and Federal reviewers. People invited to any public information meetings or workshops are the general public, task force members, County, City, and State representatives and all others that may be interested.

A copy of the Local Mitigation Strategy document is made available at the Northeast Florida Regional Council offices and the St. Johns County Emergency Management office. Announcements of meetings or workshops and where to obtain more information are made in the local and county newspapers. Other public outreach activities include periodic presentations to St. Johns County Commission and municipal Commission/Council meetings that are open to the public.

### **D. Private Sector Participation**

Since the beginning of the Local Mitigation Strategy program in St. Johns County, efforts have been made to insure participation by the private sector. Included on the mailing list for the St. Johns County LMS Task Force are representatives from the insurance industry, healthcare, representatives from the County's largest employers, local business people, local private school representatives, local farmers, and others.

Prior to each LMS meeting information packets are sent to the private sector participants. By sending out mailings to notify members of all upcoming meetings, the representatives from the private sector are being actively encouraged to participate in the Local Mitigation Strategy planning process. When possible, all LMS members were also phoned to remind them of the upcoming meetings. The meetings were attended sporadically by the private sector due to conflicts and busy schedules. However, at least one representative and sometimes more from the

private sector were in attendance at each of the LMS meetings and valuable input was obtained from these individuals.

The St. Johns County LMS Task Force continues to hold quarterly LMS meetings and continues to coordinate and encourage private and public sector interest and involvement. Efforts to expand the list of participating agencies and organizations to include a broader spectrum of representation from the community are on-going. An informational workshop is held in order to provide new members and interested parties with information regarding the Local Mitigation Strategy planning process and why their participation is important. These efforts continue throughout the planning process for updating and maintaining the Local Mitigation Strategy. New participants are continuously sought for inclusion on the mailing list. In addition the Chamber of Commerce is used as an information source to obtain up-to-date information on businesses and organizations so that it is certain that all have been given the opportunity to participate in the planning process.

#### **E. Use and Incorporation of Existing Documents**

As part of the planning process for the creation of the LMS document, other existing documents were used as references and incorporated into the LMS document. These existing documents include County and municipal Comprehensive Plans, Regional Strategic Plans, Land Development Regulations, City Codes, State Statutes, and Emergency Management Plans. These documents were used to obtain goals, objectives and policies that were incorporated into the LMS document as guiding principles, which are discussed in detail in Section II. These documents are listed in Appendix B.

Efforts are made in current and future planning activities to review new documents and documents previously not reviewed in order to cover the wide spectrum of plans within the County and State. Currently, St. Johns County, the Town of Hastings, and the Cities of St. Augustine and St. Augustine Beach are active participants on the National Flood Insurance Program. There are also recently adopted plans and studies that have not yet been reviewed and incorporated into the LMS, but will be in the current planning cycle and future reviews of the LMS.

#### **F. Incorporation of LMS into other Documents**

Part of the LMS document contains Guiding Principles, which as explained above were obtained by reviewing other pertinent county and municipal documents. Through this process of information incorporation into the LMS, new goals, objectives and policies can be created to fill in the gaps in the existing documents in order to increase the county's ability to effectively mitigate against hazards. In this way the goals and principles of the LMS will be incorporated into other planning documents in the county that deal with hazard mitigation.

#### **G. Reevaluation Criteria**

The LMS document has to be updated over time to change with the growing and changing community. Strategies, and mitigation initiatives change, Comprehensive Plans updated, and projects completed. These changes need to be reflected in the LMS document. In order to ensure that the document remains updated and current, the LMS Task Force meets and the LMS is reviewed a minimum of once every year or following a disaster (mandatory) to determine if any updates or corrections are necessary. Updates may include new issues, new projects, changes to existing projects, consideration of new funding sources, changes to timeframes of existing projects, or changes to the mitigation strategy program itself.

As a result, the LMS is maintained on a regular basis by the St. Johns County Task Force in order to meet the needs of St. Johns County and its citizens. It is essential that all facets of the community be represented at the Task Force meetings including the public, to ensure that the plan is staying up to date with all aspects of the community. Details on how the public continues to be included and encouraged to participate throughout the reevaluation, maintenance, and review process are outlined in Section I, C. Through these meetings, facilitated by St. Johns County Emergency Management staff, the LMS document is reevaluated and updated regularly.

#### **H. Submission of Plan to SHMO**

Within five years of the plan's update approval by the Federal Emergency Management Agency (FEMA), the plan must be submitted to the State Hazard Mitigation Officer for initial review and coordination.

#### **I. Conflict Resolution**

Recognizing that disputes between jurisdictions, interest groups, units of government and the private sector sometimes occur in a decision making process, the St. Johns County LMS Task Force agreed to resolve all conflicts in policy, procedures and issues based on the Regional Dispute Resolution Process.

The Northeast Florida Regional Council currently uses this process, established by the Florida Legislature as part of the 1993 Environmental Land Management Study (ELMS) legislation to facilitate intergovernmental problem solving. The process offers a reasonable approach to solving public problems. It provides a forum to cooperatively resolve issues and differences between local governments and private interests in a timely, informal, and a cost-effective manner.

The process should take no longer than two weeks. The core of the process is a settlement meeting at which disagreeing parties explain their interests, explore options, and seek a mutually acceptable agreement. Many times it ends at this point. However, if a solution is not reached, other options available include additional settlement meetings. Disputes and conflicts that cannot be resolved at this level can be escalated to mediation.

The process essentially saves time and money by seeking mutually beneficial solutions. Within this process, direct communication encourages improved control of outcomes and the quality of

the agreement itself. The conflict resolution process was not required during the development of the LMS. The LMS Task Force resolves all conflicts by democratic rule.

## Section II - Guiding Goals and Principles

### A. Goals

The purpose for developing a set of Goals and Guiding Principles is to clearly state what the community's overall vision for hazards mitigation is and to ensure that the community adequately addresses its mitigation needs before and after a disaster. Before beginning the process of developing the Guiding Principles for the St. Johns County Local Mitigation Strategy (LMS) the Task Force identified the goals they believed should be foremost in overall development of this document. The following goals are intended to be the leading concepts of this Strategy. In short, the purpose of the Local Mitigation Strategy is to provide guidance to the County in building a safer and more resilient community. The declaration of these ultimate goals provides the overall guidance for the Strategy. The goals are provided in a ranked order, where the first goal is paramount. The activities recommended as mitigation efforts by this Strategy must first meet or further these goals.

- 1. Protect the lives of the residents of St. Johns County and its Municipalities.**
- 2. Protect property to ensure that its intrinsic value is preserved.**
- 3. Protect infrastructure so that it is available during and after a disaster.**
- 4. Protect business activities so that they continue to provide economic strength to the community.**
- 5. Protect the environment to ensure that quality of life and economic wellbeing are preserved.**

These goals are used as part of the project prioritization methodology. Projects recommend by this Strategy must first meet one of the goals to be considered, then will receive points based on which Goals they will routinely further.

### B. Guiding Principles

The Guiding Principles for St. Johns County outlined in the following document, which was developed and approved by the Task Force as part of the LMS process. It was compiled from existing adopted Goals, Objectives, Policies, and Ordinances, which address hazard mitigation and long-term recovery.

The Guiding Principles were compiled by reviewing existing requirements in the adopted Comprehensive Plan of each local government as well as Stat, Regional and Local planning documents. These documents have already adopted requirements which address hazard mitigation and long-term recovery and which are already serving as the County's Adopted Guiding Principles. They are shown in the text summary and in the following matrix format

which identifies in a narrative description how they contribute to a comprehensive mitigation strategy as well as the source of the requirement and if and how it has been implemented. Sources include State Statutes, the County and Municipal Comprehensive Plans; the Strategic Regional Policy Plan developed by the NEFRC; the County Emergency Management Plan, and local ordinances.

A review of these Guiding Principles will quickly reveal several mitigation approaches commonly used in the County and municipal plans. Among these are the policies which, direct growth away from or restrict growth in the hazardous areas. The restriction of growth in the Coastal High Hazard Areas (CHHA) for example is common to each, the County and coastal municipal plans. Prohibitions on development, which increases off site flooding or does not provide for proper transportation drainage, are common in St. Johns County. These examples are given to introduce the concepts that St. Johns County and its municipal governments have available to them and the regulatory authority and public support for development of a unified mitigation strategy.

It is not intended that the inclusion of these policies as Guiding Principles in the Local Mitigation Strategy will provide a fixed master plan for the future development or revision of policies, but that they when viewed as a whole represent a community policy statement relating to the future development in St. Johns County. As such they are intended to provide the guidelines for revision of development regulations and to focus future policy development on the goals stated above. The LMS also relates to the intent and mandates of the State and Federal governments to encourage local jurisdictions to undertake a coordinated and effective program that will reduce the vulnerability of its population and infrastructure to the effects of disasters. When the use of these Guiding Principles for future policy development is combined with the direct implementation of mitigation projects identified in this Strategy, the County will have a unified mitigation approach.

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>Reduce the quantity and improve the quality of storm water runoff to surface water bodies by increasing the amount of green permeable open space and the use of more permeable surfaces through the following policy program.</p>	<p>City of St. Augustine Comprehensive Plan - Future Land Use Element - Objective 4</p>	<p>Implementation ongoing</p>
<p>Require subdivisions to be platted and recorded and include road and drainage maintenance plans as outlined in the City of St. Augustine's subdivision ordinance (Ordinance 83-9) prior to a building permit being issued.</p>	<p>City of St. Augustine Comprehensive Plan - Future Land Use Element</p>	<p>On-going enforcement</p>
<p>Ensure that coastal area populations densities are coordinated with the St. Johns County and Northeast Regional Planning Council's Hurricane Evacuation Plans,</p>	<p>City of St. Augustine Comprehensive Plan - Future Land Use Element - Objective 10</p>	<p>The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.</p>
<p>Continue to operate the drainage system based upon the existing master planning process as established by the City (city of St. Augustine) staff and under the aegis of the Director of Public Works and will provide for maintenance of its existing drainage system data base; continue to establish a list of prioritized renewal/replacement projects; and will facilitate periodic updates of the master plan.</p>	<p>City of St. Augustine Comprehensive Plan - Infrastructure Element - Drainage Sub Element - Objective 1.2</p>	<p>Implemented</p>
<p>Investigate the feasibility of establishing a storm drainage utility and a system of storm drainage user fees and charges which follow a cost of service approach to rate structuring, and produce revenues adequate to fund ongoing maintenance efforts and ongoing renewal and replacement improvements.</p>	<p>City of St. Augustine Comprehensive Plan - Infrastructure Element - Drainage Sub Element - Objective 1.3</p>	<p>Implemented</p>
<p>The storm drainage system will adhere to stringent regulatory requirements as necessary to promote the conservation and protection of natural resources.</p>	<p>City of St. Augustine Comprehensive Plan - Infrastructure Element - Drainage Sub Element - Objective 1.4</p>	<p>On-going enforcement</p>
<p>Protect valuable functions of wetlands, estuaries, tidal marshes and submerged lands, including the territorial sea by maintaining native vegetative communities and</p>	<p>City of St. Augustine Comprehensive Plan -</p>	<p>On-going enforcement</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>hydrologic systems, through continued enforcement of Ordinance 88-39, Conservation Overlay zone Development, for all development proposals in the conservation zones....</p>	<p>Conservation Element - Objective 7</p>	
<p>Control erosion and sedimentation in development areas both during and after construction.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element - Objective 6</p>	<p>Enforced through Development Code</p>
<p>Establish development guidelines for the remaining undisturbed areas of the 100 year flood plain so that the flood-carrying and flood-storage capacity of those lands is maintained.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element Objective 9</p>	<p>Implemented</p>
<p>Reduce or prevent storm damage by protecting natural systems which serve as buffers against those storms.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element Goal 3 Objective 1</p>	<p>Implemented</p>
<p>Ensure that a total evacuation of the City during a Category 3 storm can be accomplished in less than 12 hours, or in a time period determined to be safe from the recommendations of a new hurricane evacuation study and plan in 1991, by providing adequate evacuation routes and shelters.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element Goal 3 Objective 2</p>	<p>The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.</p>
<p>Regulate development within coastal high-hazard areas by enforcing coastal construction standards.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element Goal 3 Objective 3</p>	<p>On-going enforcement</p>
<p>Research strategies in post-disaster redevelopment planning that eliminate exposure to natural hazards.</p>	<p>City of St. Augustine Comprehensive Plan - Conservation Element Goal 3 Objective 4</p>	<p>Ongoing</p>



CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>		
The City of St. Augustine will implement the Future Land Use Map illustrated in the Future Land Use Element through the year 2000 to limit population concentrations in the coastal high hazard areas.	City of St. Augustine Comprehensive Plan - Conservation Element Goal 3 Objective 6	Ongoing
The City of St. Augustine will limit capital expenditures that subsidize development in coastal high hazard areas, but will place no limitation on expenditures in those areas that enhance or restore natural resources.	City of St. Augustine Comprehensive Plan - Capital Improvements Element Objective 2	On-going enforcement
Protect human life and health.	City of St. Augustine -- Chapter 13 Flood Control of the St. Augustine Code.	On-going enforcement
Minimize expenditure of public money for costly flood control projects.		
Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public		
Minimize prolonged business interruptions.		
Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains.		
Maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize future flood blight areas.		
Ensure that potential home buyers are notified that property is in a flood area.		
Standards for Flood Hazard Reduction. Provisions for development in flood hazard areas in order to minimize damages.	City of St. Augustine -- Chapter 13 Flood Control of the St. Augustine Code. Sec 13-61 through 13-65	On-going enforcement
Conservation Overlay Zone Development. Establishes criteria for the review of development proposals and to manage and regulate and direct development within the Conservation Overlay Zones 1, 2, and 3.	City of St. Augustine -- Chapter 11 Environmental Protection of the St. Augustine	Implemented

<b>CATEGORY</b>	<b>SOURCE</b>	<b>NOTES (Design; Implementation; Enforcement)</b>
<b>Objective/Policy</b>	Code.	
Conservation Overlay Zones 1, 2, and 3.	City of St. Augustine Building Code Sec. 8-134	On-going enforcement
Coastal Construction Requirements generally. All structures shall be designed so as to minimize damage to life, property and the natural environment.	City of St. Augustine Subdivision Regulations Division 3 Section 23-96.	On-going enforcement
All subdivisions require a drainage design plan show existing and proposed features. The plan shall equal or exceed design standards set forth hereinafter and the policies and procedures established in the Drainage Manual of the FDOT.	City of St. Augustine Subdivision Regulations Sec. 23-98 through 23-103	On-going enforcement
Roadway ditches standards and requirements.		
Base future land use decisions on the carrying capacity and the ability to evacuate in a major hurricane event as defined by the Northeast Florida Region Hurricane Evacuation Plan.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Objective L.1.5	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Coordinate with St. Johns County and the NEFRPC in establishing the carrying capacity of the coastal areas.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.1	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Amendments to the Future Land Use Plan shall reflect densities and intensities that do not exceed the carrying capacity of the designated evacuation routes.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.2	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Existing evacuation routes shall be so marked and should be given special consideration for improvement over other roads and highways in the City.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy	On-going enforcement

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>	L.1.5.3	
Update the hurricane evacuation and disaster preparedness plan every five years in conjunction with St. Johns County, and re-evaluate its effectiveness immediately after a major disaster event, to recommend appropriate improvements.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.4	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Update hurricane guide, showing evacuation routes, hurricane hazards, safety procedures, shelters, and other pertinent information.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.5	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Adhere to the DEP's Coastal Setback Requirements and their permitted variances regardless of the size of the developable parcel.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.6	On-going enforcement
Encourage St. Johns County, the SJRWMD and/or the State of Florida to purchase areas subject to seasonal or periodic flooding including flood-prone areas adjacent to the Atlantic Ocean to be used for public and beach-access parking.	City of St. Augustine Beach Comprehensive Plan Future Land Use Element Policy L.1.5.7	Ongoing
Identify at least two methods to improve approaches of evacuation routes which are subject to flooding.	City of St. Augustine Beach Comprehensive Plan Transportation Element Objective T.2.2	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
Continue to coordinate with FDOT and St. Johns County on the study of and necessity for improved evacuation with elevation standards.	City of St. Augustine Beach Comprehensive Plan Transportation Element Policy T.2.2.1	Ongoing
Assist in protecting, conserving, and enhancing remaining coastal dunes and beach by requesting assistance from the Department of Environmental Protection.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element	Ongoing

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>	Objective CC.1.2	
Promote hazard mitigation by enforcement of the coastal construction setback line.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policies CC.1.2.6	On-going enforcement
Enforce requirements of the Federal Flood Insurance Program by continuing to participate in the program, specifically designating coastal high hazard areas and limiting development in such areas along with relocating any infrastructure.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.2.7	On-going enforcement
Land Development Regulations should include revised regulations of building practices and land uses that reduce the vulnerability of human life and property to natural hazards, specifically hurricanes, in high hazard areas.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.2.8	Implemented
Participate with all applicable State and Federal Agencies to insure public safety by keeping Disaster Preparedness plans current incorporating the hazard mitigation annex of the peacetime emergency plan as well as updates by the Regional Planning county and St. Johns County.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Objective CC.1.3	Ongoing
Assessment of the impact of new development on emergency evacuation routes will be incorporated into the City land development ordinance.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.3.1	Ongoing
Existing evacuation routes will be given priority for improvement over other transportation facilities in the Annual Capital Improvements Program.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.3.2	Ongoing
St. Augustine Beach shall prepare and update its hurricane evacuation plan and disaster preparedness plan every five years and also reevaluate its effectiveness	City of St. Augustine Beach Comprehensive Plan	The Regional Planning Council completed the updated Evacuation Study. Local review

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b> immediately after a major disaster event to recommend appropriate improvements and post-disaster redevelopment activities both immediate and long term.	Conservation/Coastal Element Policy CC.1.3.3	and coordination are pending.
City shall update its hurricane guide showing evacuation routes, hurricane hazards, safety procedures, shelters, and other pertinent information for its citizens every year by the anniversary date of the adoption of the Comprehensive Plan.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.3.4	The Regional Planning Council completed the updated Evacuation Study. Local review and coordination are pending.
City's disaster preparedness plans shall give priority to accommodations for the handicapped and indigent, including transportation and appropriate sheltering by May, 1992.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.3.5	Implementation ongoing
St. Augustine Beach will annually coordinate disaster preparedness plans with St. Johns county and the City of St. Augustine.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.3.6	Implementation ongoing
Limit public expenditures to that which supports recreation, expenditures to the City-owned City Hall/Fire Department square, conservation of natural resources, and/or the extension of sewer facilities for public health within the coastal high hazard area.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Objective CC1.4	Enforced. City has moved its Public Works and Police Departments as well as its City Hall off the ocean front.
Infrastructure shall be planned and required to be installed currently with future development in areas outside of coastal high hazard areas.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.4.1	Implementation Ongoing
All private and public infrastructure, utilities and drainage improvements must be constructed concurrently, or in accordance with a phased plan approved by St. Augustine Beach	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.4.2	On-going enforcement
City shall reduce hurricane evacuation times by establishing for reviewing new development in relation to evacuation.	City of St. Augustine Beach Comprehensive Plan	The Regional Planning Council completed the updated Evacuation Study. Local review

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>	Conservation/Coastal Element Objective CC.1.5	and coordination are pending.
Transportation systems shall be designed and built to handle traffic generated during emergency evacuations as defined in the City's evacuation plan.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.5.1	Implementation ongoing
All roadways in the coastal zone shall be constructed to City specifications using salinity tolerant construction techniques and materials.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.5.2	Implementation ongoing
Transportation drainage systems including swales and ditches shall be maintained to ensure hydraulic capability.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.5.3	Implementation ongoing
City will coordinate with St. Johns County in lobbying FDOT for the improvements of the bridge on SR 312 or an additional bridge which crosses the Intracoastal as well as other key evacuation routes.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.1.5.4	Completed
Reduce the potential for flood-related adverse impacts in St. Augustine Beach by five percent in 3 years.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Objective 2.5	Implemented through revised building code. (10% discount)
Review existing development in low-lying areas subject to flooding and modify drainage systems by five percent in these areas in 3 years to minimize potential damage to property and natural systems.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.2.5.1	Implemented through revised building code.
Protect natural resources of the City from contamination by any hazardous substances.	City of St. Augustine Beach	None in City

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>	Comprehensive Plan Conservation/Coastal Element Objective CC.2.7	
In conformance with State and Federal regulations, commercial establishments which use, create, store, generate or transport toxic or hazardous substance shall prepare a plan which identifies the materials and how these materials will be handled and disposed.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.2.7.1	Implemented by County
St. Augustine Beach will work with other State agencies to develop sites for households, small businesses and other low volume generators of hazardous waste to deliver hazardous waste for later disposal at an approved hazardous waste disposal site.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.2.7.2	Two gas stations in City. No problems reported.
Sites polluted from underground petroleum storage tanks shall be promptly cleaned up and the tank replaced, repaired or removed as presented in an approved plan within six months of discovering the petroleum.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.2.7.3	On-going enforcement
City shall make every reasonable effort to ensure public safety health and welfare of people and property from the effects of coastal storms by limiting public expenditures in areas subject to repeated damage by wind and water thereby reducing the exposure of humans and property to natural hazards, i.e., hurricanes.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Goal CC.4	Ongoing
Prepare a post-disaster redevelopment plan by 1993 to reduce the exposure of human life and property to the destruction of hurricanes.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1	Implemented through revised building code and through the City's participation in FEMA's Community Rating Service. City has a rating of 8, which saves the City's property owners 10% on their flood insurance premium.
City shall include in its post-disaster redevelopment plan a delineation of activities that give priority to immediate repair and cleanup actions over long term redevelopment activities.	City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1.1	Ongoing

<b>CATEGORY</b>	<b>SOURCE</b>	<b>NOTES (Design, Implementation; Enforcement)</b>
<p><b>Objective/Policy</b></p> <p>City will amend its building code to specify standards for the removal, relocation or structural modification of damaged infrastructure and structures.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1.2</p>	<p>Implemented</p>
<p>City shall establish as its standard for inclusion in the Land Development Regulations that any structure damaged beyond fifty percent of value more than once during storms, hurricanes or northeasters will be determined to be a non-conforming use if located in a coastal high hazard area.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1.3</p>	<p>LDR development ongoing</p>
<p>City shall include in the post-disaster redevelopment plan, recommendations of interagency hazard mitigation reports.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1.4</p>	<p>Ongoing</p>
<p>City shall include in the post-disaster redevelopment plan, measures for eliminating unsafe conditions and inappropriate uses in coastal high hazard areas.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.1.5</p>	<p>Ongoing</p>
<p>City shall restrict the intensity of development within coastal high hazard areas consistent with public safety needs through the adoption of the Land Development Regulations.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Objective 4.2</p>	<p>LDR development ongoing</p>
<p>City shall designate the Coastal High Hazard Area as those areas which are within the FEMA V (Velocity) Zones and areas seaward of the Coastal Construction Control Line and within those areas which may be repeatedly damaged, redevelopment will be limited to conservation and recreational land uses.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.2.1</p>	<p>On-going enforcement</p>
<p>By 1992, the City shall identify any areas within the coastal high hazard area needing redevelopment and develop a plan for eliminating unsafe conditions and inappropriate conditions.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Policy CC.4.2.2</p>	<p>Implemented</p>



CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>St. Augustine Beach shall not allow public expenditures that subsidize future development in the high-hazard coastal area, except for expenditures which support recreation, expenditures to the City-owned City Hall/Fire Department square, conservation of natural resources, and/or the extension of sewer facilities for public health.</p>	<p>City of St. Augustine Beach Comprehensive Plan Conservation/Coastal Element Objective C.1.5</p>	<p>On-going enforcement</p>
<p>Protect human life and health.</p> <p>Minimize expenditure of public money for costly flood control projects.</p> <p>Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public</p> <p>Minimize prolonged business interruptions.</p> <p>Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains.</p> <p>Maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize future flood blight areas.</p> <p>Ensure that potential home buyers are notified that property is in a flood area.</p>	<p>City of St. Augustine Beach Flood Damage Prevention Regulations - Objectives.</p>	<p>On-going enforcement</p>
<p>Standards for Flood Hazard Reduction. Provisions for development in flood hazard areas in order to minimize damages.</p>	<p>City of St. Augustine Beach Land Development Regulations Sec. 5.03.05</p>	<p>On-going enforcement</p>
<p>Performance of all stormwater management systems shall comply with this section of the city's code as well as all state regulations.</p>	<p>City of St. Augustine Beach Land Development Regulations Sec. 6.05.00</p>	<p>On-going enforcement</p>
<p>The Town requires a 35-foot natural buffer around all wetlands and prohibits the location of residential, commercial and industrial land uses within the buffer areas, but allows resource-based recreational activities within buffer areas subject to best</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy</p>	<p>On-going enforcement</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b> management practices.</p>	<p>V.2.4</p>	
<p>The Town requires that post-development runoff rates and pollutant loads not exceed redevelopment conditions.</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy V.2.5</p>	<p>On-going enforcement</p>
<p>Town regulates development within the 100-year flood plain in order to maintain the flood-carrying and flood storage capacities of the floodplains and to reduce the risk of property damage and loss of life by establishing minimum floor elevations and by limiting impervious development on residential lots to a maximum of 20%. Commercial property development is also limited to 20% unless retention or detention areas are approved on a case-by-case basis.</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy V.2.7</p>	<p>On-going enforcement</p>
<p>Prohibits development or dredging and filling of wetlands which would significantly alter their functions and by only allowing non-intensive agriculture, aquaculture and silviculture type practices.</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy V.2.8</p>	<p>On-going enforcement</p>
<p>Require the maintenance of the quantity and quality of surface water runoff by prohibiting any development which may diminish or degrade the quality and quantity of surface water runoff within the Town.</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy V.2.12</p>	<p>On-going enforcement</p>
<p>Require all hazardous waste generators properly manage their own wastes and require that new hazardous waste generators comply with all applicable federal and state permitting requirements before approving any development plans.</p>	<p>Town of Hastings Comprehensive Plan - Conservation Element Policy V.2.13</p>	<p>On-going enforcement</p>
<p>Resource Protection Standards for the Town of Hastings are detailed in the Land Development Regulations</p>	<p>Town of Hastings - Land Development Regulations, Article V Resource Protection Standards</p>	<p>On-going enforcement</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>Local governments should sign statewide mutual aid agreements.</p> <p>Local governments are encouraged to consider the impact and compatibility of emergency preparedness and recovery plans on adjacent areas.</p> <p>Local governments should participate in region and state wide disaster exercises.</p> <p>Establish a work group to coordinate compatibility among communications systems within the region.</p> <p>Review and update the Regional Hurricane Evacuation Study every five years.</p> <p>Local governments shall consider utilizing the Northeast Florida Regional Planning Council's Regional Dispute Resolution Process as the first means of settling disputes concerning emergency preparedness.</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.1.1 through 3.1.6</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implements these policies.</p>
<p>The location of solid waste and commercial hazardous waste management facilities and/or regional hazardous waste storage, transfer or treatment facilities in the coastal high hazard area are assumed to have adverse regional impacts which shall be prevented.</p> <p>Development within hurricane evacuation areas should be responsible and permitted only when evacuation route capacity and shelter space capacity is available. Responsible development includes but is not limited to: structures elevated in storm surge and flooding areas; adequate drainage in flooding areas; and sufficient access for emergency response vehicles to all development.</p> <p>Assist in the development of funding for public acquisition of coastal property that has been destroyed or damaged as the result of a hurricane, storm or flooding.</p> <p>Reduce public expenditures that subsidize increased densities in the coastal high hazard area except for restoration, enhancement of natural resources, or development</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.2.1 through 3.2.8</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implements these policies.</p>

CATEGORY	SOURCE	NOTES (Design, Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>of recreational facilities.</p> <p>Educate citizens and businesses about the impacts of natural disasters, including economic disruption, personal safety and property loss.</p> <p>The siting of new critical facilities or institutions, such as hospitals, nursing homes, adult congregate living facilities and correctional facilities in coastal high hazard areas are assumed to have adverse regional impacts and shall be prevented.</p> <p>Coastal high-hazard areas, for uniformity and planning purposes, are defined as category 1 evacuation zones or as designated by the local government.</p> <p>Protect the primary dune systems of the region. Provide technical assistance to local governments in the development and implementation of dune protection plans.</p>		
<p>Public and private members of the community shall be encouraged to support and participate in Local Emergency Planning Committee activities.</p> <p>The risks of hazardous materials to the public and the environment should be determined through the Local Emergency Planning Committee, local emergency management agencies and facilities.</p> <p>Train emergency responders to appropriate levels for responding to hazardous materials incidents in accordance with the SERC Training Task Force Training Guidelines.</p> <p>A hazardous waste disposal day program should be supported by communities throughout the region.</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.3.1 through 3.3.4</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implement these policies.</p>
<p>Assess the numbers and requirements of special needs populations.</p> <p>Local governments should be encouraged to require new, reconstructed and expanded health care facilities outside the hurricane evacuation areas to be built to shelter</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.4.1 through 3.4.4</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implement these</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy specifications.</b></p> <p>Local governments should develop incentives to encourage existing health care facilities outside the storm surge areas to retrofit buildings to shelter specifications.</p> <p>Health care facilities outside the hurricane evacuation areas shall be encouraged to establish aid agreements with similar facilities within the hurricane evacuation areas.</p>		<p>policies.</p>
<p>An adverse regional impact is assumed when a proposed development in a hurricane evacuation zone is anticipated to utilize twenty-five percent (25%) or more of an identified hurricane evacuation route's level of service E hourly directional maximum service volume based on the Florida Department of Transportation's Generalized Peak Hour/Peak Direction Level of Service Maximum Volumes as presented in the Florida Highway Systems Manual which shall be mitigated.</p> <p>Roads which function as evacuation routes with high clearance times, particularly intercommunity routes, should receive high priority in FDOT or local capital improvement programs.</p> <p>Suspend road construction projects on evacuation routes during hurricane watches and move construction barriers to maximize capacity.</p> <p>Develop a system of emergency communication on highways including electronically controlled message signs and a radio station to broadcast highway conditions.</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.5.1 through 3.5.4</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implement these policies.</p>
<p>Establish a procedure for prioritizing and retrofitting existing public facilities located outside of the coastal high hazard area to shelter specifications.</p> <p>Adopt construction standards and techniques, and siting decisions for public buildings that would make these structures suitable for public shelters.</p> <p>Where shelter deficits exist, an adverse regional impact is a proposed development with anticipated public shelter space demand that will require 200 spaces or five</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.6.1 through 3.6.8</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implement these policies.</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>percent (5%) of the shelter space capacity; or where shelter deficits do not exist, an adverse regional impact is a proposed development with anticipated public shelter space demand that will cause a deficit of 200 spaces or more which shall be mitigated.</p> <p>Educate residential home builders about the benefits of constructing new residences outside of the hurricane evacuation areas with a Asafe room to serve as home shelters. Insurance agencies shall be encouraged to provide incentives to prepare existing residences as home shelters.</p> <p>Require new and existing mobile home and RV parks to have on-site shelter facilities for their residents or plans for alternative off-site shelters.</p> <p>Require new apartment complexes and condominiums located outside of hurricane evacuation areas to provide on-site shelter space.</p> <p>Innovative programs for financing shelter space should be examined including special assessment districts.</p> <p>Encourage the Humane Society and local animal control departments to develop their role in animal evacuation during disasters.</p> <p>Local governments shall address post-disaster redevelopment planning within their comprehensive plans in accordance with Rule 9J-5, F.A.C.</p> <p>Replacement development should be consistent with local, regional and state programs designed to ensure safe and timely evacuation.</p> <p>Increase attention given to building code regulations and enforcement that may not be sufficient to protect the life and safety of the occupants.</p> <p>Communities should maintain emergency recovery funding and staffing plans to enable quick restoration of services lost to disasters.</p> <p>Recovery plans should include the identification of potential disaster field offices and</p>		

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b> disaster assistance centers.  Identify areas for potential acquisition in areas of existing vulnerable development.</p>		
<p>Local governments should encourage their elected and appointed officials to attend the Public Officials Conference and other state wide training sessions and conferences.  Local governments shall conduct training exercises which include roles for their elected and appointed officials.  Educate citizens on the need for personal disaster plans including provisions for their pets.  Encourage media personnel to attend educational conferences on disasters so they can better inform and educate the public.</p>	<p>Strategic Regional Policy Plan- Emergency Preparedness Element Policies 3.8.1 through 3.8.4</p>	<p>Northeast Florida Regional Planning Council is responsible for the implementation of its Strategic Regional Policy Plan. The Council is developing ways to implements these policies.</p>
<p>Requirements for Stormwater management, including minimum design standards and finished floor elevations and lot grading plans.</p>	<p>St. Johns County Paving and Drainage Standards Ordinance 96-40</p>	<p>On-going enforcement</p>
<p>Requirements for roadway design, including pavement design and roadway drainage.</p>	<p>St. Johns County Paving and Drainage Standards Ordinance 96-40</p>	<p>On-going enforcement.</p>
<p>Through the future land use plan, the County shall ensure safe evacuation of coastal areas and shall coordinate coastal area population densities with appropriate regional hurricane plans.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Objective A.1.5</p>	<p>Implemented</p>
<p>Existing evacuation routes shall be mapped and physically posted and should be given special consideration for improvement over other transportation facilities.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy A.1.5.1</p>	<p>The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.</p>

CATEGORY	SOURCE	NOTES (Design, Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>The County shall update its hurricane evacuation plan and disaster preparedness plan every three years and also shall re-evaluate its effectiveness immediately after a major disaster event to recommend appropriate improvements.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy A.1.5.2</p>	<p>County has recently prepared the emergency management plan. The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.</p>
<p>The County shall update its hurricane guide annually if needed, showing: evacuation routes, hurricane hazards, safety procedures, shelters and other pertinent information for its citizens.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy A.1.5.3</p>	<p>County has recently prepared the emergency management plan. The Regional Planning Council recently completed the updated</p>
<p>The County shall complete a County-wide master drainage study by, which shall include inventories of existing drainage facilities and address their deficiencies. Upon completion of the drainage study for each sub-basin, the County shall review and amend the Plan to include or implement the sub-basin study's findings.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Objective F.1.3</p>	<p>Implemented</p>
<p>The County shall coordinate with DEP and St. Johns River Water Management District in the identification of all drainage basins in the County to assure uniformity of basin designation.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.1</p>	<p>Ongoing</p>
<p>As the drainage studies for each sub-basin are completed, the County shall establish drainage facility priorities in the sub-basin based on the potential damage created by flooding, the water quality in the area, and the impacts to areas of special concern (e.g., OFW, Class II).</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.2</p>	<p>Ongoing</p>
<p>Upon identification of deficiencies by the master drainage study, the County shall take action to address such deficiencies through the establishment of stormwater utilities for the affected areas, or other appropriate implementation mechanism.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.3</p>	<p>Ongoing</p>
<p>Pending completion of the master drainage study, the following standards shall be considered for addition to the Paving and Drainage Ordinance (86-4) by April 1991:</p> <p><u>Water Quality</u></p> <ol style="list-style-type: none"> <li>1. Draw down of the required retention volume within 72 hours following a storm event.</li> </ol>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.4</p>	<p>Ongoing</p>



CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>2. Special criteria for Class II, OFW, and recharge areas, which shall, at a minimum, be consistent with standards contained in Chapter 17-3, 17-25 and 40C-42 F.A.C.</p> <p><u>Water Quantity</u></p> <ol style="list-style-type: none"> <li>1. The 10-year return period shall be used to design minor internal drainage facilities.</li> <li>2. The 25-year/24-hour storm event shall be used to design storage basins for peak flow attenuation in addition to the current 10-year/24-hour storm event.</li> <li>3. The 25-year return period storm shall be used for the design of major drainage facilities such as: canals, drainage ditches and culverts external to the development.</li> <li>4. Antecedent Moisture Condition shall be the average wet season (AMC II).</li> </ol> <p>The County shall manage and regulate development within the 100-year flood plain through enforcement of the Flood Plain Management Ordinance (90-24) and the procedures recommended by FEMA as incorporated within the County's development permit review process.</p> <p>Vegetative buffers of at least 25 feet shall be required and maintained between natural drainage courses and developed areas to protect the water quality of the drainage course.</p> <p>County shall develop coordination mechanisms between the planning and engineering departments to ensure that plans developed for drainage facilities are consistent with, and support, the Future Land Use Element.</p> <p>The County shall manage, use, conserve, protect, and enhance coastal resources, along with protecting human life from natural disasters.</p>	<p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.6</p> <p>St. Johns County Comprehensive Plan Coastal Element - Policy F.1.3.7</p> <p>St. Johns County Comprehensive Plan Coastal Element - Objective F.1.4</p> <p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Goal</p>	<p>On-going enforcement</p> <p>On-going enforcement</p> <p>Implemented</p> <p>On-going enforcement</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>	G.1	
<p>The County shall assure the protection, conservation and enhancement of the County's coastal barrier areas, dunes, and beaches through: (a) coordination of County permitting activities with the activities of other regulating state and federal agencies; (b) establishing or continued enforcement of construction standards for the coastal building zones; and (c) the establishment of procedures and land development regulations to protect the County's dune systems.</p>	<p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Objective G.1.2</p>	<p>On-going enforcement</p>
<p>The County shall provide technical support and assistance to applicable state and federal agencies in identifying and inventorying all beaches and dune systems, so that they may be protected, enhanced and re-nourished.</p>	<p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Policy G.1.2.1</p>	<p>Ongoing</p>
<p>By April 1991, the County shall develop procedures and, through adoption of land development regulations shall develop and adopt standards and procedures, to ensure the protection, enhancement or restoration of the County's dune systems. At a minimum, these procedures or regulations shall provide for:</p> <ul style="list-style-type: none"> <li>-- Coordination with DEP as to applications to develop seaward of the established Coastal Construction Control Line, in order to monitor and comment on DEP applications for variances to the CCCL requirements, and to favor variances to County setback requirements where possible or appropriate to avoid or minimize development seaward of the CCCL; and</li> <li>-- The County's use of beach ramp fees/tolls, consistently with applicable law, for dune restorations and enhancement programs (such as, without limitations, the construction of dune walkovers, the establishment of a salt-tolerant vegetation/revegetation program, and public education programs in cooperation with the Marine Extension Service), and to further control beach access in order to prevent dune damage; and</li> <li>-- Establishment of standards and enforcement mechanisms to prevent</li> </ul>	<p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Policy G.1.2.2</p>	<p>Ongoing</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<b>Objective/Policy</b>  destruction of dune vegetation; and  -- Continued enforcement of the County's requirements and prohibitions against uncontrolled vehicular beach access pursuant to Ordinance No. 73-2, and related ordinances; and  -- Continued enforcement, through the development permit review process, of applicable state, federal or local coastal construction zone requirements;  -- Improvements to beach access and parking facilities as provided in Policy H.1.1.1.		
Seawall and other shoreline modifications shall be set at, or landward of, the mean high water line, except as provided by law. The County and other agencies having jurisdiction shall coordinate in establishing appropriate setbacks.	St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Policy G.1.2.3	On-going enforcement
The County shall prepare post-disaster redevelopment plans which will reduce or eliminate the exposure of human life and public and private property to natural hazards.	St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Objective G.1.3	County has recently prepared the emergency management plan. The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.
The County shall update its hurricane evacuation plan and Peacetime Emergency Plan every three years, and shall re-evaluate their effectiveness immediately after a major disaster event to recommend and adopt appropriate modifications.  The County shall update its hurricane guide showing evacuation routes, hurricane hazards, safety procedures, shelters, and other pertinent information for its citizens.  Disaster preparedness plans shall include accommodations for the handicapped and indigent, including transportation and sheltering.	St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Policies G.1.3.1 through G.1.3.10	Implementation ongoing

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>County shall add three additional public buildings as hurricane evacuation shelters to its inventory of evacuation centers.</p> <p>The County shall coordinate disaster preparedness plans with adjacent counties and municipalities.</p> <p>Emergency vehicles and personnel shall be stationed on the barrier islands during an emergency situation at the discretion of the Chairman of the Board of County Commissioners or other appropriate official.</p> <p>The County shall reduce the risks to human life, and to public and private property from natural disasters through the following post-disaster redevelopment planning and implementation of hazard mitigation measures:</p> <p>The County shall consider, and as necessary implement where appropriate, the recommendations of the hazard mitigation annex of the local peacetime emergency plan.</p> <p>Concurrently with the investigation provided for in Policy G.2.5.4, the County shall investigate development credits or transfer of development rights for use as incentives to reduce rebuilding damaged structures in the CHHA.</p> <p>St. Johns County shall direct population concentrations away from the CHHA by limiting residential densities as shown on the Future Land Use Map.</p>		
<p>The County shall cooperate with, and provide technical support and assistance to, the appropriate State and Federal regulatory agencies, and shall implement the requirements of Policy of G.1.5.3 (and other applicable Policies in other Plan Elements), in order to protect, enhance, and restore the environmental quality of the County's Coastal Area and waterways.</p>	<p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Objective G.1.5</p>	<p>Ongoing</p>
<p>Routing of new infrastructure and public services within the Coastal Area shall be designed to direct growth away from environmentally sensitive areas and the coastal</p>	<p>St. Johns County Comprehensive Plan</p>	<p>Ongoing</p>

CATEGORY	SOURCE	NOTES (Design; Implementation; Enforcement)
<p><b>Objective/Policy</b></p> <p>high hazard area, and to limit public expenditures within the coastal high hazard area.</p>	<p>Coastal/Conservation Management Element - Objective G.1.7</p>	
<p>The County shall maintain hurricane evacuation times.</p> <p>The County shall protect flood plains, wetlands, forests, and surface waters within the County from development impacts to provide for maintenance of environmental quality and wildlife habitats.</p>	<p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Objective G.1.79</p> <p>St. Johns County Comprehensive Plan Coastal/Conservation Management Element - Objective G.2.2</p>	<p>County has recently prepared the emergency management plan. The Regional Planning Council recently completed the updated Evacuation Study. Local review and coordination are in progress.</p> <p>On-going enforcement</p>

### C. Government Coordination

Every governmental agency plays a role in hazard mitigation at some level. Future funding guidelines, from the State and Federal government, will include mandated active involvement by recipient agencies. In order to be effective, the St. Johns County Mitigation Strategy must be a redefining process, evaluating developing as well as addressing existing hazard vulnerabilities. The following table will grow as and evolve as agencies begin to redefine roles and adopt activities that will further the mitigation process.

**GOVERNMENT COORDINATION TABLE**

AGENCY/ENTITIES	MITIGATION FUNCTIONS
Florida Division of Emergency Management	Technical Assistance, Advice and Funding
Northeast Florida Regional Council	Technical Assistance for Comprehensive Planning and Emergency Management Planning. Strategic Regional Policy Plan
St. Johns County Board of County Commissioners	Policy Guidance and Regulatory authority
St. Johns County Administrator	Supervision and Guidance
St. Johns County Department of Emergency Management	Management of Plan/Strategy Development/ Implementation, and Mitigation Task Force Member
St. Johns County School District	Provide shelters for evacuees.
St. Johns County Mitigation Task Force	Develop a recommended Local Mitigation Strategy for St. Johns County for approval by the St. Johns County Board of County Commissioners. Conduct periodic reviews of the mitigation strategy to ensure that goals are accomplished according to the established milestones
St. Johns County Engineering Department	Follow and implement the County's Engineering Standards and ensure compliance.
St. Johns County Building Department	Follow and implement the County's Building Code and ensure compliance.
St. Johns County Road and Bridge Department	Follow and implement the County's requirements for roadways and maintain roadways, ditches and drainage basins within its jurisdictions.

AGENCY/ENTITIES	MITIGATION FUNCTIONS
City of St. Augustine	Member of Mitigation Task Force. Input and Assistance in the Development and Implementation of Plans and Strategy.
City of St. Augustine Beach	Members of Mitigation Task Force. Input and Assistance in the Development and Implementation of Plans and Strategy.
Town of Hastings	Members of Mitigation Task Force. Input and Assistance in the Development and Implementation of Plans and Strategy.
Flagler Estates Road and Water District	Members of Mitigation Task Force. Input and Assistance in the Development and Implementation of Plans and Strategy.
Florida Department of Transportation	Maintain roadways, ditches and drainage basins within its jurisdiction

## Section III - Hazards Identification and Vulnerability Assessment

### A. County Description

St. Johns County is situated in the northeast Florida region. Bounded by the Atlantic Ocean with approximately 45 miles of Atlantic Ocean shoreline on the east and the St. Johns River on the west, St. Johns County is the seventh fastest growing county in Florida and has a land area of 609.0 square miles. The County has the longest shoreline in northeast Florida. Its population in 1990 was 83,829 yielding a density of 137.7 persons per square mile and the population increased to 123,135 in 2000 with a density of 202.2 persons per square mile. According to the U.S. Census, there was a population increase of nearly 17% from 2000 to 2003. This is a suburban county partially within the Jacksonville Urban Area with several urban places. Anticipated growth will continue the induction of St. Johns County as an urbanized area within northeast Florida. However, the southern half of the county is classified as rural. The expansion of the urban area is expected to proceed southward from the County line. Like every other coastal county of the State, a large portion of the population is concentrated along the counties main bodies of water: the Atlantic coast, inter-coastal waterway, and along the St. Johns River. These are areas most vulnerable to the effects of hurricane storm surge, wind, and freshwater flooding.

Its county seat, St. Augustine, is the oldest permanent settlement in the United States. The U.S. Census 2000 says that the population aged 65 and over in St. Johns County increased to 19,579 residents; that will account for 15.9 percent of the total population. In 1990, 22.1 percent of the elderly households were defined as below poverty level. In 2000, this number increased to nearly 40 percent.

### B. Population and Housing

Development along the ocean and the resulting vulnerability of that population to natural hazards is a major concern of emergency management planners. Most population growth in the last few decades has occurred closest to water bodies and this trend is expected to continue. Increasing coastal development is accompanied by certain social and economic costs due to imperiled public safety and property damage, as well as potential losses from hurricanes, flooding, or high winds.

Along with the growing population is the decrease in household size leading a requirement for more houses to accommodate the population. While the St. Johns County is still mostly rural, the overall household size has decreased since 1980 from 2.65 to 2.44 in 2000.

**Number of Households  
Persons Per Household, 1980 -2000- 2010**

County	1980		2000		Projected 2010	
	Households	PPH	Households	PPH	Households	PPH
St. Johns	18,623	2.65	49,614	2.44	59,500	2.38



A major concern is the proliferation of mobile home communities and scattered mobile homes located in low-lying areas and unmarked or water-surge-affected roadways. During the 1970s the region experienced a 158 percent increase in the number of mobile homes with only a 44 percent increase in total year-round dwelling units. During the 1990s, St. Johns County experienced an increase of over 13,100 dwelling units, over 2,600 of which were mobile homes. These figures amount to an increase in total units of 24 percent and over 27 percent in mobile homes.

In 1990, mobile homes numbered 7,187 and accounted for 17.45 percent of dwelling units. By 2000, the number of mobile homes jumped to 7,688 and accounted for 13.3 percent of all dwelling units. Occupants of mobile home units account for approximately 24,000 persons that would potentially be affected by hazardous weather.

In the St. Johns County as of 1996 there are approximately 9,744 persons aged 16 and over with mobility or self-care limitation as shown below. Of that number, 4,299 are aged 65 and over.

#### **Regional Persons With Mobility or Self-Care Limitation**

County	Persons Aged 16-64		Persons Aged 65+	
	Total	With Mobility Limit	Total	With Mobility Limit
St. Johns	52,577	5,455	13,164	4,299

According to the 1990 Census, at least 644 persons in the County that did not speak or understand English. This number more than tripled to 1,973 by year 2000; this is attributed to the increase in Asian population.

The population of St. Johns County has been aging. Median age rose from 36.9 in 1990 to 41.6 in 2000 and the age group distribution for the county is changing as a result. While increasing in actual numbers due to overall population growth, the age groups 0-17, 18-24 and 25-44 have declined as a share of population between 1990 and 1999. The age groups that have shown an increase are especially 45-64 and those 65 and over.

#### **C. Income and Earnings**

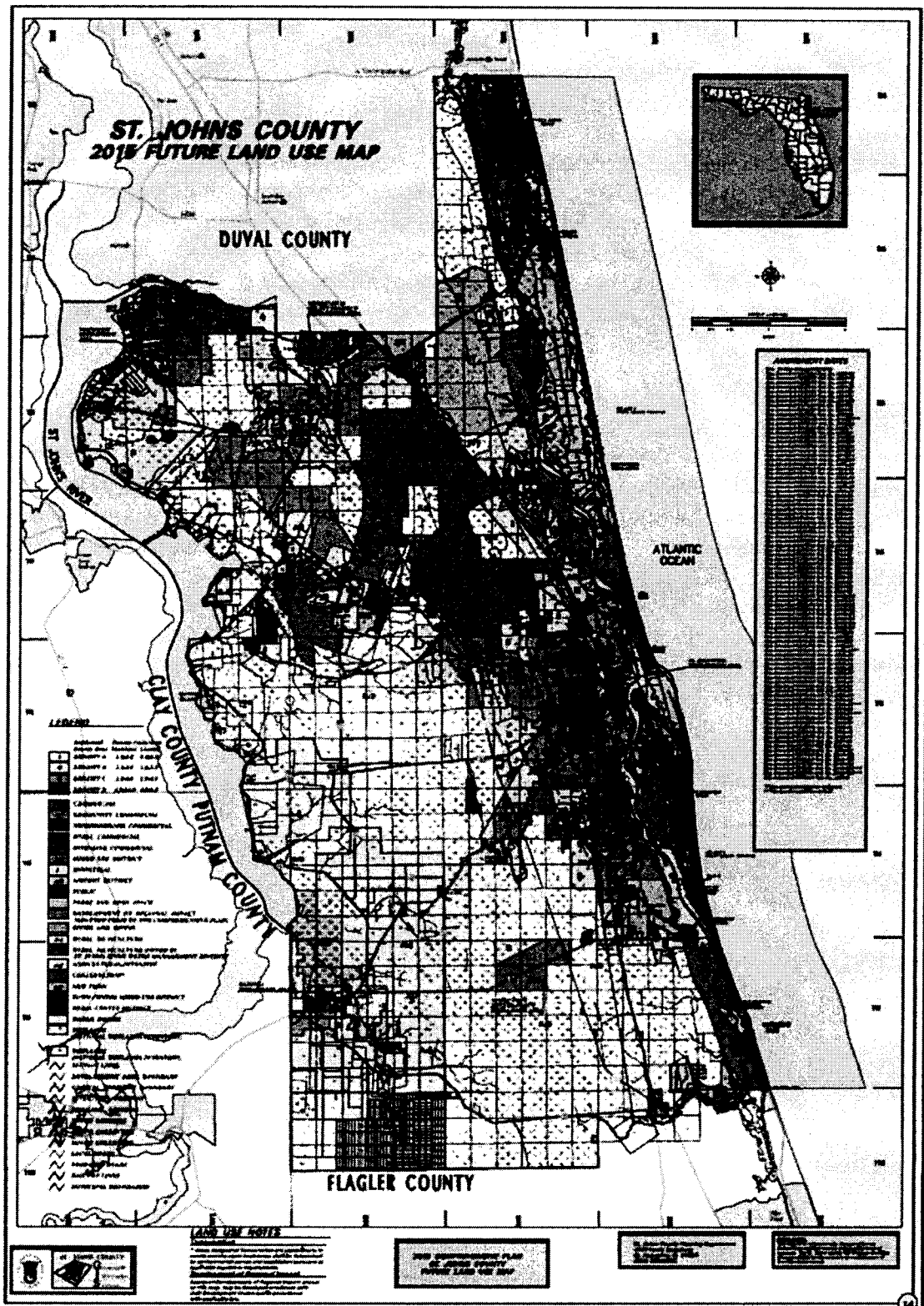
Per capita personal income in St. Johns County was estimated at \$28,674 in 2000. This is 121 percent of the state average and the county ranks 6th in the state. In 1986, the per capita personal income was \$16,210 and the rank was 8th in the state. This yields an annual growth rate of 6.1 percent over the last ten years as compared to a state average of

4.7 percent. However, in 2000, 23 percent of all County households earned less than \$25,000, and 6.3 percent earned less than \$10,000.

#### **D. Land Uses and Development Trends**

St. Johns County exhibits a pattern of rural, suburban and urban land uses. In the northwest part of the County there are suburban subdivisions in the Julington Creek/ Fruit Cove area. More intense single family, multi-family, and commercial urban land uses are found in the northeast part of the County, mainly Ponte Vedra Beach. Both Urban and suburban land uses dominate the east central portion of the County in and around the City of St. Augustine. Residential and Commercial development exists both north and south of St. Augustine along U.S. 1. Recreation land uses also exist along the barrier islands in the County.

In the 1980's the highest growth areas were in the northeast portion of the County, specifically the Ponte Vedra Beach/Palm Valley area. In the last two decades, development has occurred in the northwest portion of the County including Fruit Cove, Julington Creek, Switzerland, and areas around 210 West. Several large subdivisions are also emerging along I-95. These areas are growing fast due to several factors including low land prices, good schools, and accessibility to major roads and employment centers. This growth includes Developments of Regional Impact planned or projects that are currently being developed within the County that will bring a mix of residential, commercial, and retail to the County. The following Map is a Future Land Use Map and identifies areas of development and future development within the County.



## E. Hazards Identification and Vulnerability

The following sections identify potential hazards that could affect the County and its residents. Each hazards characteristic is described and past occurrences have been identified. Table A-1, the Hazards Quick Reference Table, in the appendices outlines the specifics of the hazards identification section in greater detail. Also included at the end of Section III are the multi hazard maps.

### 1. Hurricanes

Hurricanes have the greatest potential for causing disaster then any other single natural threat to St. Johns County. The first step in the formulation of a hurricane disaster mitigation strategy is to identify and analyze the expected hurricane hazards such as storm surge and winds. The effects of an impacting hurricane will depend upon the strength, direction and, location of impact of the storm. Hurricanes are categorized on the Saffir-Simpson Hurricane Scale from one through five. (See below) Categories one and two storms are considered “minor” hurricanes, although they can cause significant damage. Categories 3, 4 and 5 hurricanes are “major” hurricanes and can cause massive destruction and potential loss of life.

#### SAFFIR/SIMPSON HURRICANE INTENSITY CATEGORIES

Category	Central Pressure		Wind Speed		Damage
	Millibars	Inches (Hg)	Miles per Hour	Knots	
1 (Minor)	980	28.9	74 - 95	64 - 83	Minimal
2 (Minor)	965 - 979	28.5 - 28.9	96 - 110	84 - 96	Moderate
3 (Major)	945 - 964	27.9 - 28.5	111 - 130	97 - 113	Extensive
4 (Major)	920 - 944	27.2 - 27.9	131 - 155	114 - 135	Extreme
5 (Major)	< 920	< 27.2	> 155	> 135	Catastrophic

The three major hazards produced by a hurricane are the storm surge, high winds and rainfall. The storm surge is the abnormal rise in ocean water levels caused by the wind and pressure forces of a hurricane or tropical storm. Storm surge produces most of the flood damage and drowning associated with storms that make landfall or that closely approach the coastline. Of the hurricane hazards, the storm surge is considered to be the most dangerous as ninety percent of hurricane-related deaths have been caused by drowning.

St. Johns County is a coastal County and may have storm surge associated with hurricanes as well as surge effects associated with the St. Johns River which functions less as a river and more like a tidally influenced lagoon along its lower portions from Palatka to Jacksonville which make up the western boundary of the county. The St. Johns River is shallow and strongly influenced by tides from the Atlantic Ocean up to 50 miles downstream. As a result, within St. Johns County, areas adjacent to the St. Johns River and its tributaries are subject to storm surge. Areas of particular vulnerability include the entire shoreline of the St. Johns River, the southern portions of Julington

Creek, shorelines adjacent to Cunningham Creek, Six Mile Creek and Deep Creek, which leads into and may cause the Town of Hastings to flood.

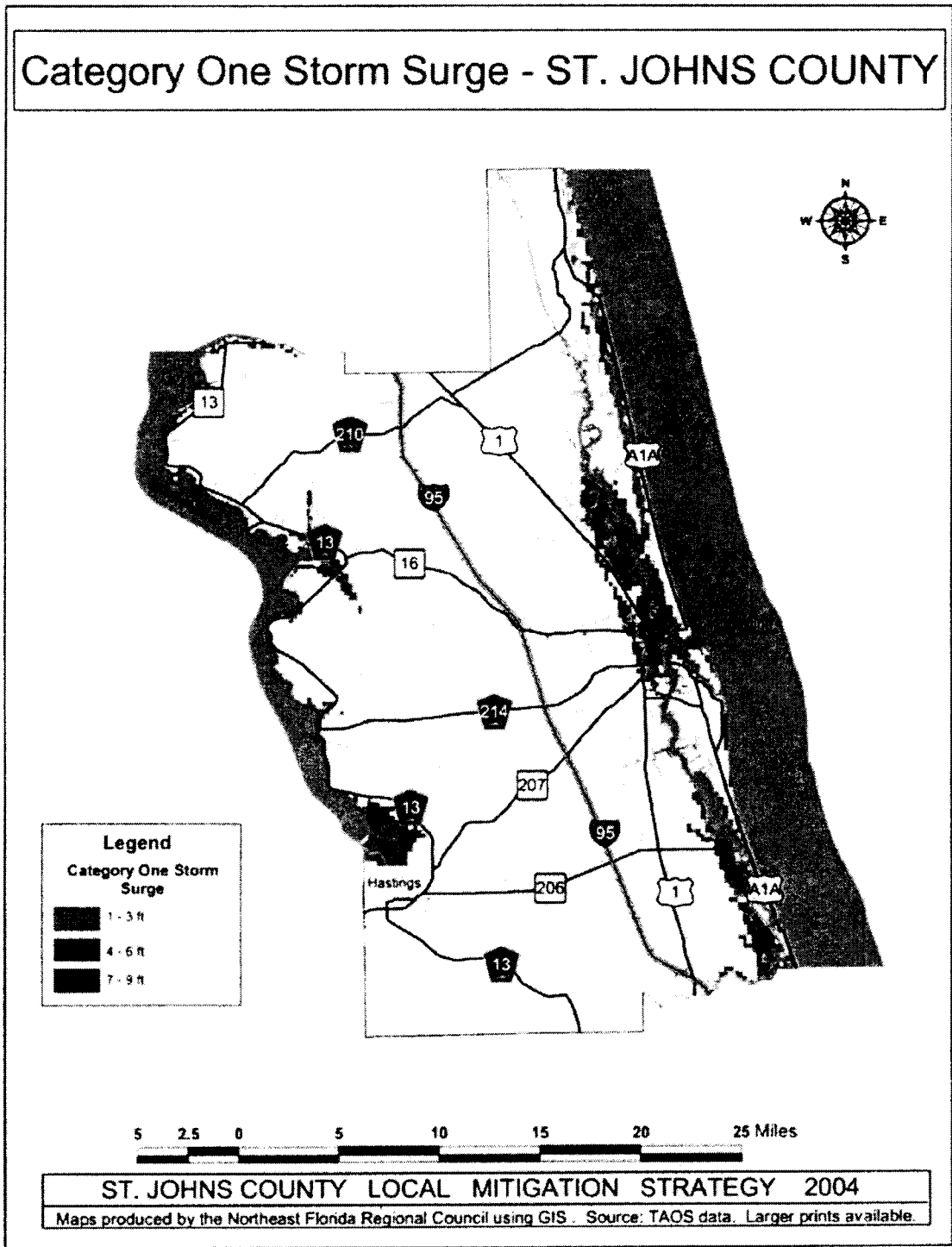
A review of records from the National Weather Service between 1979 and 1999 shows that St. Johns County and Northeast Florida have had brushes with hurricanes but no direct hits. The last hurricane to directly impact Northeast Florida was hurricane Dora in 1964, which came ashore in northern St. Johns County. The following storms have come the closest to Northeast Florida and St. Johns County in the past twenty years

Hurricane David .....	September 4, 1979
Hurricane Dennis .....	August, 1989
Tropical Storm Isadore.....	September/October, 1984
Hurricane Bob.....	July 24, 1985
Tropical Storm Chris .....	August, 1988
Tropical Storm Josephine .....	October, 1996
Tropical Depression Georges .....	September/October, 1998
Hurricane Floyd.....	September 15, 1999
Tropical Storm Gabrielle.....	September, 2001
Hurricane Charley.....	August, 2004
Hurricane Frances.....	September, 2004
Hurricane Jeanne.....	September, 2004
Tropical Storm Ophelia.....	September, 2005
Tropical Storm Alberto.....	June, 2006
Tropical Storm Ernesto.....	August, 2006

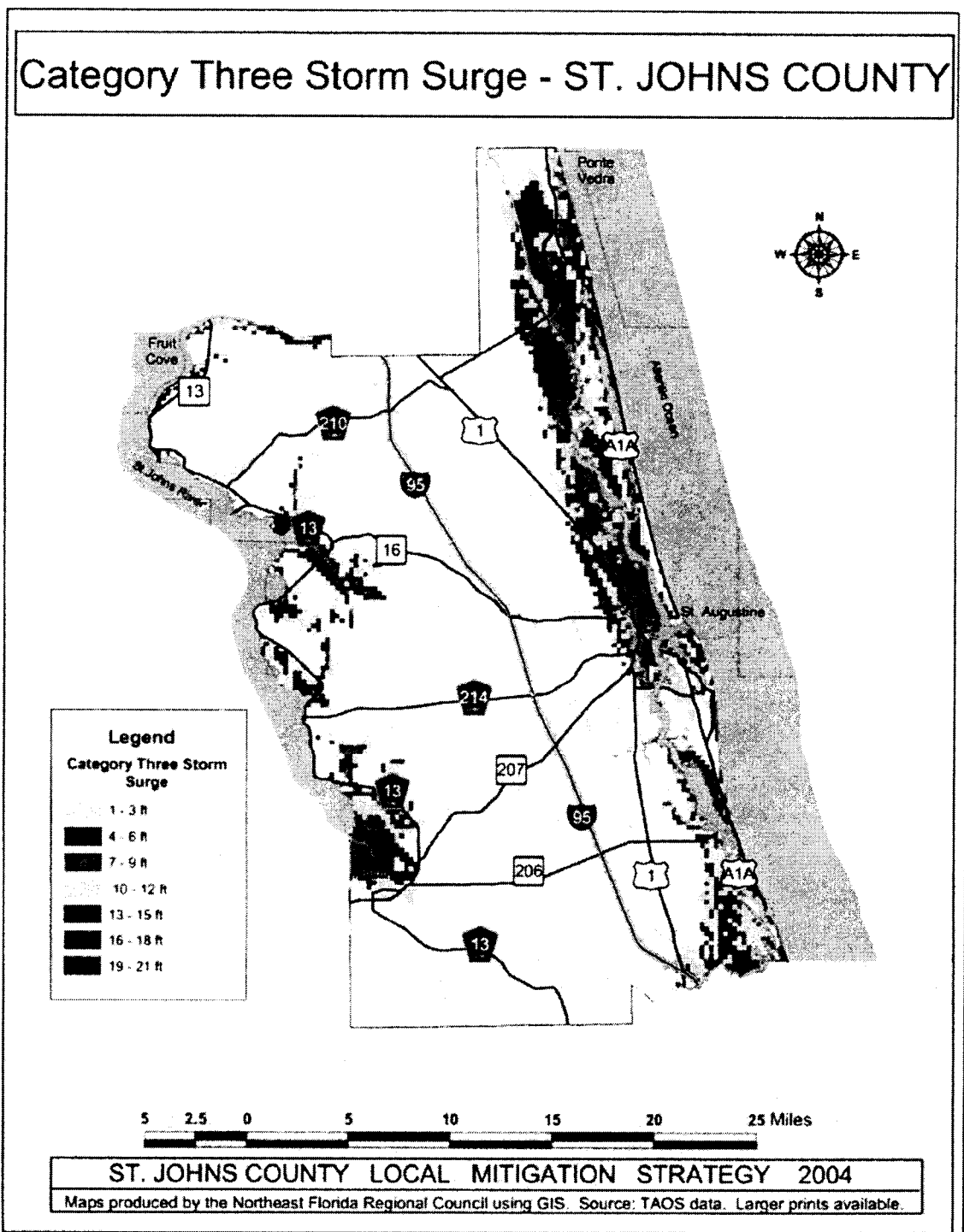
## **2. Storm Surge**

Complete details regarding the storm surge threat are available from two sources: the TAOS (The Arbiter of Storms) model currently in use by the State of Florida through the Division of Emergency Management and the SLOSH (Sea, Lake and Overland Surges from Hurricanes) model currently in use by the National Weather Service and the National Hurricane Center. A comparison of data from the two sources does not show resoundingly different results for the minor storm events, differences are greater for data on major storm events both models are respected in the response community. However, the SLOSH model has a longer proven record and will be used in this analysis for storm surge vulnerability levels. The Northeast Florida Regional Council updated the Storm Surge Atlas for St. Johns County (Volume 3) utilizing the SLOSH data in 1998. The following maps, Maps 1, 2, and 3, represent the surge threat identified in the models as shown in the Storm Surge Atlas.

Map 1

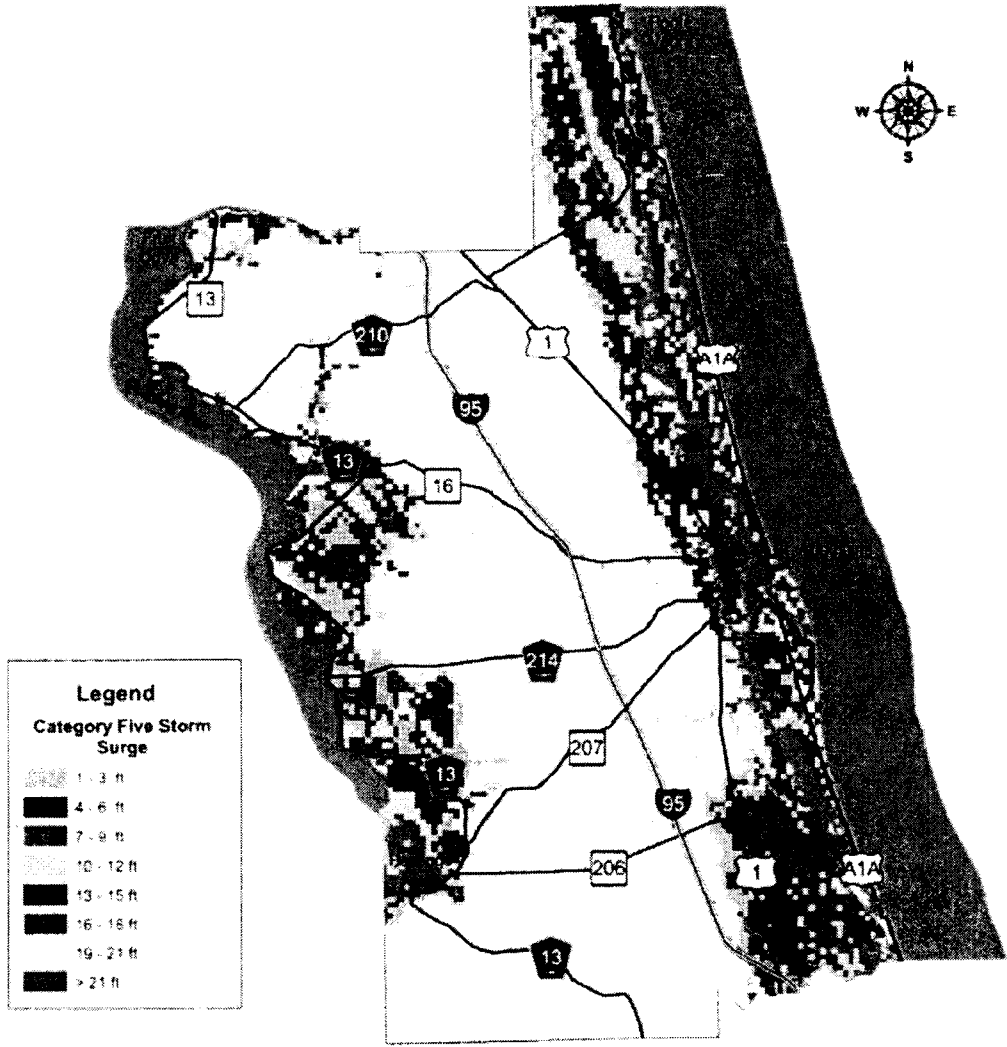


Map 2



Map 3

# Category Five Storm Surge - ST. JOHNS COUNTY



## ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY 2004

Maps produced by the Northeast Florida Regional Council using GIS. Source: TAOS data. Larger prints available.

lms\_sjohns\_final\_2004.mxd



### **3. Areas Subject to High Winds**

If a severe storm or hurricane were to occur in the County there are certain areas where winds would be higher due to topography (higher elevations), proximity to the ocean, and/or land use patterns such as large clear-cut within the forest. These areas have been determined by the TAOS models and are mapped as part of the Multi-Hazard Map Series.

The following areas appear to be the most susceptible to high winds from a hurricane:

- All shorelines;
- Areas adjacent to the Intracoastal Waterway;
- Development located adjacent to the St. Johns River;
- Areas in and around the Town of Hastings.

The high winds also can be devastating to persons outside, in mobile homes or substandard structures, or in structures with unprotected exposures. A 140-mile per hour wind can produce as much as 60 pounds of pressure per square foot. With this kind of pressure a structure, once compromised during a windstorm, will experience increasing internal pressure to the roof and walls. This could cause: the roof to blow off the structure, the structure to completely fail, or the inside to be devastated by a wind tunnel effect.

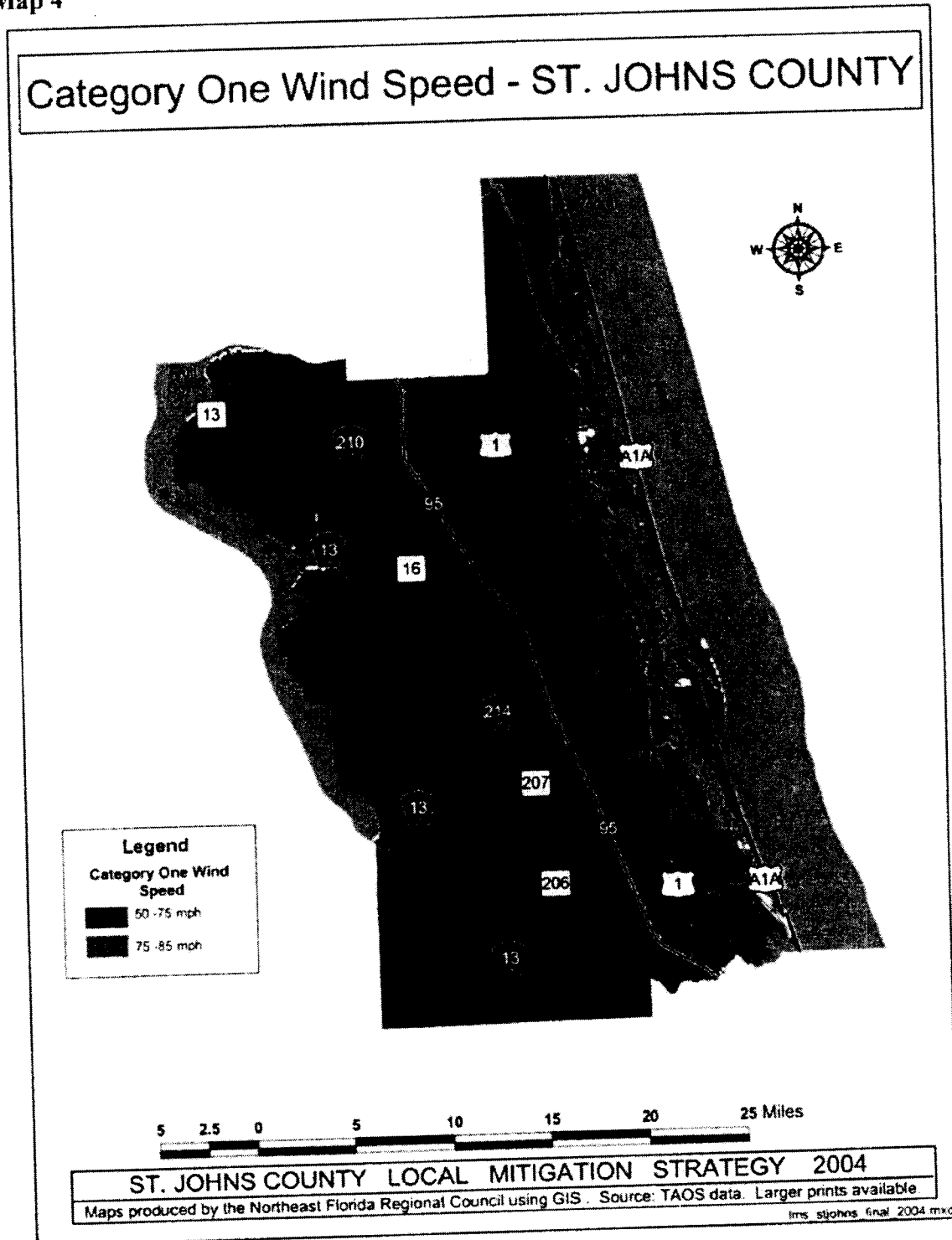
The following maps, Maps 4, 5, and 6, are from the TAOS (The Arbiter of Storms) model currently in use by the State of Florida through the Division of Emergency Management. They represent the high wind hazard from hurricanes, categories 1, 3 and, 5. The maps clearly show that the County is vulnerable to winds from even a category 1 hurricane.

### **4. Tornadoes**

Although tornadoes in Florida are not as prevalent as they are in the Midwest within the area known as "Tornado Alley", nevertheless they do occur from time to time. However, during the period between 1956 and 1983, Florida had a total of 1,370 reported tornadoes, an average of 44 per year. This ranks Florida third among the States in the number of tornados, behind Texas and Oklahoma. Further, while not considered one of the main hazards of a hurricane, tornadoes are spawned by hurricanes and can cause major damage and loss of life. Tornados are most prevalent in west central Florida and portions of the panhandle.

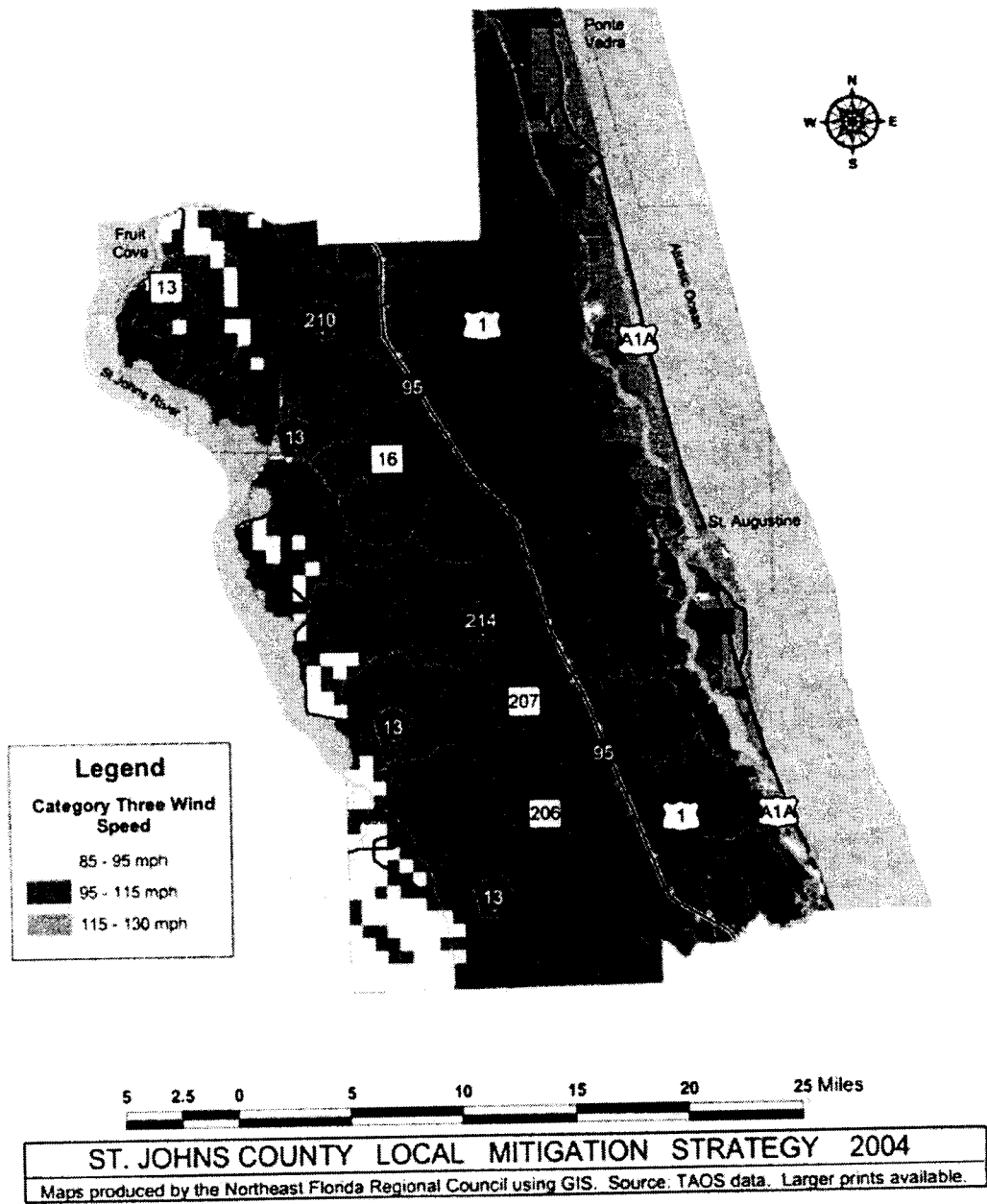
A review of records from the National Weather Service shows that between 1882 and 1998 St. Johns County has had one death associated with a tornado that occurred on September 10, 1882. From the period 1950-1995 St. Johns County had 25 tornadoes. Information on the tracks of tornadoes is available through the State Department of Emergency Management database. The following Map, Map 7, illustrates the tornado risk in St. Johns County.

Map 4



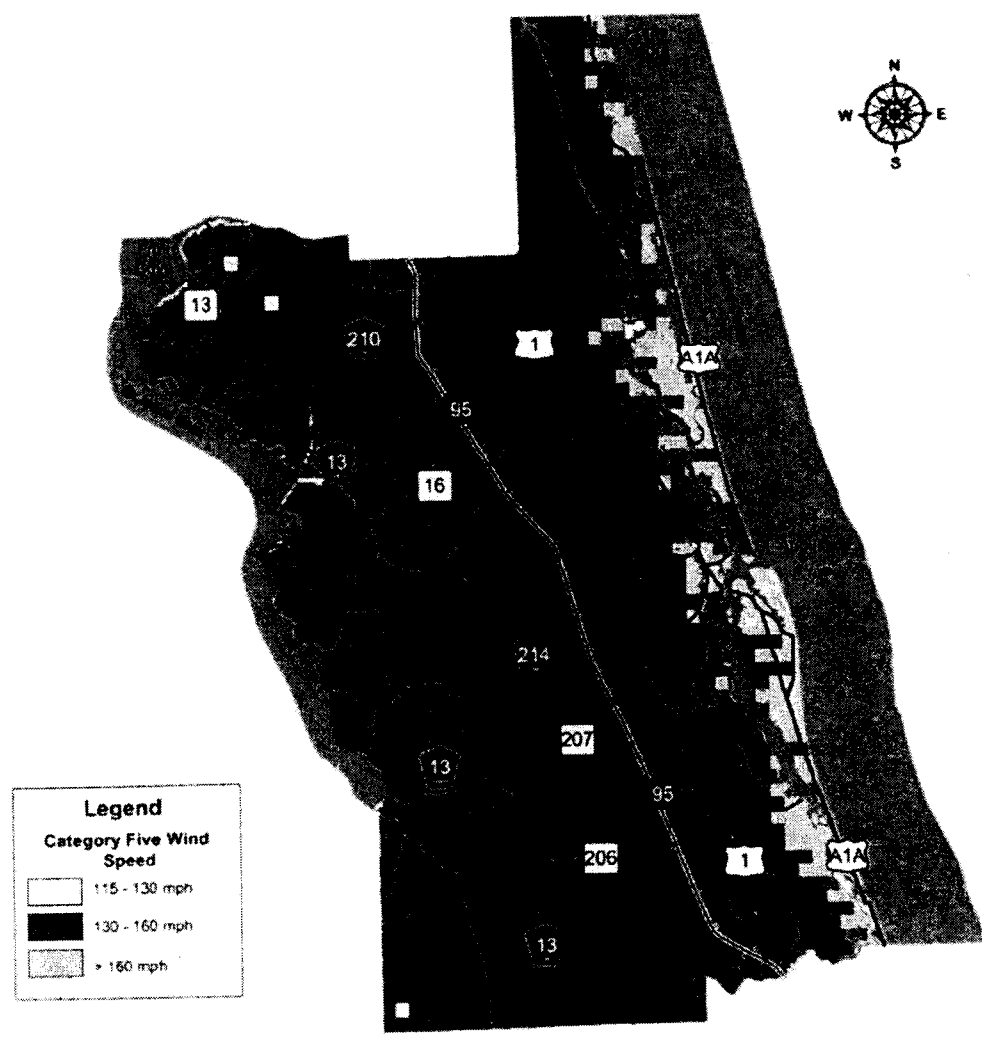
Map 5

# Category Three Wind Speed - ST. JOHNS COUNTY



Map 6

# Category Five Wind Speed - ST. JOHNS COUNTY



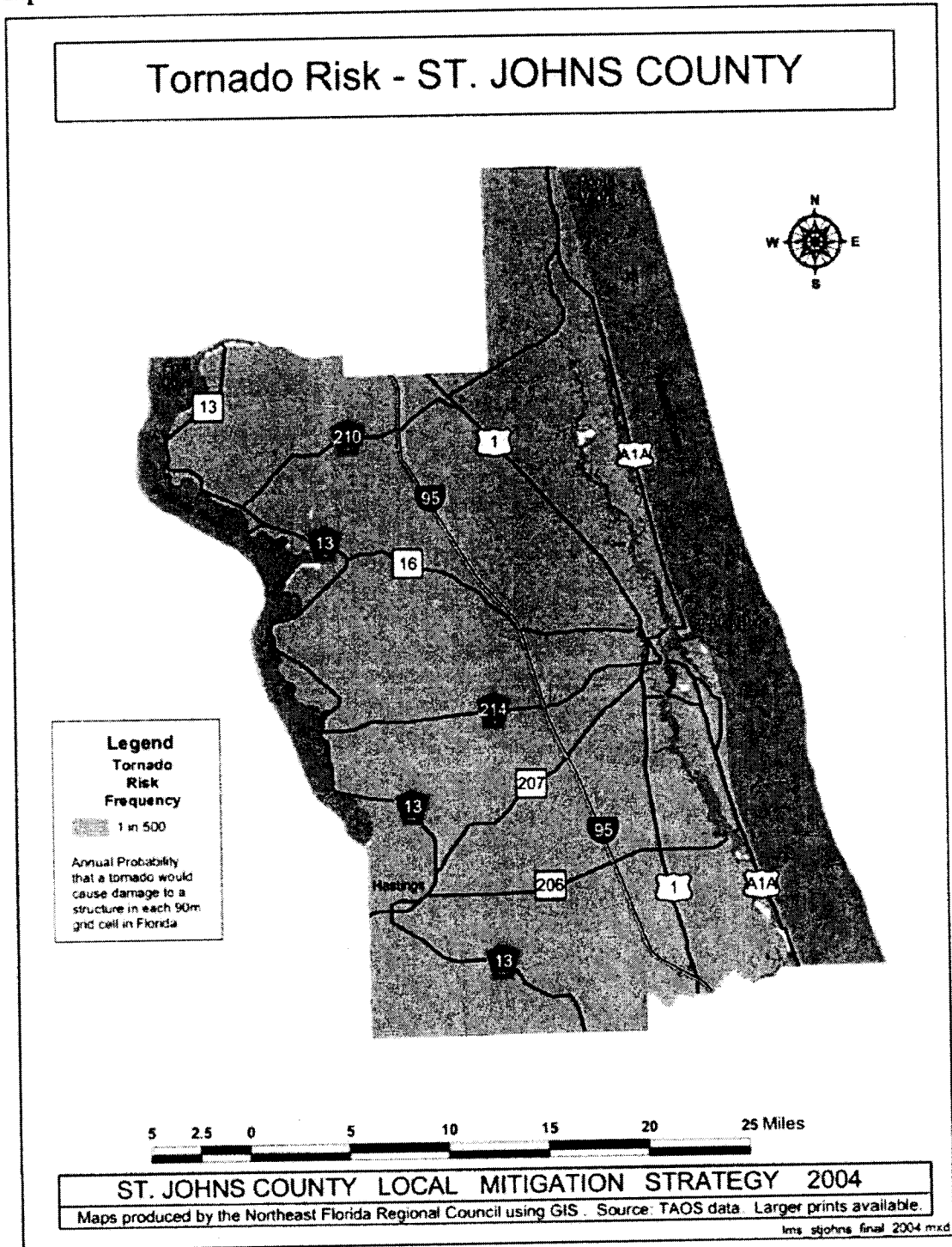
**Legend**  
**Category Five Wind Speed**

White	115 - 130 mph
Black	130 - 160 mph
Stippled	> 160 mph



**ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY 2004**  
Maps produced by the Northeast Florida Regional Council using GIS. Source: TAOS data. Larger prints available.  
lms stjohns final 2004.mxd

Map 7



## 5. Freshwater Flooding

Freshwater flooding is generally associated with small natural streams or other drainage systems that are overwhelmed by large amounts of runoff generated by short episodes of extremely heavy rainfall. Freshwater flooding of evacuation routes just prior to evacuation orders or during the latter evacuations can trap evacuees. Detailed below are some of the roads and areas of concern within the county.

Freshwater Flooding occurs in several areas in St. Johns County. Those areas that become flooded in heavy rains occurring in short periods of time are described below. The largest area of note is the downtown area in the city of St. Augustine these roads are frequently flooded after rains. Other notable roadways include:

- Solana Road west of Sunset Drive
- Several sections of Roscoe Road which runs along the Intracoastal Waterway
- The Intersection at Race Track Road and Russell Sampson
- Greenbriar Road east of Roberts Road
- International Golf Parkway just west of the World Golf Village and a large section just west of US-1.

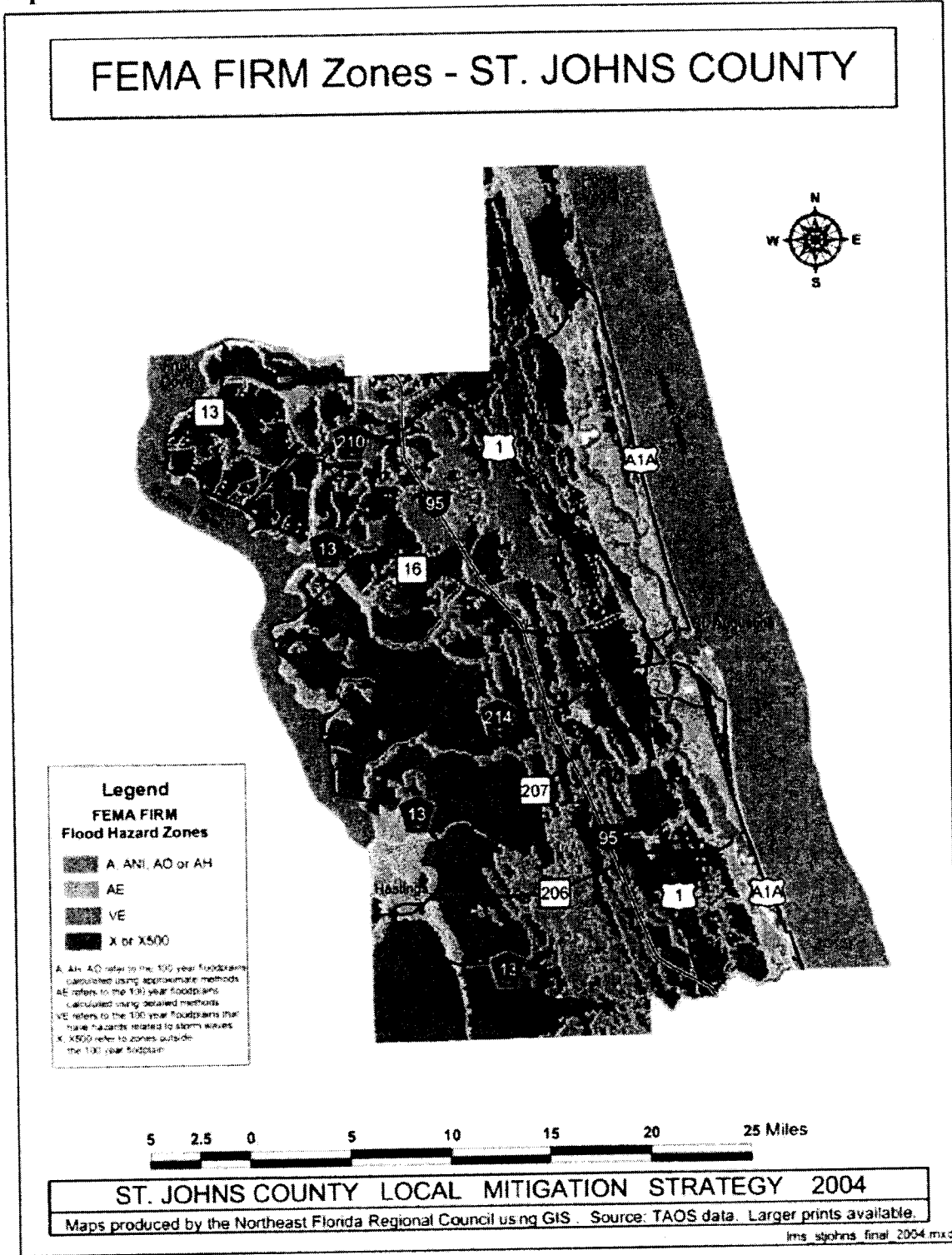
Freshwater flooding may inundate potential evacuation routes and prevent persons evacuating late from vulnerable areas. Flooded roads and storms can also contribute to fatal accidents. Freshwater flooding as well as coastal flooding is modeled by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program (NFIP). Vulnerability to flooding is documented in the Flood Insurance Rate Maps delineating the "100-year storm" (or A Zones) and the Velocity (or V) Zones. Map 8 illustrates the FEMA FIRM, Flood Insurance Rate Maps, for St. Johns County.

## 6. Floodplains

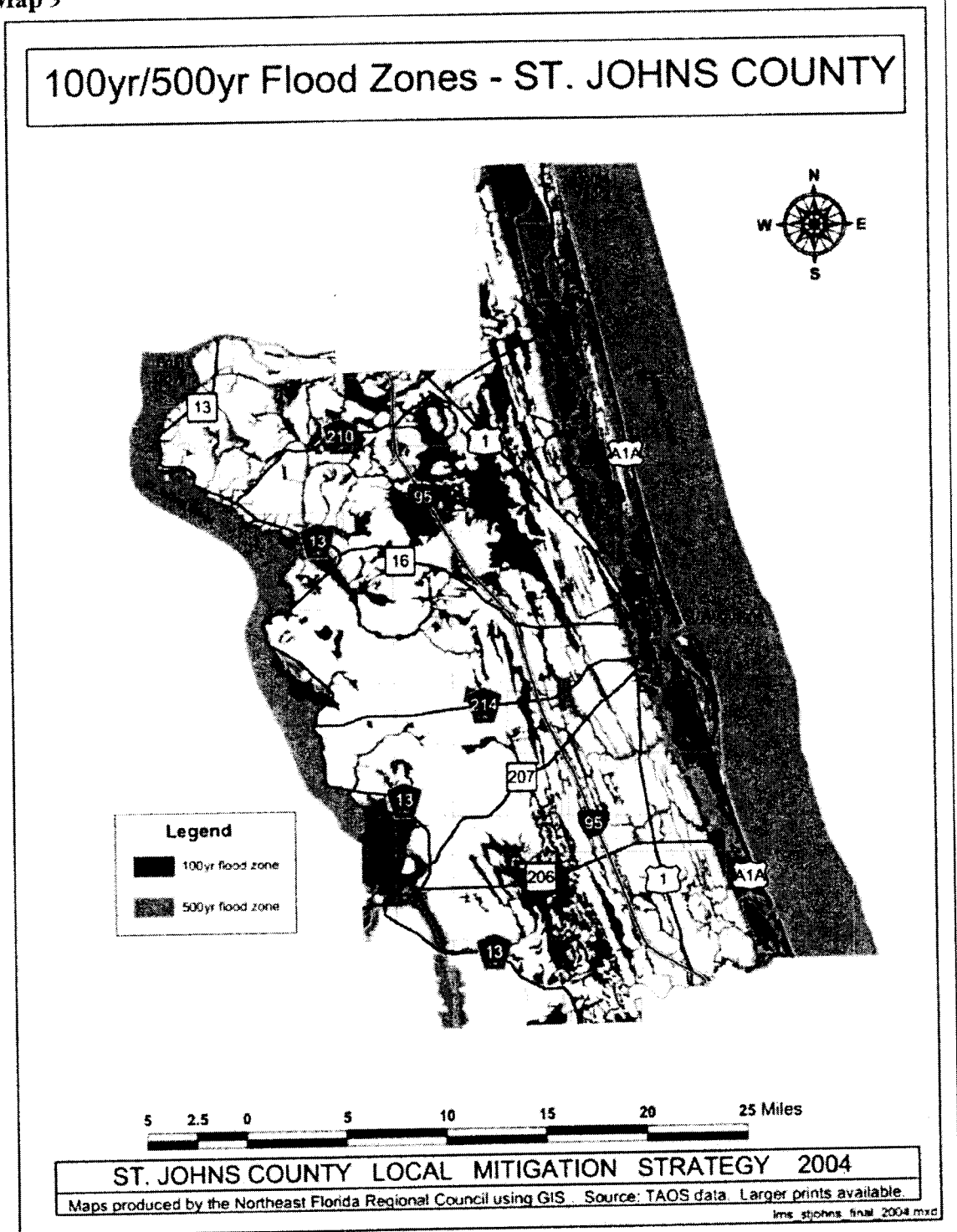
Map 9 show those areas of St. Johns County that are within the 100 year and 500 year floodplain as delineated by the Federal Emergency Management Agency (FEMA) as part of the National Flood Insurance Program (NFIP). These are areas which experience flooding associated with heavy rainfall events which cause localized flooding from overflowing streams or ponds in low lying areas. In St. Johns County floodplains are associated with the St. Johns River and Intracoastal Waterway and their tributaries.

Flooding within these areas accounts for the principle flooding problems within the County. As shown on the flowing map the largest portion of the county vulnerable to freshwater flooding is that area east of US 1 and areas along the St. Johns River. These are also the areas with the highest population concentrations within the County. As a result a significant portion of the Counties population is vulnerable to the effects of a 100 or 500-year flooding event. This could mean either that the dwelling units are directly impacted by being flooded, or that the property or accesses to the property are flooded resulting in health and safety hazards. Based on analysis completed for the Northeast

Map 8



Map 9





Florida Hurricane evacuation Study, between 30,000 and 40,000 of the County's 150,000 residents are vulnerable. This is between 20 and 30 percent of the population.

## **7. Wildfires**

The County is subjected to some form of wild fire each year. In recent history 1997 through 1999 the fires have been larger and have threatened urbanized areas more frequently. St. Johns County is transforming from a rural county, to one which is much more urban in nature, but a large percentage of its land area is still covered in forest. As a result many areas of the County are susceptible to wildfire. The most vulnerable areas those generally located at the urban/wildland interface, primarily located in the western portions of the County. These are areas where subdivisions occur adjacent to large undeveloped areas of forestland. Much of this land is in large ownerships including lands owned by large timber companies and which is actively managed for silviculture.

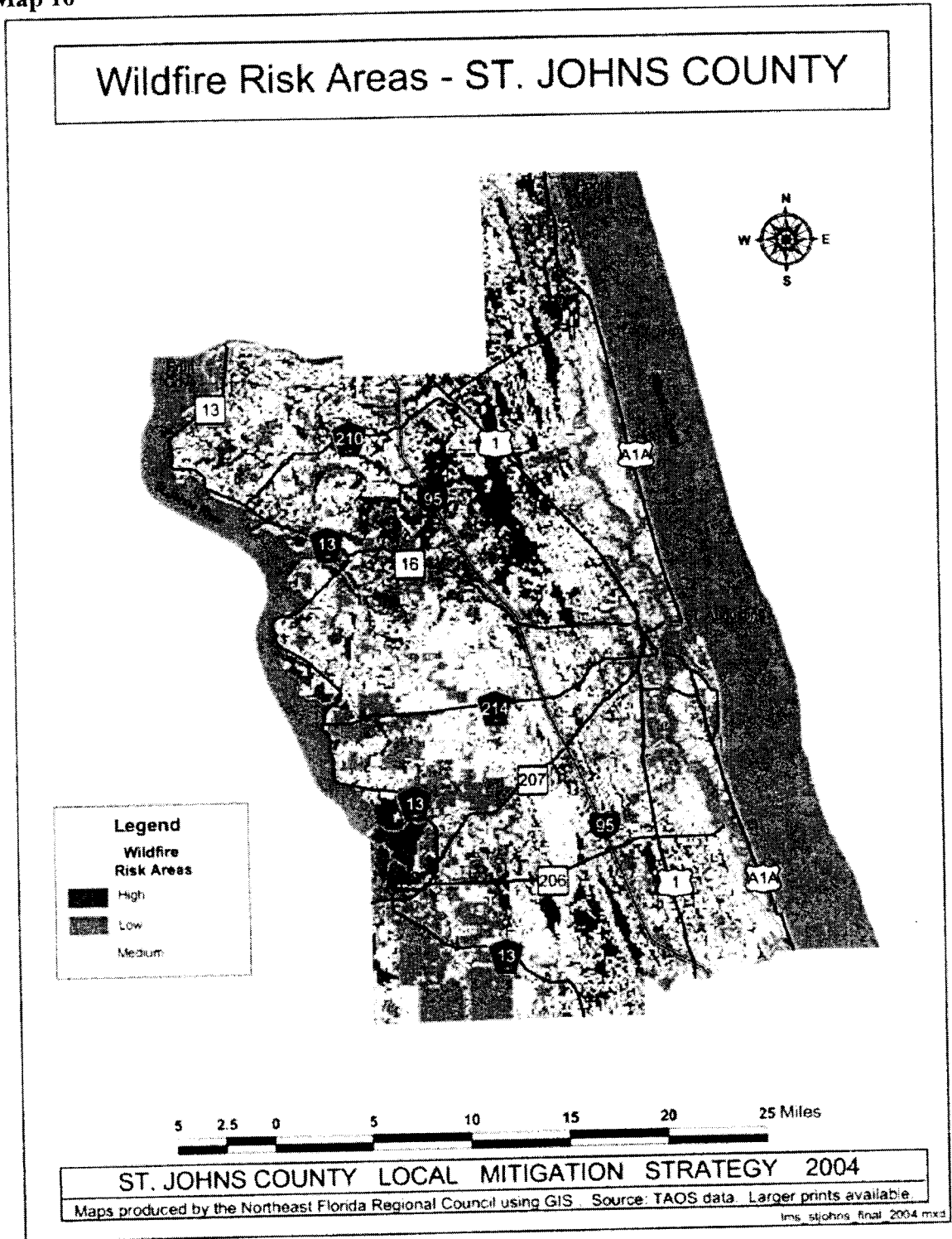
When subdivisions are developed without clearing the wooded areas surrounding them the interface becomes extremely hazardous. Florida has a history of naturally occurring wildfires. The hot, wet summers following long periods of uninterrupted growth cause the buildup of underbrush, which is prime fuel for wildfires. Large amounts of dry underbrush require only an ignition source; this can be from a home fireplace, trash burn, carelessly tossed away cigarette, or a natural source such as lightning. Once ignited, the underbrush can burn thousands of acres. Housing developments adjacent to areas with large amounts of underbrush are vulnerable to the fires.

Map 10 shows the areas of the County dominated by large tracts of land still covered primarily with forests. These areas represent the primary places wildfire may occur. The interface between these areas and the urban areas indicated the areas most vulnerable to wildfires.

## **8. Hazardous Materials**

Hazardous materials are used to maintain the modern lifestyles of both urban and rural communities; in fact, as many as 50,000 new chemicals are created annually. Agricultural uses for chemicals range from fertilizers, insecticides and disease control for crops to ammonia refrigeration units for dairy products. These chemicals increase crop yields and ensure the delivery of fresh products to markets. Similarly in urbanized areas of northeast Florida communities often use extremely hazardous chemicals, such as chlorine or sulfuric acid for treating drinking and wastewater. Safe drinking water and reduced levels of pollution in surface waters are the result. Industrial chemicals such as potassium cyanide (used in manufacturing medicines) and fluorine (used in rocket fuels) are essential to maintain modern lifestyles in the northeast Florida area. New industrial chemicals improve product durability and create alternatives to high cost organic products, making products affordable to a wider range within the general population. However, these conveniences have increased vulnerability of the general population to exposure from an accidental release of hazardous materials.

Map 10



Since 1988, there has been a fifteen percent increase in the number of registered facilities using extremely hazardous materials in Northeast Florida. Supplying these facilities require routinely transporting hazardous materials the County by rail, truck, air and/or, barge. The County is rapidly urbanizing; developing around the economic centers of St. Augustine, Ponte Vedra, and the World Golf Village. As the population and number of facilities that handle hazardous materials grow, greater numbers of people are vulnerable to an accidental release. This would include vulnerability from a release of hazardous materials during or following a major natural or man-made disaster. Facilities releasing materials during a major event can cause residual contamination. If a facility is damaged during a major event only to release a hazardous material once the event has past a much greater hazard to community is created.

As part of the *Comprehensive Emergency Management Plan*, facilities subject to the 1986 Emergency Planning and Community Right-To-Know Act are identified and the following information is obtained:

- The types of chemicals
- The type and design of the container
- Quantity of materials
- The nature of the hazard (vapors, mists, fire explosion etc.)

In addition a Vulnerability Analysis was completed and includes the following information:

- A vulnerability zone (radius) around the facility that could be affected by a release.
- Population within this zone.
- Property in the zone subject to damage.
- Potential environmental impacts within the zone.

And finally a Risk Analysis is completed which includes the following information:

- Probability of occurrence
- Estimates of injuries and deaths
- Impacts to critical facilities
- Impacts to property
- Impacts to environment

## **9. Terrorism**

Terrorism incidents can come in many forms including cyber-terrorism, biological weapons, chemical weapons, nuclear weapons, explosive weapons, and incendiary weapons. Biological, nuclear, incendiary, chemical, and explosive materials (B-NICE) are considered hazardous by nature. All counties in Florida are vulnerable to a terrorist attack, whether physical destruction from bombs or contamination from chemical, biological weapons, or radiological materials. There is also the risk of cyber-terrorism

attacks that could disrupt or destroy vital computer networks. The county and local emergency service departments will be the first to respond to an actual or suspected terrorism attack. There are 7 potential targets that are vulnerable to a terrorist attack in St. Johns County as identified in the Terrorism Annex:

- Northrup Grumman Aircraft installation
- Flagler Hospital
- Florida National Guard Headquarters
- Florida National Guard Armory
- Elementary and High Schools
- Special Events
- County Government Complex

A Terrorism Response Annex has been created as an appendix to the St. Johns County Comprehensive Emergency Management Plan (CEMP) to provide St. Johns County with a continuing assessment of the community's vulnerability, and capability to respond to a terrorism incident. The annex provides an assessment of the County's critical facilities and vulnerable populations, specialized response capabilities of emergency response personnel, definitions of operational aspects used in response management, and federal, state, and local command structure roles and responsibilities. The Terrorism Annex also provides information on each type of weapon of mass destruction that may be used in a terrorism attack. Map 11 identifies the location of the facilities that have been deemed "Critical Facilities" by St. Johns County.

The following are descriptions of each type of potential hazardous threat by terrorist acts:

- Biological weapons; microorganisms and/or toxins from living organisms that have infectious or non-infectious properties that produce lethal or serious effects in plants and animals, including small pox, anthrax, Ebola, and bubonic plague.
- Nuclear weapons; high-energy particles or gamma rays that are emitted by an atom that represent a hazard to humans both internally and externally.
- Incendiary weapons; intentional arson or explosions used to spread fire or chemical and biological weapons.
- Chemical weapons; gas, liquid, or aerosol agents used to affect the transmission of nerve impulses in the human nervous system, including blister/mustard agents, choking agents and blood agents,
- Explosive weapons; used to damage property and cause loss of human life by resulting secondary hazards such as unstable structures, debris and fire.

**Map 11**

**Map available upon request**

## **10. Earthquakes**

Earthquakes are rapid movements of the earth causing movement and shifting of rock beneath the surface. The event of an earthquake occurring in St. Johns County is rare although past events have been recorded in the State of Florida. The most recent earthquake was recorded in Daytona in 1975. Florida's geology does not contain any fault lines or volcanoes, which are generally associated with earthquakes. Earthquakes were recorded in Florida in 1879, 1880, 1886, 1893, 1948, and 1952, but only one caused very minimal damage. Earthquakes can, however cause severe damage and loss of life. Earthquakes are not a major hazard concern in the State of Florida. Map 12 illustrates the earthquake risk in St. Johns County

## **11. Tsunamis**

Tsunamis are giant waves generated in a body of water that can be caused as a result of an earthquake, volcano, landslide, or explosions. Tsunamis have been recorded in various places around the globe, but none in Florida. These giant waves can greatly affect low-lying coastal areas by inundating mass areas of land. St. Johns County is not in immediate danger of a tsunami; however scientists in England have been studying the affects of a potential tsunami in the Atlantic Ocean caused by the possible eruption of a volcano in the Canary Islands that would lead to part of the mountain falling into the ocean. These natural hazards are not common in the Atlantic Ocean but have happened in the Pacific Ocean in the past. Map 13 shows the tsunami risk in St. Johns County.

## **12. Landslides / Sinkholes**

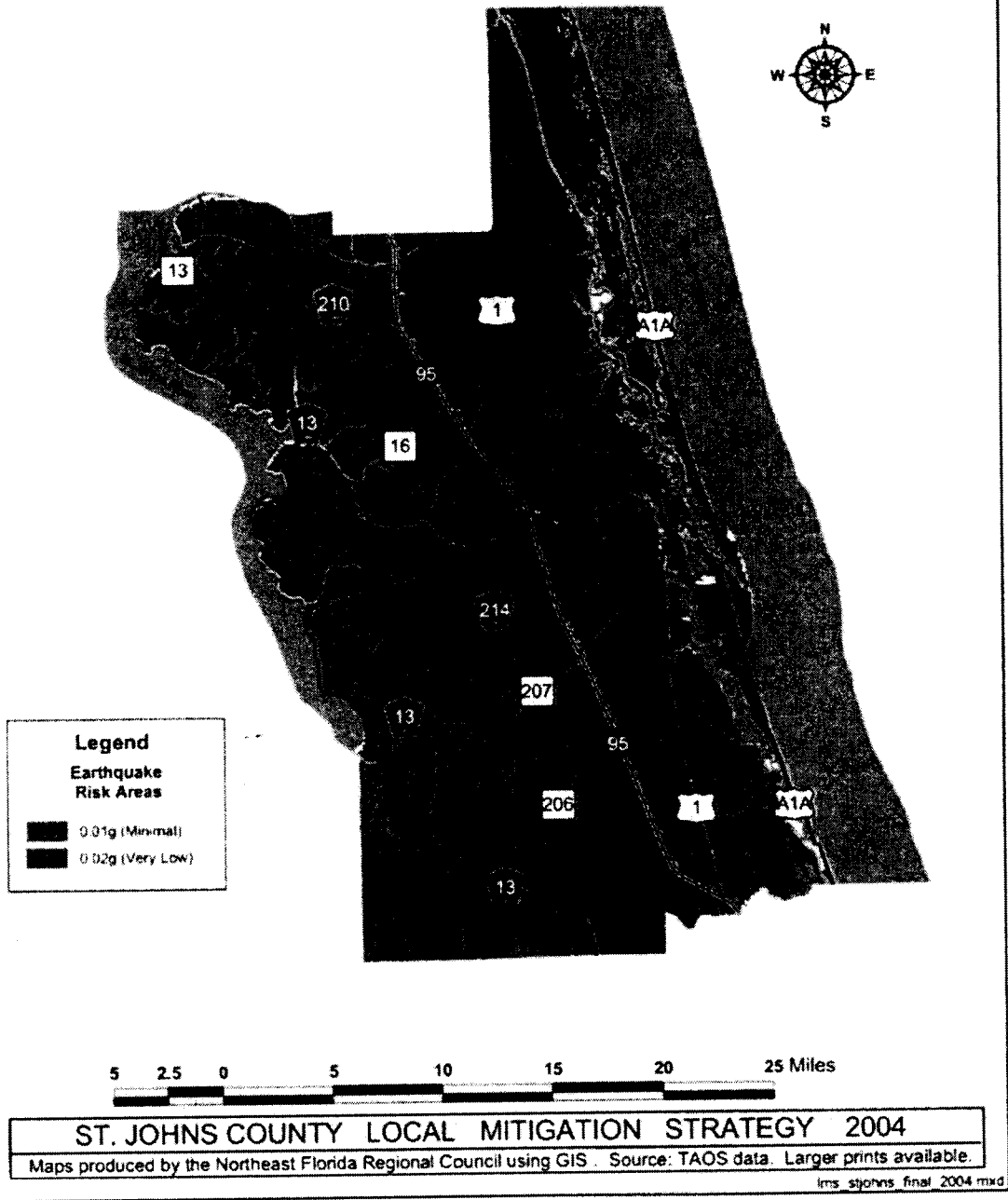
Sinkholes are a common feature of Florida's landscape due to the state's karst topography. This karst topography can include caves, disappearing streams, springs, and underground drainage systems, all of which occur in Florida. A sinkhole, technically not a landslide, is formed when carbonate layers that lie beneath the ground's surface dissolve and the ground above the void collapses from its weight over the open space underneath. Sinkholes can cause damage to roads, homes, and other buildings that lie on the surface above the underground void. According to the Florida Geologic Survey, St. Johns County has not experienced any recently recorded sinkholes. Map 14 illustrates the sinkhole hazard in the County.

## **13. Dam / Levee Failure**

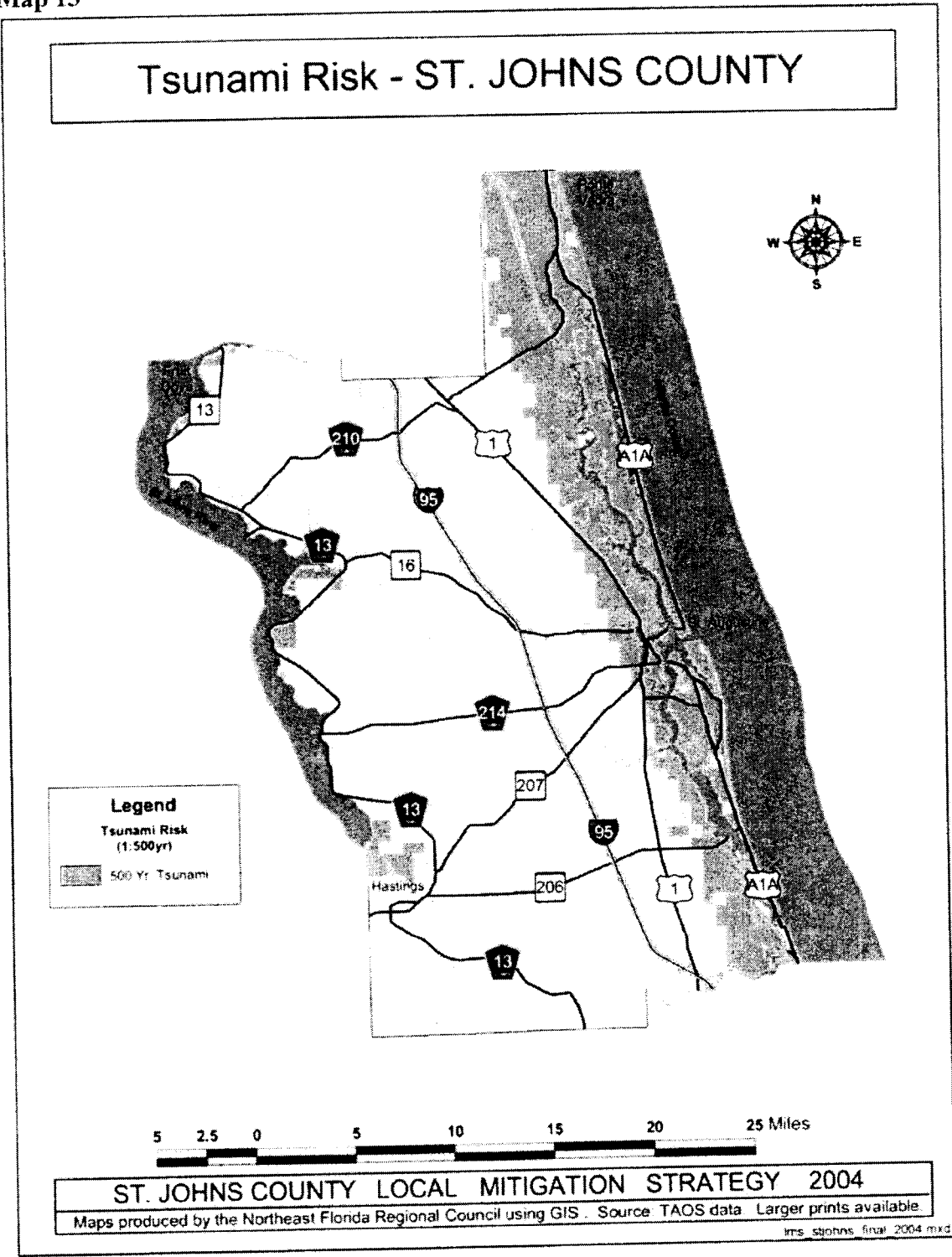
Dam or levee failure can be caused by a flooding event and can cause damage to property downstream from the dam or levee when the water starts moving. St. Johns County has only one dam located at The Guana Tolomato Matanzas National Estuarine Research Reserve. Therefore St. Johns County is at a low risk for this type of hazard.

Map 12

# Earthquake Risk Areas - ST. JOHNS COUNTY



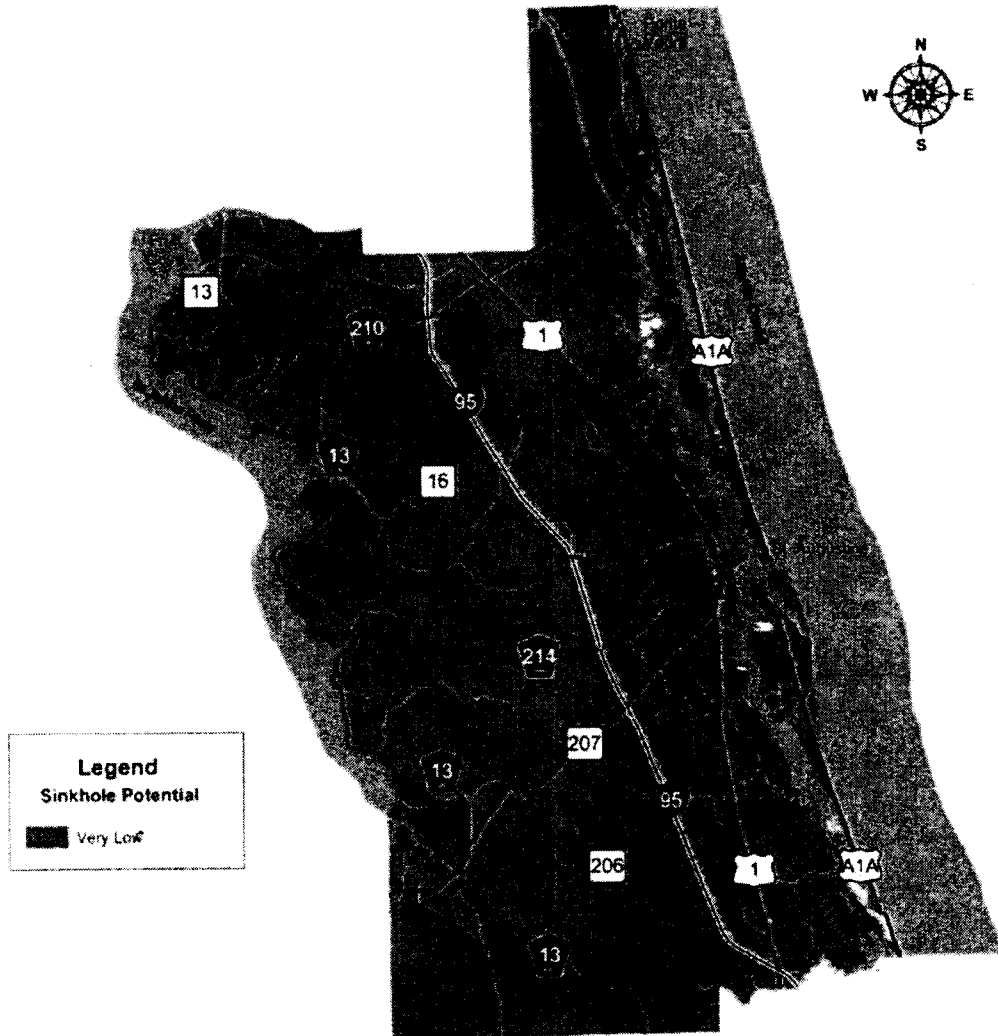
Map 13





Map 14

# Sinkhole Potential - ST. JOHNS COUNTY



**Legend**  
Sinkhole Potential  
Very Low

5 2.5 0 5 10 15 20 25 Miles

**ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY 2004**  
Maps produced by the Northeast Florida Regional Council using GIS . Source: TAOS data. Larger prints available.

lms\_stjohns\_final\_2004.mxd

#### **14. Drought / Heat Wave**

Drought is a normal climatic occurrence that happens almost everywhere on the planet, although its characteristics vary throughout different regions. Drought is recognized as a deficiency of precipitation over an extended period of time, which could be an entire season or more. Drought not only has its physical effects on the environment, but also has social effects as well, and can often be exacerbated by human demand on water supply. There are different perspectives on drought, which include those from meteorological, agricultural, societal, and hydrologic perspectives. Periods of drought can affect crops, water supply, and can lead to increased hazard of wildfires. All of St. Johns County is susceptible to drought conditions and the hazards associated with them.

A heat wave is when temperatures are abnormally and uncomfortable hot for an extended period of time. This event could continue from one day to several weeks. Heat waves are often accompanied by high humidity and can have a great impact on lives, including heat strokes, heat exhaustion, and even death. People in urban areas are more susceptible to the effects of a heat wave due to the Urban Heat Island effect. All of St. Johns County is susceptible to heat wave conditions.

#### **15. Winter Storm / Freeze**

A winter storm is defined as a storm that can range from a few hours of moderate snow to blizzard like conditions with wind-driven snow that can last for days. Winter storms can impede visibility, affecting driving conditions, and can have an impact on communications, electricity or other services. Winter storms can range from several states to one county. St. Johns County is not generally susceptible to winter storms, because temperatures rarely reach snow-producing levels. The climactic conditions for winter storms are also not favorable. But temperatures can reach levels low enough to cause damage to crops and water lines.

Freezing occurs when temperatures are below freezing over a wide spread area for a significant period of time. Freezing temperatures can damage agricultural crops and burst water pipes in homes and buildings. Frost, often associated with freezes can increase damaging effects. Frost is a layer of ice crystals that is produced by the deposition of water from the air onto a surface that is at or below freezing.

## **F. Summary**

Much development has been occurring along the County's coastline, particularly residential construction. All such structures are subject to the hazards of hurricanes and, accordingly, need to be constructed in conformance with stringent building codes. This is particularly true of structures in the hurricane surge zone. The storm surge has by far the most destructive power associated with a hurricane. The benefits of the preserving the natural dune system have been shown to be enormous in mitigating storm surge hazard. Other actions such as elevating houses above the anticipated surge levels, building back from the shoreline, and using breakaway walls on lower levels all mitigate the effects of this hazard.

Second to the storm surge in power but yielding the potential for far-reaching and expensive damage are the heavy winds associated with a hurricane. Hurricane force winds, even a category 1 hurricane, directly striking the area will be felt throughout the County. Structures not built to withstand high winds are particularly vulnerable. Older, substandard, mobile homes, and manufactured homes are dispersed throughout the County, all of which will be at risk in the event of a hurricane.

In addition to threats from hurricanes many dwelling units and other structures are located in FEMA designated 100-year flood plain areas. Enforcing minimum floor elevations, relocating the extremely vulnerable, or elevating structures minimizes the vulnerability to this threat.

Outside the floodplains the hazards are centered on wildfires and hazardous materials. Homes built in the urban/wildland interface are the most vulnerable to wildfires. Control burns and buffering will greatly reduce the threat of wildfires to the urbanized areas of the County. However, the entire County is vulnerable to the effects of a release of hazardous materials.

The vulnerable zones for each hazardous materials facility are mapped by facility for two reasons. First, unless the result of a catastrophic event or the intentional actions of an individual, a simultaneous release of hazardous materials by multiple sites is unlikely. Second, the amount of overlap and complete coverage of the County by the hazards quickly renders the map useless. Preparedness and prevention are the key mitigation factors for hazardous materials. Educating the population to the risk, and a rapid response to a release begins to mitigate the hazard. Unfortunately, some people are unable to respond to protective actions unassisted, or are not able to read literature intended to educate them to the risk. Many people at-risk throughout the County are transportation disadvantaged, who are handicapped, elderly, or economically disadvantaged.

Appendix A – St. Johns County Hazards Quick Reference Guide, provides an overview of the impacts associated with various hazards.

## Section IV – Vulnerability and Loss Estimates

### A. Repetitive Loss Data

Some areas of the County experience repetitive flooding from heavy rainfall and damage includes flooded roadways and homes.

The most well known area with repetitive flooding is the waterfront area of downtown St. Augustine which is very low and which sometimes can flood from the combination of a full moon, a high tide and a northeastern wind. Flooding also occurs throughout the County within low-lying areas and within the 100-year floodplain.

According to information provided by the Florida Division of Emergency Management the City of St. Augustine Beach has had 20 losses to 6 properties totaling \$1,050,365.55. The City of St. Augustine has had 49 losses on 16 properties totaling \$467,751.40. Unincorporated St. Johns County (including the Town of Hastings and Flagler Estates) has had 92 losses on 38 properties totaling \$1,134,159.54. This information included properties with reported losses up to October 2006.

A detailed description of these repetitive losses is provided on the following table. Exact addresses are considered confidential and are thus not included.

# Repetitive Loss Summary for St. Johns County

Data as of 10/31/2006

County Name	Community Name	Building Payments	Contents Payments	Total Payments	Average Payment	Losses	Properties
St. Johns County	St. Augustine Beach, City Of	846,219.88	204,145.67	1,050,365.55	52,518.28	20	6
	St. Augustine, City Of	331,067.91	136,683.49	467,751.40	9,545.95	49	16
	St. Johns County **	865,865.32	268,294.22	1,134,159.54	12,327.82	92	38

\* NOTE: ALL PAYMENTS ARE IN US DOLLARS (\$)

\*\*NOTE: THE DATA CONTAINED ON THIS REPORT CONTAINS REPETITIVE LOSS PROPERTIES AS WELL AS MITIGATED PROPERTIES (PROPERTIES THAT ARE NO LONGER REPETITIVE).

## B. Critical Facilities Inventory

According to information from the Florida Department of Community Affairs, critical facilities are defined as: "those structures from which essential services and functions for victim survival, continuation of public safety actions, and disaster recovery are performed or provided. Supporting life-line infrastructure essential to the mission of critical facilities must also be included in the inventory when appropriate."

Each local government must decide which of its facilities is critical. In light of this, St. Johns County has completed an inventory of critical facilities, which it deems are necessary to provide with extra protection in the event of a natural or man-made disaster. This inventory includes the following types of facilities:

Airport	Group Quarters	Parks
Boat ramps	Medical Services	Schools
Correctional Facility	Fire Stations	Shelters
Churches	Government Buildings	Sheriff's Department
Clinics	Hazard Material Sites	Transportation Facilities
Communication stations	Hospitals	Water and Sewer
Communication towers	Industrial Parks	Facilities
Electrical Substations	Landfills	Sewer Lift Stations
Emergency Operations Center	Landing Zones	
	Nursing Homes	

Critical facilities table and map on file with St. Johns County Emergency Management.

### **C. Other Vulnerable Facilities**

In addition to the repetitive loss properties and critical facilities identified by the County and municipalities there are other vulnerable properties that also need to be identified and examined for potential losses and future mitigation actions. These properties include those non-repetitive loss properties that are located in a flood zone, properties located in the urban/wildland interface, properties located within the zone of vulnerability of a facility containing hazardous materials, and others that may be determined vulnerable throughout the identification process. Through the identification process, the value of the properties identified as vulnerable will be determined therefore ultimately allowing for a damage loss estimate for each hazard.

To identify additional vulnerable properties two devices will be utilized. First, data provided from an effort between the State of Florida Department of Community Affairs and Kinetic Analysis Corporation that provides information on vulnerable properties will be evaluated. The data available through this source includes the total number of structures for a number of categories, arranged by DOR code, and their values. To supplement the information gained through the state provided source, the Federal Emergency Management Agency provided HAZUS-MH software (Hazards U.S. / Multi-Hazards) that has been developed specifically to complete risk assessments for earthquake, flood, and hurricanes, will be used to identify vulnerable properties from a pre-provided database within the software. This information includes housing stock and property values, in addition to numerous other data.

As of the current draft of the St. Johns County Local Mitigation Strategy, the State provided information is mostly available to the County and ready for review. Additionally the HAZUS-MH software has been provided to the Northeast Florida Regional. It is expected that the process of identifying any and all vulnerable structures will be one that is time consuming. A full analysis will be conducted using the new data source and software products and this analysis will be part of the next draft of the Plan.

### **D. Loss Estimates**

Once a thorough identification and analysis of vulnerable properties within the County and its municipalities is completed, a damage loss estimate analysis will be conducted. The loss estimate will be conducted via the State provided data source and supplemented by the HAZUS-MH software provided by FEMA. The State provided data includes values for different types of properties and loss estimates for vulnerable structures for a number of different hazards. The HAZUS-MH software includes a regional inventory of assets, supports advanced analysis functions and provides mapping capabilities. The HAZUS-MH provided data has a polygon feature, which includes census tracts/blocks that show features such as demographics and general building stock, line data features which includes utility pipelines, and road segments, and point data features, which includes essential and lifeline facilities, high potential loss facilities, and bridges. The provided demographic and economic data is from the most recent U.S. Census.

The State provided analysis includes property values and a source for mapping vulnerable areas of each County. To conduct this analysis access to either the internet site or the State provided

data CD will be needed. For the HAZUS-MH software, the damage loss estimate is comprised of a series of activities. The first step is to define the study region. This includes defining jurisdictional and geographical boundaries. The second step is to create a base map of the study region using HAZUS/MH provided data. This is the step where additional local data can be added. The base map will include features such as defined boundaries, key features, demographic data, and other important point locations. After a base map is created and any additional data is added, the next step is to identify the hazards of interest. After the hazards are chosen, the next step is to develop and run the hazard scenario. The outcome from the analysis will provide the necessary data to complete a damage loss estimate.

The next draft of the Local Mitigation Strategy will contain a much more detailed description of which steps were taken in the loss estimate analysis. The analysis will include, in addition to a description of the methodology used, maps designating hazard areas and data tables that will provide information on the outcome of each analysis.

To supplement the information that will be extracted from the outcome of the two damage loss estimate alternative methods, information from the Florida Statistical Abstract 2003 was reviewed and is provided in order to show property values for the County. The Florida Statistical Abstract 2003 provides data on assessed property values and proportion of land by use in each County, using 2002 data. The following table provides information on the property values in St. Johns County.

#### St. Johns County Property Values

<b>St. Johns COUNTY</b>	<b>Residential</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Agricultural</b>	<b>Institutional</b>	<b>Government</b>	<b>Total</b>
<b>Value (in millions of dollars)</b>	9,409.07	1,348.04	130.44	98.73	375.05	866.11	12227.44
<b>Percentage (of total value)</b>	77.0	11.0	1.1	0.8	3.1	7.1	100.0



## Section V – Initiative Development

### A. Project Selection and Submission Criteria

In St. Johns County there are numerous areas and locations that suffer or are vulnerable to disasters such as floods, accidental chemical releases and other natural and man made disasters. The mitigation initiatives that St. Johns County developed began with evaluating the guiding principles that were completed during the initial phases of the LMS process. The initiatives revolved around these principles regarding the reduction of County's vulnerability to natural and man made hazards that exist. The Taskforce, comprised of a variety of people in the public and private sector, created the initiatives, which reflected the needs of the community. The Taskforce reviewed a number of documents including: Future Land Use policies, Land Development Regulations and data collected from the Department of Public Safety.

The Taskforce over the process of several meetings discussed and listed potential projects in St. Johns County, which are discussed in detail in the following section. The projects were both structural and non-structural mitigation projects. These projects were then discussed in the context of cost, responsible entity, implementation time, funding and areas affected. After all the data was compiled, the taskforce ranked the projects. Each of the projects were evaluated against 14 criteria ranging from cost of the initiative compared with the number of people to benefit to consistency to other plans and programs. Parts B and C below explains in more detail the scoring and prioritizing process and table 7 shows the criteria that the projects were ranked against. As maintenance of the document continues, these criteria will continue to be used to rank new projects that are supported by the Task Force for inclusion into the LMS. A standard form has been developed for submission of new projects for consideration by the Task Force to determine if it should be included in the LMS. The standard form will cover all the criteria that the projects are scored upon.

### B. Scoring and Prioritizing Projects

Each mitigation project chosen for inclusion in the Strategy by the Taskforce will benefit the community and preserve and protect life and property. However, each mitigation project represents a large investment of financial resources and/or personnel resources. Due to these facts a method to prioritize each project was adopted. This prioritization method will be a guide for those using the strategy. It will tell which projects have priority to be implemented when resources do become available for that type of project.

The Taskforce adopted a prioritization method early in the LMS process. The methodology has been reviewed and revised several times to produce a fair and easy to use system. The method considered and evaluated such factors as: consistency with the comprehensive plans, who would benefit by the project, availability of funding, and the time frame of implementing the project. The Task Force assigned a numerical figure ranking the project on the criteria mentioned earlier. The final ranking was drawn from the numerical figures assigned by the Taskforce.

The Task Force believes that project prioritization and reprioritization will be an ongoing responsibility. The completion of a project alone may be cause to reprioritize the remaining projects. However, the likelihood is that as additional projects are defined and presented the list of prioritized initiative will grow and become refined. In a process that will evolve with the change prioritize of time and an evolving community.

### **C. Project Prioritization Methodology**

Hazard Mitigation Project Prioritization Method:

#### **1. Feasibility Assessment**

All potential mitigation efforts, whether educational, legislative, or structural, must meet certain standards to be considered as viable project or initiatives. Viability standards include the following:

- (1) Is the proposed project or initiative consistent with the Guiding Principles of St. Johns County Local Mitigation Strategy?
- (2) Does the project or initiative have clearly defined mitigation goals and objectives?
- (3) Does the project or initiative address a hazard to which the local community is clearly vulnerable?
- (4) Is the project or initiative technically feasible?
- (5) Is the project or initiative acceptable to, or does it have a reasonable expectation of gaining acceptance by the general public?
- (6) Can the project or initiative be accomplished without generating any major or prohibitive environmental impacts?

#### **2. Prioritization Criteria**

There are 12 categories which individual mitigation projects or initiatives are evaluated. Up to ten points may be awarded in categories one through four and categories six through nine; up to 15 points in category five, and up to five points each in the final three categories for a total possible point score of 110 points. Five point categories receive lower possible point scores because, while they are important considerations in terms of implementing mitigation projects or initiatives, they are not felt to be as critical as the preceding 10 categories. Detailed suggestions for scoring individual categories are presented below.

- (1) Containment within the Existing Comprehensive Growth Management Plans - Is the project or initiative consistent with or incorporated in an existing City or County Comprehensive Growth Management Plan.

If not incorporated into an existing Comprehensive Plan, is the project or initiative proposed for incorporation through submittal of an Application for a Comprehensive Plan Amendment?

If not incorporated into an existing Comprehensive Plan, is the project or initiative consistent with the applicable City or County Comprehensive Plan?

Projects or initiatives incorporated into an applicable Comprehensive Plan or proposed for incorporation through submittal of an amendment application will receive 10 points. Projects consistent with but not incorporated into a Comprehensive Plan will receive 5 points.

- (2) Consistent with Existing Regulatory Framework – Is the project or initiative consistent with existing legal and regulatory framework of the governing jurisdiction?

Does a proposed project require any changes or waivers in existing building, zoning, or environmental statutes or ordinances? Projects which fit within the existing legal and regulatory framework will receive 10 points. Projects which are in conflict with the existing regulatory framework will receive lower point scores depending upon the seriousness and numbers of regulatory barriers to be overcome in implementing the proposed project.

- (3) Community Rating System (CRS) Credit - Does the proposed project or initiative provide credit points toward improving the St. Johns County CRS Classification and reducing flood insurance rates in the County?

The National Flood Insurance Program determines the rate communities pay for flood insurance based on a 10-Class system. Class 1 communities receive the most premium credit and class 10 communities receive the least. Communities can improve their classification by conducting activities to reduce flood losses. Communities are awarded “Activity Credit Points” for a variety of flood mitigation activities including public information activities, mapping and regulatory activities, and structural projects to reduce flood losses. Projects and initiatives yielding the maximum number of CRS “Activity Credit Points” will be awarded 10 points under this criterion. Those receiving lower CRS ratings will receive lesser scores.

- (4) Community Benefit – Does the project further one of the principle five goals of the LMS as described below select the best fit:

- I. Protect the lives of the residents of St. Johns County and its Municipalities (15 points).
- II. Protect property to ensure that its intrinsic value is preserved (14 points).
- III. Protect infrastructure so that it is available during and after a disaster (13 points).

IV. Protect business activities so that they continue to provide economic strength to the community (12 points).

V. Protect the environment to ensure that quality of life and economic well being are preserved (11 points).

(5) Community Exposure – Does the project mitigate a frequently occurring, high risk, or specific problem to which a community is particularly vulnerable?

How frequently does the problem the project is designed to mitigate actually occur? A maximum of 10 points may be awarded in this category based on the amount of funding required balanced against the relative and repetitive exposure of the community as determined under the vulnerability assessment.

(6) Effectiveness – What is the benefit/cost ratio of the project when applying the Federal Emergency Management Act (FEMA) “Cost-effectiveness of Hazard Mitigation Projects” guidelines?

FEMA has produced detailed guidelines for evaluation for evaluating the cost effectiveness of mitigation projects. All mitigation projects using FEMA funding must have a benefit/cost ratio greater than 1. The higher the benefit/cost ratio, the bigger the “bang for the buck.” A total of 10 points will be awarded in this category based on the following:

Benefit/cost ratio = 4.0 or greater	= 10 points
Benefit/cost ratio = 3.0 to 3.9	= 8 points
Benefit/cost ratio = 2.0 to 2.9	= 6 points
Benefit/cost ratio = 1.0 to 1.9	= 4 points
Benefit/cost ratio = < 1.0	= 0 points

(7) Effective Life Expectancy – How long will the community continue to receive the benefits of a particular mitigation project or initiative?

All mitigation projects and initiatives have an effective life span. Conditions change, new technology becomes available, and physical structures wear out. All these factors determine how long a community will receive benefits from money invested in a mitigation measure. 2 points will be awarded for every five years of effective benefit, with a maximum benefit of 25 years or 10 points.

Effective Life Span = Up to 25 or more	= 10 points
Effective Life Span = Up to 20 years	= 8 points
Effective Life Span = Up to 15 years	= 6 points
Effective Life Span = Up to 10 years	= 4 points
Effective Life Span = Up to 5 years	= 2 points

(8) Public Support – Does the project have demonstrated public support and a demonstrated

need? A maximum of 10 points will be awarded to proposed projects based on their level of need and support as follows:

Very High	= 10 points
High	= 8 points
Moderate	= 6 points
Low	= 2 points

- (9) Funding Availability – Is funding currently available for this particular project?

If funding is anticipated but currently not available, points will be awarded as follows:

Available in 1 year	= 8 points
Available in 3 years	= 4 points
Available in 4 years	= 2 points

- (10) Sponsorship – Does the project have an active sponsor that will take responsibility for its management and implementation?

Up to 5 points will be awarded if a local government agency (City or County), or other entity identified by the funding source, will sponsor the project. An additional five points will be awarded to a project with a local sponsor willing to match funds with a funding entity.

- (11) Funding Source – Is there an identified funding source or entity for this project or initiative?

Five points will be awarded to all projects and initiatives for which funding source or entity already exists with the express purpose to fund projects of this type, even if funds for this specific project or initiative have not been made available to date.

- (12) Time Frame for Accomplishing Objectives – How long will it take for the proposed mitigation project to accomplish its stated goal?

Projects which can be accomplished quickly or have an inherent advantage over long term projects, although long term projects may ultimately be more beneficial to the community. The following weighted scale assigns points to proposed projects based on their duration.

1 year	= 5 points
2 year	= 4 points
3 year	= 3 points
4 year	= 2 points
5 year	= 1 points

ST. JOHNS COUNTY LMS  
POINT SYSTEM METHODOLOGY

CRITERIA CATEGORY	10 Points	8 Points	6 Points	5 points	4 Points	3 Points	2 Points	1 Point	0 Points
Contained Within the Comprehensive Plan	Incorporated into plan	NA	NA	Consistent with plan but not incorporated	NA	NA	NA	NA	Inconsistent with plan
Consistent with Existing Regulatory framework	Consistent	NA	NA	Partially Consistent	NA	NA	NA	NA	Inconsistent, many regulatory barriers
Provide Community Rating System Credits	Provides maximum number of CRS credits	NA	NA	Provides some CRS credits	NA	NA	NA	NA	Provides no CRS credits
Community Benefit	Protects lives of St. Johns Co. residents (15 points)	Protects Property (14 points)	Protects Infrastructure (13 points)	Protects business activities (12 points)	Protects environment (11 points)	NA	NA	NA	NA
Community Exposure	Mitigates a hazard of high frequency and risk	NA	NA	Mitigates a hazard of moderate freq. & risk	NA	NA	NA	Mitigates a hazard of low frequency and risk	Mitigates a hazard of negligible risk
Effectiveness	Benefit/cost ratio = 4.0 or greater	Benefit/cost ratio = 3.0 to 3.9	Benefit/cost ratio = 2.0 to 2.9	NA	Benefit/cost ratio = 1.0 to 1.9	NA	NA	NA	Benefit/cost ratio = <1.0
Effective Life Expectancy	Up to 25 or More Years	Up to 20 Years	Up to 15 Years	NA	Up to 10 Years	NA	Up to 5 Years	NA	NA
Public Support	Very High	High	Moderate	NA	NA	NA	Low	NA	NA
Funding Availability	Public support	Public support	Public support	NA	Available in 3 years	NA	Available in 4 years	Available in 5 years	NA
Sponsorship	Identified sponsor willing to match funds	NA	NA	Project has identified sponsor	NA	NA	NA	NA	No identified sponsor
Identified Funding Source	NA	NA	NA	A funding source has been identified	NA	NA	NA	NA	A funding source has not been identified
Time Frame For Accomplishing Objectives	NA	NA	NA	1 year	2 years	3 years	4 years	5 years	NA

#### **D. Project Implementation**

In the project descriptions it provides information on who initiated the mitigation project and who will be responsible for overseeing the projects implementation. Individual agencies will be responsible for implementation the mitigation initiatives that they have had approved for funding.

## **Section VI – Mitigation Initiatives**

### **A. Mitigation Initiatives**

Mitigation initiatives are selected by the St. Johns County LMS Task Force and voted on and prioritized. The table at the end of the document shows each project's score and rank on the list.



## Section VI - Funding

### A. Funding Sources

The following table provides current information on sources of available funding (if any) that is used for hazard mitigation projects. The table includes the name of the grant, the sponsoring agency, type of assistance available and who is eligible. As additional or updated information becomes available the list will be amended accordingly.

NAME OF GRANT	SPONSORING AGENCY	TYPE OF ASSISTANCE AVAILABLE	ELIGIBILITY
Hazard Mitigation Grant Program	FEMA		Only after a disaster
Pre-Disaster Mitigation Program			
National Flood Insurance Program			
Flood Mitigation Assistance Program			
Repetitive Flood Claims			
Severe Repetitive Loss			
Residential Construction Mitigation Program			

# APPENDIX

## A

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Hurricanes/ Coastal Storms
<b>Description</b>	A Hurricane is a tropical cyclone characterized by thunderstorms and defined surface wind circulation, developing over warm waters and caused by the atmospheric instability created by the collision of warm air with cooler air. Hurricane winds range from 75 mph to 155+ mph. Wind damage and storm surge are associated with hurricanes as well as tropical storms. Tropical storms are tropical cyclones with sustained winds greater than 39 mph and less than 74 mph.
<b>Location and Extent</b>	St. Johns County is a coastal county and may have storm surge and high wind associated with hurricanes along coastal areas, as well as surge effects associated with the St. Johns River. Areas of particular vulnerability include the entire shoreline of the St. Johns River and its associated tributaries. Coastal areas including St. Augustine, St. Augustine Beach, Ponte Vedra, Summer Haven, and Vilano Beach are not only vulnerable to storm surge, these areas are also vulnerable to the high winds associated with a hurricane as are areas at higher elevations.
<b>Vulnerability*</b>	High
<b>Previous Occurrences</b>	In 1964 Category 3 Hurricane Dora came ashore in Northern St. Johns County and is the most recent hurricane to make landfall in the Northeast region. The following storms, while not making landfall in northeast Florida caused damage in the area, Hurricane Floyd in 1999, Hurricane Irene in 1999, Tropical Storm Gabrielle in 2001, Hurricane Charley, Hurricane Frances, and Hurricane Jeanne in 2004, Tropical Storm Ophelia in 2005, and Tropical Storms Alberto and Ernesto in 2006. Some coastal storms include the Thanksgiving storm of 1984 and the no-name storm of the winter of 1993.
<b>Probability of Future Occurrences*</b>	High
<b>Risk Level*</b>	High
<b>References</b>	Hurricane Evacuation Study, <a href="http://www.floridadisaster.org">www.floridadisaster.org</a> , St. Johns County CEMP, TAOS
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Storm Surge
<b>Description</b>	A storm surge is an onshore surge of water associated with a low pressure weather system, typically a <u>tropical cyclone</u> . Storm surge is caused primarily by high winds pushing on the ocean's surface. The wind causes the water to pile up higher than the ordinary sea level. Low pressure at the center of a weather system also has a small secondary effect. It is this combined effect of low pressure and persistent wind over a shallow water body which is the most common cause of storm surge flooding problems.
<b>Location and Extent</b>	Areas of particular vulnerability include the entire coastline of St. Johns County, the Intercoastal Waterway and the shoreline of the St. Johns River and its associated tributaries.
<b>Vulnerability*</b>	High
<b>Previous Occurrences</b>	Hurricane Dora in 1964.
<b>Probability of Future Occurrences*</b>	High
<b>Risk Level*</b>	High
<b>References</b>	Hurricane Evacuation Study, St. Johns County CEMP, TAOS
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Wind
<b>Description</b>	Strong damaging winds associated with powerful storms such as hurricanes, tropical storms and severe thunderstorms
<b>Location And Extent</b>	Areas along the coastline, the Interoceanal Waterway, and the St. Johns River appear to be most susceptible to high winds from a hurricane. All areas of the County are susceptible to high winds associated with thunderstorms.
<b>Vulnerability*</b>	High
<b>Previous Occurrences</b>	Hurricane Dora in 1964 caused damages from high winds. Between 1950 and 2004 there were 96 reported strong wind events associated with thunderstorms in St. Johns County. In 2004 Hurricanes Charley, Frances and Jeanne caused some wind damage in areas throughout the County. Between 1950 and 2006 there were 117 reports of high winds associated with severe thunderstorms.
<b>Probability of Future Occurrences*</b>	High
<b>Risk Level*</b>	High
<b>References</b>	National Climatic Data Center, St. Johns County CEMP, TAOs
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Tornado
<b>Description</b>	A violently rotating column of air that extends from a thunderstorm down to the ground, and can reach wind speeds of 250 mph or more.
<b>Location And Extent</b>	All of St. Johns County is susceptible to the effects of a tornado if one touched down. However, the County is in the low frequency zone.
<b>Vulnerability*</b>	High
<b>Previous Occurrences</b>	Between 1950 and 2006, 45 tornadoes were reported in St. Johns County.
<b>Probability of Future Occurrences*</b>	Medium
<b>Risk Level*</b>	High/Medium
<b>References</b>	National Climatic Data Center, National Weather Service Storm Prediction Center, St. Johns County CEMP, TAOS
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Wildfire
<b>Description</b>	An uncontrolled fire that spreads through and consumes vegetative fuels and any other flammable materials in its path.
<b>Location And Extent</b>	St. Johns County is transforming from a rural county, to one which is much more urban in nature, but a large percentage of its land area is still covered in forest. As a result many areas of the County are susceptible to wildfire. The most vulnerable areas are those generally located at the urban/wildland interface. These are areas where subdivisions occur adjacent to large undeveloped areas of forested lands.
<b>Vulnerability*</b>	Medium. Extreme during drought conditions; High, December through June when rainfall amounts typically decrease. Very active fire events in the past have commonly occurred in May-June.
<b>Previous Occurrences</b>	Significant wildfire events have been recorded in St. Johns County in 1985, 1990, 1993, 1998, 1999. These wildfire events correlated with drought periods and the typical Florida dry season.
<b>Probability of Future Occurrences*</b>	High
<b>Risk Level*</b>	Medium/High
<b>References</b>	Florida Division of Forestry; St. Johns County CEMP
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Floods
<b>Description</b>	Floods happen when the water draining from a watershed, from excessive rainfall, exceeds the capacity of the river or stream channel to hold it. Water overflows onto the nearby low-lying lands called "floodplains". In relatively flat flood plains, land may stay covered with shallow, slow moving water for days or even weeks. Some coastal flooding may be caused by the storm surge associated with tropical storms and hurricanes.
<b>Location and Extent</b>	St. Johns County has an abundance of low lying areas that flood with excessive rainfall and/or storm surge. Areas that can experience extreme flooding are downtown St. Augustine, Hastings, and Flagler Estates. In these areas roads may have to be closed due to localized flooding.
<b>Vulnerability*</b>	Medium
<b>Previous Occurrences</b>	Between 1950 and 2006 St. Johns County has had 13 reported flood events
<b>Probability of Future Occurrences*</b>	High
<b>Risk Level*</b>	Medium/High
<b>References</b>	National Climatic Data Center; St. Johns County CEMP; TAOS
<b>Map</b>	Yes



## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Hazardous Materials Accident
<b>Description</b>	The accidental release or spill of hazardous chemicals into the environment where human, plant, or animal life would be endangered.
<b>Location And Extent</b>	Areas in the vulnerability zone around facilities that contain hazardous materials are susceptible to hazards associated with accidents and/or spills. Areas adjacent to main transportation routes that transport hazardous materials are also susceptible to the hazards associated with accidents and spills.
<b>Vulnerability*</b>	Medium
<b>Previous Occurrences</b>	2004 - Hydro Aluminum – Transport truck experienced a severe acid leak while still on property.
<b>Probability of Future Occurrences*</b>	Medium
<b>Risk Level*</b>	Medium
<b>References</b>	St. Johns County CEMP, St. Johns County Terrorism Annex
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Freeze/Winter Storm
<b>Description</b>	A winter storm is a meteorological event in which the dominant varieties of <u>precipitation</u> are forms that only occur at cold <u>temperatures</u> , such as snow or sleet, or a rainstorm where ground temperatures are cold enough to allow <u>ice</u> to form. These storms can cause rough surf and high winds that can lead to coastal erosion. Freezing occurs when temperatures are below freezing over a wide spread area for a significant period of time.
<b>Location And Extent</b>	All of St. Johns County is susceptible to the effects of a freeze, which could damage agricultural crops, but winter storms are not common to this area.
<b>Vulnerability*</b>	Medium
<b>Previous Occurrences</b>	"No Name" Storm of March 1993. A Nor'easter in 1996.
<b>Probability of Future Occurrences*</b>	Medium
<b>Risk Level*</b>	Medium
<b>References</b>	St. Johns Co. CEMP; NWS
<b>Map</b>	No

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Drought/Heat Wave
<b>Description</b>	Drought is a normal climatic occurrence and is recognized as a deficiency of precipitation over an extended period of time. Drought is measured with the Keetch-Byram Drought Index which measures soil moisture. Typically May-June have the highest drought numbers. A heat wave is when temperatures are abnormally and uncomfortably hot for an extended period of time.
<b>Location And Extent</b>	All of St. Johns County is susceptible to the effects of drought caused by low precipitation levels. Agricultural lands and forest lands are the most at risk during drought due to the loss of crops and the increased potential for wildfires.
<b>Vulnerability*</b>	Low – Even though extended periods of drought are common due to fluctuating rainfall patterns.
<b>Previous Occurrences</b>	The NWS has recorded a rainfall deficit in 1997-2002 coinciding with a La Nina event. The Palmer Drought Severity Index is a long term drought indication index that measures trends in rainfall and soil moisture amounts. The Palmer index shows that the years 1990 and 1999-2001 were severe drought years for St. Johns County.
<b>Probability of Future Occurrences*</b>	Low-Moderate Low
<b>Risk Level*</b>	Low
<b>References</b>	Florida Division of Forestry; St. Johns Co. CEMP; NWS
<b>Map</b>	No

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Terrorism
<b>Description</b>	A violent act, economically destructive act, or any act dangerous to human life, including the unlawful force or violence against a person or property to intimidate or coerce government, civilians, or any segment thereof, usually for political or ideological purposes.
<b>Location And Extent</b>	St. Johns County is not generally susceptible to acts of terrorism; however acts of terrorism can potentially occur anywhere in the county, although there are few targets.
<b>Vulnerability*</b>	Low
<b>Previous Occurrences</b>	None
<b>Probability of Future Occurrences*</b>	Low
<b>Risk Level*</b>	Low
<b>References</b>	St. Johns County CEMP; St. Johns County Terrorism Annex
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Earthquake
<b>Description</b>	A sudden motion or trembling of the Earth that is caused by a release of tension that has accumulated within or along the edge of a tectonic plate.
<b>Location And Extent</b>	St. Johns County does not have favorable geology for the occurrence of earthquakes.
<b>Vulnerability*</b>	Low
<b>Previous Occurrences</b>	One reported in 1975 off the coast of St. Augustine. Some minor damage to bridges noted.
<b>Probability of Future Occurrences*</b>	Low
<b>Risk Level*</b>	Low
<b>References</b>	US Geological Survey; St. Johns County CEMP; TAOS
<b>Map</b>	Yes

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Tsunami
<b>Description</b>	A tsunami is a series of <u>waves</u> created when a body of water, such as an <u>ocean</u> is rapidly displaced on a massive scale. <u>Earthquakes</u> , <u>mass movements</u> above or below water, <u>volcanic eruptions</u> ; <u>landslides</u> ; and <u>meteorite impacts</u> all have the potential to generate a tsunami.
<b>Location And Extent</b>	Tsunamis are not common in the Atlantic Ocean; therefore St. Johns County is not generally susceptible. However, if a tsunami were to occur, the coastal areas of the County would be the most susceptible to the hazard.
<b>Vulnerability*</b>	Low
<b>Previous Occurrences</b>	None
<b>Probability of Future Occurrences*</b>	Low
<b>Risk Level*</b>	Low
<b>References</b>	TAOS
<b>Map</b>	No

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Sinkholes
<b>Description</b>	A downward movement of earth materials under the force of gravity into a void beneath the surface
<b>Location And Extent</b>	St. Johns County is not generally susceptible to sinkhole due to unfavorable geology for sinkholes.
<b>Vulnerability*</b>	Low
<b>Previous Occurrences</b>	None
<b>Probability of Future Occurrences*</b>	Low
<b>Risk Level*</b>	Low
<b>References</b>	US Geological Survey; St. Johns Co. CEMP; TAOS
<b>Map</b>	No

## St. Johns County Hazards Quick Reference Table

<b>Hazard</b>	Dam/Levee Failure
<b>Description</b>	Failure of a dam or levee causing flooding downstream of the damaged structure
<b>Location And Extent</b>	There are no public dams or levees in St. Johns County recorded with US Army Corps of Engineers, however there is a small dam on Guana River in the State Park.
<b>Vulnerability*</b>	Low
<b>Previous Occurrences</b>	None
<b>Probability of Future Occurrences*</b>	Low
<b>Risk Level*</b>	Low
<b>References</b>	US Army Corps of Engineers
<b>Map</b>	No

\* *Probability and Vulnerability from the St. Johns County Comprehensive Emergency Management Plan and apply to County and Municipalities.*

*Risk= Vulnerability/Probability of Future Occurrences*



# Appendix B

**Plans, Studies, Reports, and Other Document Reviewed**

- St. Johns County Comprehensive Plan
- City of St. Augustine Comprehensive Plan
- City of St. Augustine Beach Comprehensive Plan
- Town of Hastings Comprehensive Plan
- St. Johns County Comprehensive Emergency Management Plan

# Appendix C

**CHAPTER 29D-6  
NORTHEAST FLORIDA REGIONAL COUNCIL  
DISPUTE RESOLUTION**

**29D-6.001 Purpose.**

(1) In recognition of the Northeast Florida Regional Planning Council's (NEFRPC) role in facilitating intergovernmental problem solving, a voluntary regional dispute resolution process (RDRP) is hereby established to reconcile differences on planning, growth management, disputes arising from the intergovernmental review required by local government intergovernmental coordination element, or inconsistencies between port master plans and local government comprehensive plan, and other issues among local governments, regional agencies and private interests. Components of the RDRP consists of: process initiation; situation assessment; settlement meetings, mediation or advisory decision making; and settlement agreements.

(2) Use of this process shall not alter a jurisdiction's, organization's, group's or individual's right to judicial or administrative determination of any issue if that entity is entitled to such a determination under statutory or common law.

(3) Participation in the RDRP as a named party or in any other way does not convey or limit intervenor status or standing in any judicial or administrative proceedings.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

**29D-6.002 Definitions.**

(1) **Situation Assessment** – is a procedure of information collection that may involve review of documents, interviews and/or assessment meetings leading to a written and/or verbal report(s) identifying: the issues in the dispute; the stakeholders; information needed before a decision can be made; and a recommendation on the best dispute resolution procedures.

(2) **Pre-initiation meetings** – are opportunities for a party to discuss the suitability to the RDRP with the RPC staff for resolving their dispute before formally initiating the RDRP.

(3) **Facilitation** – is a procedure in which a facilitator helps the parties design and follow a meeting agenda and assists parties to communicate more effectively throughout the process. The facilitator has no authority to make or recommend a decision.

(4) **Mediation** – is a procedure in which a neutral third party assists disputing parties in a negotiation process to explore their interests, develop and evaluate options, and reach a mutually acceptable agreement without prescribing a resolution. A mediator may take more control of the process than a facilitator and usually works in more complex cases where a dispute is more clearly defined.

(5) **Advisory Decision Making** – is a procedure aimed at enhancing the effectiveness of negotiations and helping parties more realistically evaluate their negotiation positions. This procedure may include fact finding, neutral evaluation, and/or advisory arbitration in which a neutral party or panel listens to the facts and arguments presented by the parties and renders a non-binding advisory decision.

(6) **Jurisdiction** – is any local government or regional agency.

(7) **Named Party(ies)** – shall be any jurisdiction, public or private organization, group or individual who is named in an initiation letter, including the initiating jurisdiction, or is

admitted by the named parties to participate in settlement of a dispute pursuant to subsections 29D-6.003(1), (2) and (3), F.A.C. Being a named party in the RDRP does not convey or limit standing in any judicial or administrative proceeding.

(8) Representative – is an individual who is given guidance and authority to act, to the extent possible; by a named party in a RDRP case. This individual shall be designated by the process set forth pursuant to Rule 29D-6.003, F.A.C.

(9) Initiation Letter – is a letter from a jurisdiction formally identifying a dispute and asking named parties to engage in this process to resolve the dispute, and, at a minimum, attend the initial settlement meeting. Rule 29D-6.010, F.A.C., specifies what is required in an initiation letter.

(10) Response Letter – is a letter which formally notifies the initiator, the Northeast Florida Regional Planning Council, and other named parties that a party is willing to participate in the RDRP and, at a minimum, attend at least one settlement meeting. Subsection 29D-6.010(3), F.A.C., specifies what must be included in a response letter.

(11) Settlement Agreement – may be voluntarily approved by the individual or governing body authorized to bind the named party. Agreements may take the form of memorandums of understanding, contracts, interlocal agreements or other for mutually agreed to by the signatory parties or as required by law. A settlement, may be agreed to by some or all of the named parties.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History–New 7-5-94.

### **29D-6.003 Participation.**

(1) Named parties shall automatically be allowed to participate in the RDRP. Other jurisdictions, public or private organizations, groups, or individuals suggested by a named party in response letters or during RDRP meetings or submitting a petition to participate, may become named parties if agreed to by two-thirds majority of the named parties, except as provided in subsection 29D-6.003(2), F.A.C.

(2) All initiation and response letters made in accordance with intergovernmental coordination elements (ICE) of local government comprehensive plans; or involving consistency between port master plans and local comprehensive plans shall only list affected jurisdictions as named parties. The named parties may at the initial settlement or subsequent RDRP meetings add public or private named parties by mutual agreement of all the current named parties.

(3) Other jurisdictions, public or private organizations, groups or individuals seeking to become a named party shall submit to the Northeast Florida Regional Planning Council staff a written petition to participate, including reasons for the request and information required in subsection 29D-6.010(2), F.A.C. Such jurisdictions, public or private organizations, groups, or individuals shall become named parties if agreed to by a two-thirds majority of the named parties, prior to or during RDRP meetings; except as pursuant to subsection 29D-6.003(2), F.A.C. Named parties who do not respond within 10 calendar days of the initiation letter may not participate in the RDRP unless they submit a petition to participate.

(4) Each named party shall designate a representative in writing, or be represented by the chief executive officer. Jurisdictions are encouraged to designate a representative to participate in the RDRP in advance of initiating or receiving a request.

(5) Any named party may invite individuals or organizations to attend meetings under this process who can provide information and technical assistance useful in the resolution of the dispute. The parties, by agreement, or the presiding neutral shall determine when and under what circumstances such invited parties may provide input.

(6) All communications by a named party called for in this process shall be submitted to all other named parties and the NEFRPC staff in writing.

(7) All named parties who agree to participate in this process commit to a good faith effort to resolve problems or disputes.

(8) Any named party may withdraw from participation in the RDRP upon written notice to all other parties and the Northeast Florida Regional Planning Council staff.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

#### **29D-6.004 Cost.**

(1) The Northeast Florida Regional Planning Council shall be reimbursed for actual costs, both direct and indirect, associated with the implementation of this process.

(2) The costs of administration, situation assessment, settlement meetings, mediation or advisory arbitration shall be split equally between the parties or according to other agreed upon allocation.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

#### **29D-6.005 Timeframes.**

(1) The initial settlement meeting shall be scheduled and held within 30 days of the date of the initiation letter at a time and place convenient to the named parties.

(2) Additional settlement meetings, mediation or advisory decision-making shall be completed within forty-five (45) days of the date of conclusion of the initial settlement meeting.

(3) Where necessary to allow this process to be effectively carried out, named parties should address deferring or seeking stays of judicial or administrative proceedings.

(4) All timeframes specified in this rule may be shortened or extended by mutual agreement of the named parties.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

#### **29D-6.006 Administrative Protocols.**

(1) The Council is responsible for implementation of RDRP. Council staff shall serve as facilitator, if agreeable to the named parties, and shall perform the administrative procedures necessary to implement the processes set forth in this rule. A Council

member(s) or Council staff may serve as mediator or arbitrator if agreeable to the named parties.

(2) Administrative duties provided by the Council staff may include: conducting pre-initiation meetings; administering procedures related to process initiation; conducting situation assessments; maintaining a list of qualified mediators; securing the services of mediators; arranging meetings; and invoicing.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.007 Public Notice Records and Confidentiality.**

(1) Applicable public notice and public records requirements shall be observed as required by Chapters 119, 120, 286 or other Florida Statutes.

(2) Participants in this process agree by their participation that no comments, meeting records, or written or verbal offers of settlement shall be entered by them as evidence in subsequent judicial or administrative action.

(3) To the extent permitted by law, mediation under this process will be governed by the confidentiality provisions of Chapter 44.302(2), F.S.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.008 Pre-Initiation Meeting.**

A jurisdiction, organization, group, or individual contemplating initiation of this process may request an informal pre-initiation meeting with Council staff in order to ascertain whether the potential dispute would be appropriate for this process.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.009 Situation Assessment.**

(1) A jurisdiction, organization, group, or individual may request that the RPC staff or other neutral party perform a situation assessment at any time, before or after initiation of the process.

(2) The situation assessment may involve examination of documents, interviews and/or assessment meetings, and shall recommend issues to be addressed, parties that may participate, appropriate resolution procedures and a proposed schedule.

(3) The situation assessment is intended to examine the nature of the dispute; identify affected and potential parties; and assist the parties to evaluate appropriate dispute resolution procedures.

(4) The situation assessment shall be performed by Council staff, unless the Council is a named party. In those cases where the Council is a named party, the situation assessment will be performed by a neutral agreeable to all the named parties.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

**29D-6.010 Initiation of the Procedure.**

(1) This process is initiated by an initiation letter from the representative of the governing body of a jurisdiction to the named parties involved in the dispute and to the NEFRPC staff. The initiation letter must be accompanied by a resolution of the governing body authorizing initiation or by a copy of a written authorization of a representative to initiate requests to use the RDRP.

(2) Such an initiation letter shall identify: the issue to be discussed; named parties to be involved in the dispute resolution process; the initiating party's representatives and others who will attend, and a brief history of the dispute indicating why it is appropriate for this process.

(3) Private interests may ask any jurisdiction to initiate the process.

(4) Named parties shall send a response letter to the NEFRPC staff, and all other parties confirming their willingness to participate in a settlement meeting within ten 10 calendar days of receipt of the initiation letter. This response shall include any additional issues and potential named parties the respondent wishes considered, as well as, a brief history of the dispute and description of the situation from the respondent's point of view.

(5) Upon receipt of a request the NEFRPC shall assess its interest in the case. If the NEFRPC is a named party or sees itself as a potential party, it shall notify the named parties of the nature of its interest and ascertain whether the parties desire an outside facilitator for the initial settlement meeting.

(6) The NEFRPC may not initiate the RDRP but may recommend that a potential dispute is suitable for this process and transmit its recommendation to potential parties, who may, at their discretion, initiate the RDRP.

(7) The NEFRPC staff shall schedule a meeting at the most convenient time within thirty (30) days of the date of the initiation request.

(8) Any dispute which arise from the intergovernmental review required by local government intergovernmental coordination element, or from inconsistencies between port master plans and local government comprehensive plan shall automatically be accepted for dispute resolution by the NEFRPC.

(9) In the event that a dispute involves jurisdictions under two or more regional planning councils, the process adopted by the region of the initiating jurisdiction shall govern, unless the named parties agree otherwise.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

**29D-6.011 Settlement Meetings.**

(1) Settlement meetings shall, at a minimum, be attended by the named parties' representatives designated pursuant to subsection 29D-6.003(3), F.A.C.

(2) Settlement meetings may be facilitated by a NEFRPC staff member or other neutral facilitator acceptable to the parties and shall be held at a time and place acceptable to the parties.

(3) At the settlement meeting, the parties shall consider adding named parties, consider guidelines for participation, identify the issues to be addressed, present their concerns and constraints, explore options for a solution, and seek agreement.



(4) The parties shall submit a settlement meeting report in accordance with subsection 29D-6.015(4), F.A.C., of this process.

(5) If an agreed upon settlement meeting is not held or a settlement meeting produces no agreement to proceed to additional settlement meetings, mediation or advisory decision making, any party who has agreed to participate in this procedure may proceed to: a joint meeting of governing bodies pursuant to Chapter 164, F.S., litigation, administrative hearing or arbitration, as appropriate.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.012 Mediation.**

(1) If two or more of the named parties submit a request for mediation to the NEFRPC staff, the NEFRPC shall assist them to select and retain a mediator or the named parties may request that the NEFRPC select a mediator.

(2) All disputes shall be mediated by a mediator who understands Florida growth management issues, has mediation experience and is acceptable to the parties. Parties shall consider but not be limited to mediators who are on the Florida Growth Management Conflict Resolution Consortium rosters or any other mutually acceptable mediator. Mediators shall be guided by the Standards of Professional Conduct, Florida Rules of Civil Procedure, Rule 10, Part II, Section 020-150.

(3) The parties shall submit a mediation report in accordance with subsection 29D-6.015(4), F.A.C., of this process.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.013 Advisory Decision-Making.**

(1) If two or more named parties submit a request for advisory decision making to the NEFRPC the NEFRPC shall assist the parties to select and retain an appropriate neutral or the parties may request the NEFRPC make the selection.

(2) All disputes shall be handled by a neutral who understands Florida growth management issues, has appropriate experience and is acceptable to the parties.

(3) The parties shall submit an advisory decision-making report in accordance with subsection 29D-6.015(4), F.A.C., of this process at the conclusion.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History—New 7-5-94.

#### **29D-6.014 Settlement Agreements and Reports.**

(1) The form of all settlements reached through this process shall be determined by the named parties, and may include interlocal agreements, concurrent resolutions, memoranda of understanding, plan amendments, deed restrictions or other forms as appropriate.

(2) Agreements signed by designated representatives shall be in the form of recommendations to formal bodies and subject to their formal approval.

(3) Agreements may be reached by two or more named parties even if all of the named parties do not agree or do not sign a formal agreement if the agreement does not effect the rights of the other named parties that do not sign the agreement.

(4) After settlement meetings, mediation, or advisory decision making under this process, the named parties shall submit a joint report to the NEFRPC staff which shall, at a minimum, include:

(a) Identification of the issues discussed and indicating which were resolved;

(b) A list of potentially affected or involved jurisdictions, organizations, groups, or individuals (including those which may not be named parties);

(c) A description of agreed upon next steps, if any, including measures for implementing agreements reached;

(d) A time frame for starting and ending informal negotiations, additional settlement meetings, mediation, advisory decision-making, joint meetings of elected bodies, administrative hearings or litigation, and;

(e) Any additional NEFRPC assistance requested.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

#### **29D-6.015 Other Dispute Resolution Processes.**

(1) In addition to the RDRP under Section 186.509, Florida Statutes, parties may consider the applicability of other resolution processes within Florida Statutes, including: Intergovernmental Coordination Element, Section 163.3177(6)(h)(1) & (2), F.S., Port Master Plans, Section 163.3178, F.S.; Community Residential Homes, Section 419.001(5), F.S.; Cross Acceptance Negotiation Process, Section 186.505(22), F.S.; Location of Spoil Sites, Section 380.27, F.S.; Administrative Procedures Act, Chapter 120, F.S.; Florida Governmental Cooperation Act, Chapter 164, F.S.; Mediation Alternatives to Judicial Action, Chapter 44, F.S.

(2) When appropriate, parties may obtain a stay of judicial or administrative proceedings to provide time for RDRP negotiations.

Specific Authority 186.509 FS.

Law Implemented 186.509 FS.

History--New 7-5-94.

# APPENDIX D

DEC 20 2005

RESOLUTION NO. 05-\_\_\_\_\_

**RESOLUTION OF THE ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY  
TASKFORCE, ACCEPTING THE ST. JOHNS COUNTY LMS DOCUMENT**

WHEREAS, The St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a disaster mitigation plan; and

WHEREAS, St. Johns County initiated the Local Mitigation Strategy Plan development by entering into a contract with the Florida State Department of Community Affairs,

WHEREAS, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria for such plans; and

WHEREAS, this Local Mitigation Strategy plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery in the event of a hazardous event occurring on St. Johns County

**NOW, THEREFORE, BE IT RESOLVED** that the St. Johns County LMS Taskforce, hereby accepts the St. Johns County Local Hazard Mitigation Plan.

Unanimously adopted by the St. Johns County LMS Taskforce in regular meeting assembled in the offices of the St. Johns County Emergency Operations Department, April 20 2005.

  
E R. Ashton, LMS Taskforce Contact

RESOLUTION NO. 2005 - 118

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA APPROVING AND ADOPTING THE ST. JOHNS COUNTY LOCAL MITIGATION STRATEGY PLAN

WHEREAS, the St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

WHEREAS, St. Johns County initiated development of the Local Mitigation Strategy Plan by entering into a contract with the Florida State Department of Community Affairs Division of Emergency Management; and

WHEREAS, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria for such plans; and

WHEREAS, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery of hazardous events occurring in St. Johns County; and

WHEREAS, the Local Mitigation Strategy Taskforce accepted the Plan to be complete on March 2, 2005;

NOW THEREFORE, BE IT RESOLVED by the Board of County Commissioners of St. Johns County that

The Local Mitigation Strategy Plan attached and incorporated herein as Exhibit A is hereby approved and adopted effective immediately.

The St. Johns County Director of Emergency Management is hereby directed to timely notify the State Division of Emergency Management of the date of the County's approval and adoption of the Local Mitigation Strategy Plan.

PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, State of Florida, this 20<sup>th</sup> day of April, 2005.

BOARD OF COUNTY COMMISSIONERS  
OF ST. JOHNS COUNTY, FLORIDA

By: 

Chairman

ATTEST: CHERYL STRICKLAND, CLERK

By: 

RENDITION DATE 4-21-05

Public Records of  
St. Johns County, FL  
Clerk # 2005021774,  
O.R. 2400 PG 1622-1623  
03/23/2006 at 03:19 PM,  
REC. \$9.00 SUR. \$9.50

**RESOLUTION NO. 2005-1**

**RESOLUTION OF THE FLAGLER ESTATES ROAD AND WATER CONTROL  
DISTRICT BOARD OF SUPERVISORS, ACCEPTING THE ST. JOHNS COUNTY  
LOCAL HAZARD MITIGATION PLAN DOCUMENT**

WHEREAS, The St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

WHEREAS, St. John's County and its incorporated municipalities initiated development of the Local Mitigation Strategy Plan by entering into a contract with the Florida State Department of Community Affairs Division of Emergency Management, and

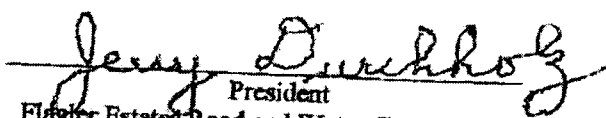
WHEREAS, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria for such plans; and

WHEREAS, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery in the circumstances of hazardous events occurring in St. Johns County; and

WHEREAS, the Local Mitigation Strategy Taskforce accepted the Plan to be complete on July 19, 2000.

**NOW, THEREFORE, BE IT RESOLVED** that the Flagler Estates Road and Water Control District Board of Supervisors hereby accepts the St. Johns County Local Hazard Mitigation Plan.

Adopted by the Flagler Estates Road and Water Control District Board of Supervisors in the regular meeting assembled in the offices of the Flagler Estates Road and Water Control District on March 17, 2005.

  
President  
Flagler Estates Road and Water Control District

**RESOLUTION #05-03**

**RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF HASTINGS  
ACCEPTING THE ST. JOHNS COUNTY LOCAL HAZARD MITIGATION  
PLAN DOCUMENT**

**WHEREAS**, the St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

**WHEREAS**, St. Johns County and its incorporated municipalities initiated development of the Local Mitigation Strategy Plan by entering into a contract with the Florida State Department of Community Affairs Division of Emergency Management; and

**WHEREAS**, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria for such plans; and

**WHEREAS**, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery in the event of a hazardous events occurring in St. Johns County; and

**WHEREAS**, the Local Mitigation Strategy Taskforce accepted the Plan to be complete on July 19, 2000.

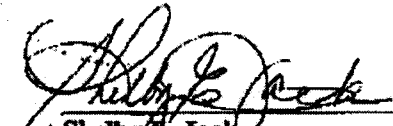
**NOW, THEREFORE, BE IT RESOLVED** that the Town Council of the Town of Hastings hereby accepts the St. Johns County Local Hazard Mitigation Plan.

Adopted by the Town Council of the Town of Hastings in Regular Session assembled in the offices of the Town Council on this 11<sup>th</sup> Day of April, 2005.



**Tom Ward  
Mayor**

**ATTEST:**



**Shelby G. Jack  
It's Clerk**

**RESOLUTION NO. 2005-14**

**A RESOLUTION OF THE CITY COMMISSION OF THE  
CITY OF ST. AUGUSTINE, FLORIDA, APPROVING AND  
ADOPTING THE ST. JOHNS COUNTY LOCAL  
MITIGATION STRATEGY PLAN**

**WHEREAS**, the St Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

**WHEREAS**, St Johns County initiated development of the Local Mitigation Strategy Plan by entering into a contract with the Florida State Department of Community Affairs Division of Emergency Management; and

**WHEREAS**, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria for such plans; and

**WHEREAS**, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man made hazards and to provide a priority for recovery of hazardous events occurring in St. Johns County; and

**WHEREAS**, the Local Mitigation Strategy Taskforce accepted the Plan to be complete on March 2, 2005; and

**WHEREAS**, the City recognizes the necessity of the Local Mitigation Strategy Plan, as it relates to receiving the benefits of the FEMA grants programs;



NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION  
FOR THE CITY OF ST. AUGUSTINE, FLORIDA, AS FOLLOWS:

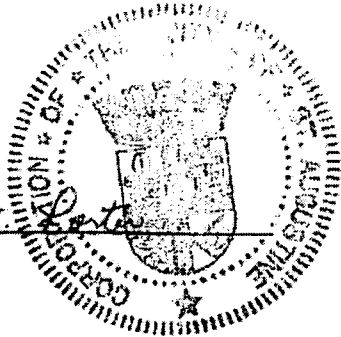
Section 1 That the Local Mitigation Strategy Plan attached and incorporated herein as Exhibit "A" is hereby approved and adopted effective immediately

Section 2 That the City Clerk is hereby directed to timely notify the St. Johns County Director of Emergency Management of the date of the City's approval and adoption of the Local Mitigation Strategy Plan

ADOPTED in Regular Session of the City Commission of the City of St Augustine, Florida, this 11<sup>th</sup> day of July, 2006

ATTEST:

Marsha V. Denton  
City Clerk



[Signature]  
Mayor-Commissioner

**RESOLUTION 05-11**

CITY OF ST. AUGUSTINE BEACH  
ST. JOHNS COUNTY  
FLORIDA

RE: TO ADOPT THE ST JOHNS  
COUNTY LOCAL MITIGATION  
STRATEGY PLAN

The City Commission of St. Augustine Beach, St. Johns County, Florida, in regular meeting duly assembled on Monday, July 11, 2005, resolves as follows:

WHEREAS, the St. Johns County Local Mitigation Strategy (LMS) Taskforce was created in August 1998, with the responsibility of developing a Local Hazard Mitigation Plan; and

WHEREAS, St. Johns County initiated development of the Local Mitigation Strategy Plan by entering into a contract with the Florida State Department of Community Affairs Division of Emergency Management; and

WHEREAS, the St. Johns County LMS Taskforce has completed a Local Mitigation Strategy Plan which has been reviewed by the Florida State Department of Community Affairs as meeting the criteria of such plans; and

WHEREAS, this Local Mitigation Strategy Plan is intended to provide a strategy to mitigate dangers and costs associated with weather and man-made hazards and to provide a priority for recovery of hazardous events occurring in St. Johns County; and

WHEREAS, the Local Mitigation Strategy Taskforce accepted the Plan as completed on March 2, 2005

NOW, THEREFORE, BE IT RESOLVED, that the City Commission of the City of St. Augustine Beach, St. Johns County, Florida adopts the Local Mitigation Strategy Plan prepared by the St. Johns County Local Mitigation Strategy Taskforce and the Northeast Florida Regional Council.

RESOLVED AND DONE, this 11th day of July, 2005 by the City Commission of the City of St. Augustine Beach, St. Johns County, Florida

  
\_\_\_\_\_  
Mayor - Commissioner

ATTEST:

  
\_\_\_\_\_  
City Manager