PASCO COUNTY
LOCAL MITIGATION STRATEGY

(A Guide to Implementing Pre-Disaster Mitigation and Post-Disaster Recovery Initiatives)

Developed by the Pasco County Hazard Mitigation Committee
Coordinated and prepared by the Pasco County Office of Emergency Management

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Table of Contents

EXECUTIVE SUMMARY 3
GLOSSARY OF NATURAL HAZARD AND MITIGATION TERMS 7
LIST OF RESOURCES CONSULTED 11

I. THE PLANNING PROCESS 13

PURPOSE 13
PUBLIC INVOLVEMENT 15
HAZARD MITIGATION PLANNING COMMITTEE (HMPC) 15
PARTICIPANTS 16
OTHER INTERESTED PARTIES (OIP) – PUBLIC PARTICIPATION 16
MULTI-JURISDICTIONAL PARTICIPATION 17
PLANNING PROCESS 17
THE COMMUNITY POPULATION 19
POPULATION DENSITY 19
VULNERABLE POPULATIONS 21
ECONOMIC VULNERABILITY 25
REPETITIVE LOSS PROPERTIES AND DEVELOPMENT OF REPETITIVE LOSS AREAS (RL) 27

II. RISK ASSESSMENT 29

INTRODUCTION 29
NATURAL HAZARD ANALYSIS: LOW PROBABILITY HAZARDS 30
NATURAL HAZARD ANALYSIS: MODERATE-TO HIGH PROBABILITY HAZARDS 31
VULNERABILITY OF MOBILE HOME PARKS IN STORM SURGE 43
TECHNOLOGICAL HAZARD ANALYSIS: MODERATE PROBABILITY HAZARD 94
HAZARD ANALYSIS SUMMARY 97
CONCLUSIONS AND RECOMMENDATIONS 105

III. MITIGATION STRATEGY 107

LOCAL HAZARD MITIGATION GOALS AND OBJECTIVES 107
MITIGATION ACTIONS 108
PROCESS FOR PRIORITIZING PROJECTS 110
FUNDING SOURCES 121
PLAN MAINTENANCE PROCESS 131
INCORPORATION INTO EXISTING PLANNING MECHANISMS 133

IV. APPENDICES 135

APPENDIX A DOCUMENTING THE HAZARD MITIGATION PLANNING PROCESS 137
APPENDIX B_SPECIAL NEEDS SHELTER PACKET 137
APPENDIX C MITIGATION STRATEGY 165
APPENDIX D ANNUAL REPORT OF REPETITIVE LOSS PROPERTIES 203
APPENDIX E MAJOR DISASTER DECLARATIONS 259
APPENDIX F NCDC WEATHER DATA 263
APPENDIX G DOCUMENTATION OF HAZMAT INSPECTION PROGRAM 277
APPENDIX H HAZARD IMPACT AND ESTIMATED LOSSES 288
APPENDIX I TAMPA BAY TIMES ARTICLE ABOUT "SINKHOLE ALLEY" 341
APPENDIX J MONTHLY TORNADO AVERAGE BY REGION AND STATE 384
APPENDIX K RISING STORM SURGE RISK 387
APPENDIX L LMS WORKING GROUP AND MUNICIPAL RESOLUTIONS 389
APPENDIX M COMMUNITY WILDLIFE PROTECTION PLAN 400
APPENDIX N 2014 FLOOD INFORMATION STUDY 465
APPENDIX O COMMUNTIY OUTREACH MEETINGS 675

Executive Summary

The state of Florida experienced numerous 137 Federal Declarations during the 58-year period between 1953 and 2011 (http://www.fema.gov/disasters/grid/state-tribal-government/47, accessed 06/15/2014), the complete list of which is included as Appendix A. Sitting as it does in western Florida, from the Gulf of Mexico to its eastern boundary 50 miles inland, the community experiences coastal flooding and hurricanes; inland riverine overflows and tornadoes; and sinkholes and wildfires countywide. Its notable weather events included Tropical Storm Debby (2012), Hurricane Jeanne (2004), Hurricane Francis (2004), Hurricane Charley (2004), Hurricane Georges (1998), Tropical Storm Josephine (1996), Hurricane Erin (1995), and the March 1993 Storm of the Century. Tropical Storm Debby affected Pasco County in particular, resulting in damage to many structures for which federal grants are still being submitted in an effort to demolish damaged housing from previous flooded areas – a mixture of properties within and outside of designated flood hazard areas (FHAs). Aside from tropical weather events, Pasco County experienced two damaging tornados in 2006 and 2007. Extensive flooding occurred frequently between December 1997 and April 1998, and again in 2003.

While Pasco County is does not face the level of exposure to tropical storms as do Miami-Dade County or the Florida Keys, the state's overall risk level is reflected in the fact that approximately 41% of National Flood Insurance Program (NFIP) policies are written for the State of Florida. In Pasco County, the substantial amount land located within a Special Flood Hazard Area (SPHA) totals 425,730 acres. The most recent period for which National Flood Insurance Program data was secured is that ending July 2005. At that time, FEMA reported in July of 2005 that over 32,000 flood insurance policies were in effect in the County and local municipalities representing $4,574,867,500 in coverage. The policies in force provide protection for 15.1% of the total housing units in Pasco County.

Jay B. Starkey Wilderness Park
New Port Richey, FL

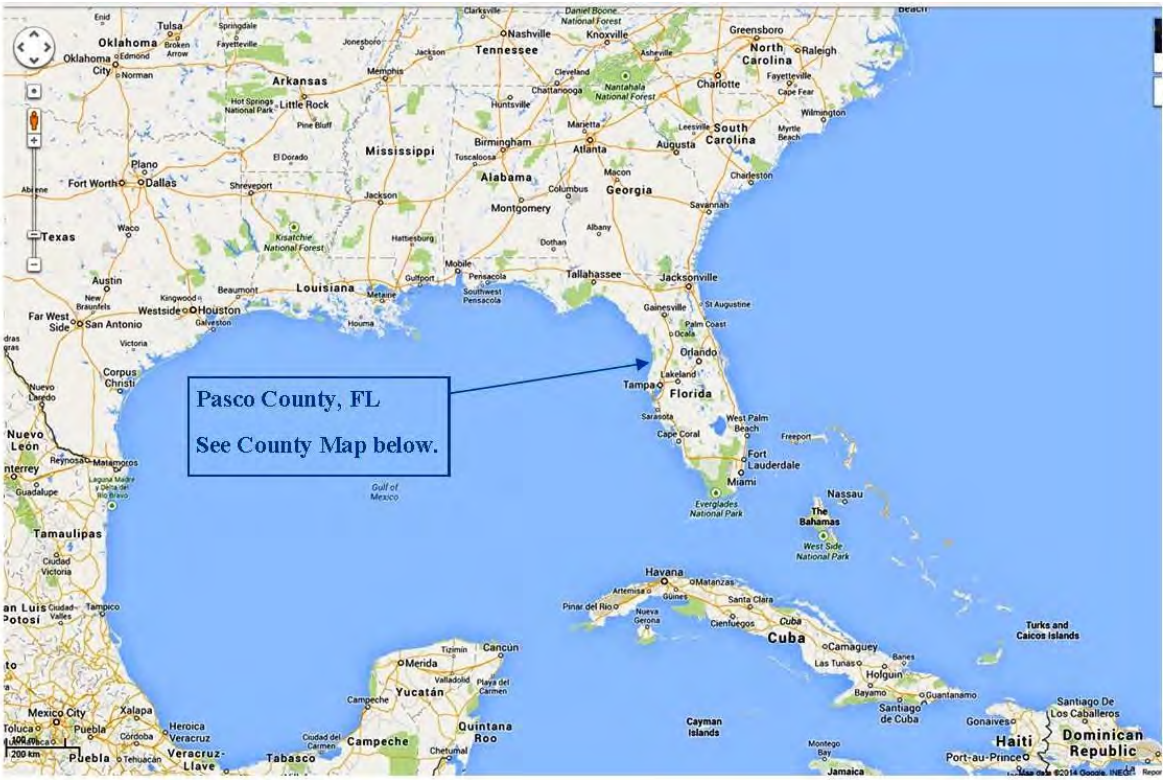
At risk to coastal, riverine and localized flooding, it's not surprising that approximately 41% of the National Flood Insurance Program (NFIP) policies are written for Florida properties. In Pasco County, the amount of property lying within a designated floodplain is substantial. Roughly 425,730 its 555,520 acres lie in a floodplain (http://en.wikipedia.org/wiki/Pasco_County,_Florida#Geography). As of July 2005, FEMA informed County government 32,000+ flood insurance policyholders in the cities, unincorporated county territory, and municipalities were in effect countywide, representing $4,574,867,500 in coverage. The policies in force provide protection for 15.1% of the total housing units in Pasco County.

The county includes six political subdivisions: the cities of Dade City, New Port Richey, Port Richey, San Antonio and Zephyrhills; and the Town of St. Leo, well known for St. Leo Abbey and St. Leo University. Maps shown on the next two pages illustrate the county's location and its west-to-east, widely dispersed political boundaries. Pasco County is located on the west central coast of Florida, bordered on the north by Hernando County, on the east by Polk and Sumter Counties, on the south by

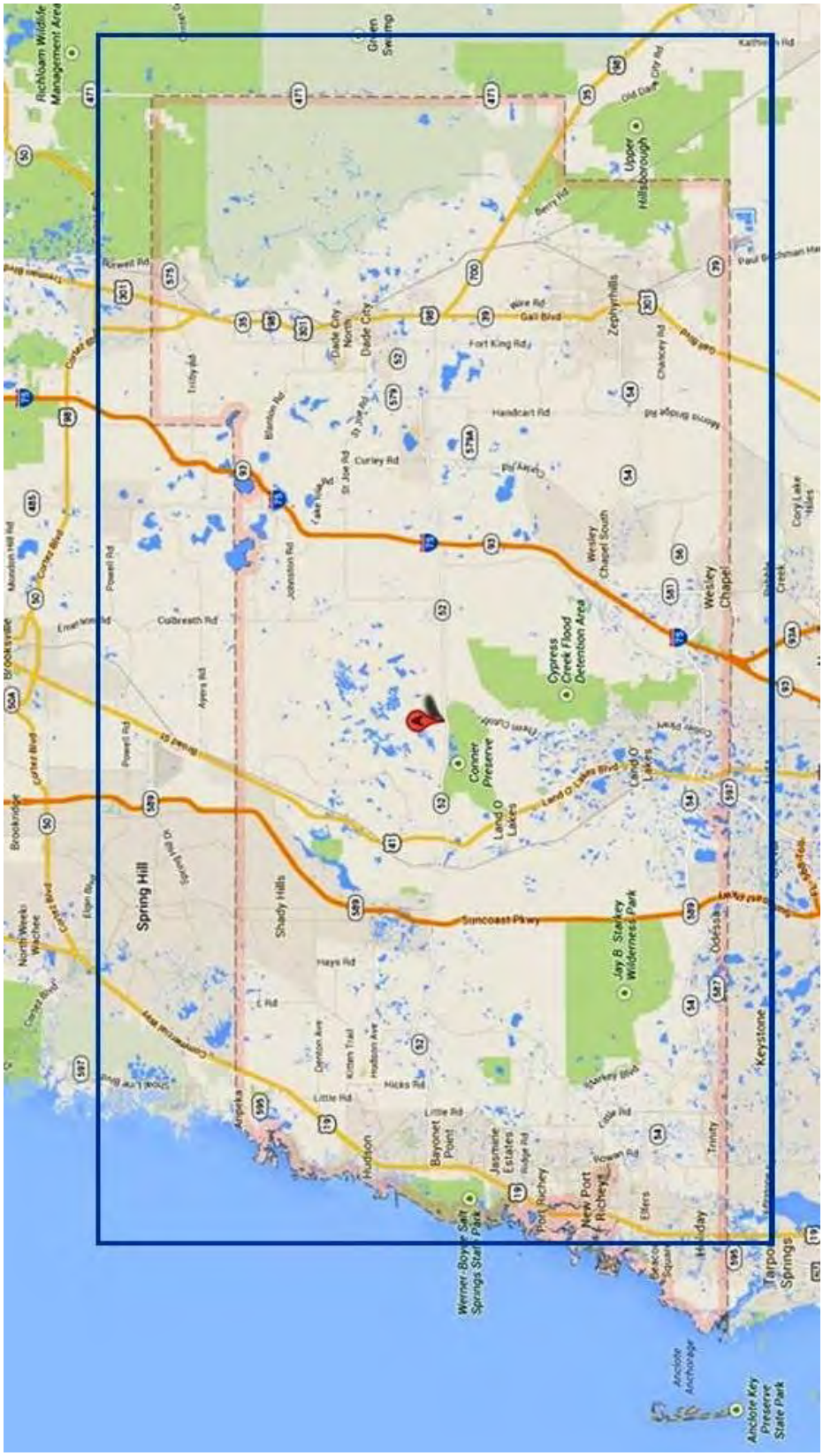
Hillsborough and Pinellas Counties and on the west by the Gulf of Mexico. The land area for Pasco County totals 868 square miles, approximately 745 square miles of land area and 123 square miles of water (inland, coastal, territorial, new reservoirs and other man-made lakes). The region is characterized by discontinuous highlands in the form of ridges separated by valleys. The ridges are above the static level of the water in the aquifer, and the valleys are below it. Broad shallow lakes are common on the valley floors, smaller deep lakes have formed on the ridges. Based on physiography, the county can be divided into five areas: the Coastal Swamps, the Gulf Coastal Lowlands, the Brooksville Ridge, the Tsala Apopka Plain, and the Western Valley.

Given this varied geographic layout, jurisdictional vulnerability to emergencies and disasters is nuanced. In general, all jurisdictions are vulnerable to the effects of such hazards as wind from tropical cyclone events, extreme temperatures, wildfires, severe storms and tornadoes, drought, pandemic disease outbreaks, civil disturbances and terrorism. Coastal storm surge, oil spill, and mass immigration events present as threats to the cities of New Port Richey and Port Richey and to the unincorporated areas of the County, from Hudson to Holiday. Freshwater flood events are most commonly found in the Suncoast Parkway and I-75 communities like Cypress Creek and Land o' Lakes. Hazardous materials spills present a higher vulnerability along major transportation corridors and in industrial settings. Dade City, New Port Richey, Port Richey and the western portions of unincorporated Pasco County have the highest probability of an industrial chemical incident.

Location of Pasco County in Western Florida



Location Pasco County's Incorporated Communities.



The Hazard Analysis section of the Pasco County Comprehensive Emergency Management Plan (CEMP) discusses in detail various types of hazards and their reported events and assigns each jurisdiction with a 'very low'/'low'/'moderate'/'high' probability of occurrence and level of vulnerability. It identifies Pasco County to be highly vulnerable to hurricanes, wildfire, floods and tornadoes/severe weather. It also analyzes the topography, historical development patterns, land use patterns, and growth and development trends that have an impact on the county's vulnerability.

Hazard mitigation is the practice of reducing risks to people and property from disasters. When developing new areas of a community, it is relatively straightforward to avoid hazardous areas if we know their locations. Since few communities are created from scratch, it is also necessary to make existing communities safer and able to more quickly recover after a disaster. This term is referred to as hazard resilience. There are many obstacles to improving resilience. Despite any obstacles, hazard mitigation brings a host of benefits that become apparent after a disaster; the cost of reconstruction is lower and the time it takes to recover is shorter; businesses are closed for a lesser time; public facilities require fewer repairs; and the community is restored to normal more quickly. In the long term, the community should be more resilient to future disasters.

The identification, reduction and management of risks from disasters are becoming increasingly important. If effective action is not taken, human and economic costs of disasters to communities in the State are escalating so rapidly that it may not be possible to ever fully recover. The State of Florida, Department of Emergency Management is intent on finding reasonable approaches to making communities more resistant to disasters and ensuring that any redevelopment in their aftermath continues to lessen future vulnerability to those impacts. One of the most effective ways to do this is to have every local government recognize the importance of hazard mitigation, develop and adopt a Local Mitigation Strategy, and a post-disaster redevelopment plan.

Local government, citizens businesses, industry, educational institutions, and community organizations must strive together to meet mitigation objectives. This Local Mitigation Strategy is a compilation of the efforts of these stakeholders' efforts to identify their mitigation goals and objectives, and develop mitigation initiatives based on the hazards and vulnerability of Pasco County. Implementation of the hazard mitigation objectives can only be accomplished through personal awareness and responsibility, coupled with governmental regulation and enforcement, as well as public awareness and support. The objective of this Local Mitigation Strategy is to make Pasco County a safer, more disaster resistant community.

Glossary of Natural Hazard and Mitigation Terms

The following terms are used in the field of hazard mitigation, or describe community facilities, federal programs, processes, or elements of a hazard mitigation or community recovery program.

Aquifer Recharge Areas: Areas contributing to or providing volumes of water, which make a contribution to the storage or regional flow of an aquifer.

Base Flood Elevation (BFE): The highest elevation, expressed in feet above sea level, of the level of flood waters occurring in the regulatory base flood (i.e. 100-year flood event).

Building Codes: Regulations adopted by local government that establish standards for construction, modification, and repair of buildings and other structures.

Coastal High Hazard Area (CHA): Evacuation zone for a Category 1 hurricane as established in the Tampa Bay Regional Planning Council's Hurricane Evacuation Study.

Community Development Block Grants (CDBG): The objective of the CDBG program is to facilitate the development of viable urban communities by providing decent housing and a suitable living environment, while expanding economic opportunities primarily for persons of low and moderate incomes. Funds must be used so as to give maximum feasible priority to activities which will carry out one of the three broad national objectives of: benefit to low and moderate income families; or aid in the prevention or elimination of slums or blight; or activities designed to meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community.

Community Rating System (CRS): An initiative of the Federal Insurance Administration to encourage increased efforts in the reduction of flood losses, facilitate accurate insurance ratings and promote the awareness of flood insurance.

Comprehensive Emergency Management Plan (CEMP): Required by Florida Statues and addresses the four inter-related phases of emergency management: preparedness, response, recovery and mitigation.

Critical Facilities: A structure from which essential services and functions for victim survival, continuation of public safety actions, and/or disaster recovery are performed or provided.

Cultural Facilities: Establishments such as museums or art galleries of an historic, educational or cultural interest that are not operated commercially.

Development: The carrying out of any building activity or mining operation, the making of any material change in the use or appearance of any structure or land, or the dividing of land into three or more parcels.

Disaster: Any natural, technological, or civil emergency that causes damage of sufficient severity and magnitude to result in a request for a declaration of a state of emergency or disaster by a community

or state to the President of the United States. Disasters are identified by the severity of resulting damage, as follows:

- Minor Disaster: A disaster that is likely to be within the response capabilities of local government and to result in only a minimal need for State or Federal assistance.
- Major Disaster: A disaster that will likely exceed local capabilities and require a broad range of State and Federal assistance.
- Catastrophic Disaster: A disaster that will require massive state and federal assistance, including immediate military involvement.

Drainage: Surface water runoff or the removal of surface water or groundwater from land by drains, grading or other means.

Emergency Management, Preparedness and Assistance (EMPA) Trust Fund Grant Program: Competitive grant for the state or regional agencies, local governments and private non-profit organizations for the implementation of projects that will further state and local emergency management objectives.

Evacuation Routes: Routes designated by Pasco County Office of Emergency Management and the Tampa Bay Regional Planning Council for the movement of persons to safety in the event of a hurricane.

Floodplain Management Plan: The operation of a program containing corrective and preventive measures for reducing flood damage including, but not limited to, flood control projects, floodplain land use regulations, flood proofing of buildings and emergency preparedness plans.

Flood-prone Areas: Areas inundated during a 100-year event or areas identified by the National Flood Insurance Program as an "A Zone" on Flood Insurance Rate Maps or Flood Hazard Boundary Maps.

Goal: Long-term end toward which programs or activities are ultimately directed.

Habitat: The particular natural community or communities that typically support a population of a particular plant or animal species.

Hazardous Material: Any substance or material in a quantity or form which may be harmful to humans, animals, crops, water systems, or other elements of the environment if accidentally released. Hazardous materials include: explosives, gases (compressed, liquefied, or dissolved), flammable and combustible liquids, flammable solids or substances, oxidizing substances, poisonous and infectious substances, radioactive materials and corrosives.

Hazard Mitigation Grant Program (HMGP): The program operates under the authority of Public Law 100-707, the Robert T. Stafford Disaster Relief and Emergency Assistance Act. Section 404 provides to eligible applicants 75/25 (75% federal/25% local) matching funds to implement immediate and long-term hazard mitigation measures. Up 15% of the combined Public Assistance (PA) and Individual Assistance (IA) funding distributed during any single disaster is available to fund hazard

mitigation projects. Section 406 is site-specific mitigation that is written if authorized by the federal/state/local officials and is in accordance with any applicable rules and regulations.

Historic Resources: All areas, districts or sites containing properties listed on the Florida Master Site File, the National Register of Historic Places, or designated by a local government as historically, architecturally, or archaeologically significant.

Hurricane Shelter: A structure which meets the shelter selection guidelines, designated by local officials to be pre-identified for sheltering residents during a hurricane.

Infrastructure: Man-made structures which serve the common needs of the population, such as: sewage disposal systems, potable water systems, potable water wells serving a system, solid waste disposal sites or retention areas, stormwater systems, utilities, piers, docks, wharves, breakwaters, bulkheads, seawalls, bulwarks, revetments, causeways, marinas, navigation channels, bridges and roadways.

Local Mitigation Strategy (LMS): Plan developed to minimize negative impacts (potential loss of life or property damage) from a natural, man-made or technological disaster.

Long-Term Temporary Housing: Tents, mobile homes, suitable rental housing, or other readily fabricated dwellings set-up for residents to live in until they are able to return to their own homes or find new homes. Utilization of this type of housing can last up to six months or longer.

Mitigate: To offset or reduce negative impacts through measures such as, but not limited to:

- Not taking action or parts of certain action.
- Limiting the degree or magnitude of the action.
- Repairing, rehabilitating, or restoring the affected resources.
- Preserving and maintaining operations over time during the life of the action, and
- Replacing or providing substitute resources or environment.

Mobile Home: A structure, transportable in one or more sections, twelve (12) body feet or more in width, and over forty (40) feet in length, which is built upon an integral chassis and designed to be used as a dwelling unit with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained herein. If fabricated after June 15, 1976, each section shall bear a HUD label certifying that it was built in compliance with Federal Manufacturing Home Construction and Safety Standards 42 USC 5401 and 24 CR 3282 and 3283.

Mobile Home Park: A mobile home development consisting of a parcel of land under single ownership which has been, or is proposed to be, planned and improved for the placement of mobile homes for non-transient use.

Mobile Home Space: A plot of land for placement one mobile home within a mobile home park.
National Flood Insurance Program (NFIP): A federal program, which authorizes the sale of federally subsidized flood insurance in communities that agree to adopt and implement flood mitigation

strategies and regulations.

Objective: A specific, measurable, intermediate end that is achievable and marks progress toward a goal.
Open Space: Undeveloped lands suitable for passive recreation or conservation uses.

Post-Disaster Recovery: Long-term activity designed to return life to normal or improved levels following a disaster.

Project Impact: FEMA initiative that challenges communities to take actions that protect families, businesses and property by reducing the effects of natural disasters.

Public Facilities: Systems or facilities falling into categories such as transportation, sewer, solid waste, drainage, potable water, educational, parks and recreation, and public health.

Recreational Vehicle: Vehicle type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle.

Recreational Vehicle (RV) Park: Place set aside and offered by a person, for either direct or indirect remuneration of the owner, leaser, or operator of such place, for the parking, accommodation, or rental of five or more recreational vehicles or tents; and the group camping and similar recreational facilities.

Retrofit: Corrective measures taken on an existing structure to minimize damage caused by water, wind and fire.

Runoff: The part of the rainfall that travels to surface streams and water bodies via surface or subsurface routes.

Storm Surge: The abnormal rise in water level 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.

Stormwater: Flow of water resulting from a rainfall event.

Subdivision: The division of land, lot, tract or parcel into two or more lots, parcels, plats or sites, or other divisions of land for the purpose of sale, lease, offer, or (immediate or future) development. The term also includes the division of residential, commercial, industrial, agricultural, or other land by means such as deed, metes and bounds description, lease, map or plat.

Wetlands: Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils.

List of Resources Consulted

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Bringing the Plan to Life, Implementing the Hazard Mitigation Plan, Federal Emergency Management Agency, FEMA 386-4, August 2003.

City of Dade City Comprehensive Plan, Dade City, FL October 2010.

City of New Port Richey Comprehensive Plan, New Port Richey, FL March 2008.

City of New Port Richey Land Development Code, New Port Richey, FL April 2009.

2025 Town of St. Leo Comprehensive Plan, St. Leo, FL August 2009.

City of San Antonio Book of Codes of Ordinances, San Antonio, FL May 2012.

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City of Zephyrhills Comprehensive Plan, Zephyrhills, FL September 2010.

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Developing the Mitigation Plan: Identifying Mitigation Actions and Implementation Strategies, Federal Emergency Management Agency, FEMA 386-3, April 2003.

Getting Started, Building Support for Mitigation Planning, Federal Emergency Management Agency, FEMA 386-1, September 2002.

Handbook for Hazard Mitigation Projects, Seven M. Seibert, Secretary, Florida Department of Community Affairs, March 2001.

Integrating Manmade Hazards Into Mitigation Planning, Federal Emergency Management Agency, FEMA 386-7, September 2003.

Local Multi-hazard Mitigation Planning Guidance, Federal Emergency Management Agency, October 2011.

Multi-Jurisdictional Mitigation Planning, Federal Emergency Management Agency, FEMA 386-8, August 2006.

Pasco County Comprehensive Emergency Management Plan, Pasco County, FL June 2010.

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Planning for Post-Disaster Recovery and Reconstruction, Federal Emergency Management Agency and American Planning Association, December 1998.

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State of Florida Enhanced Hazard Mitigation Plan, Federal Emergency Management Agency, August 2013

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2014 Employment Estimates by Industry in Pasco County. U.S. Department of Labor. 2013.

Understanding Your Risks, Identifying Hazards and Estimating Losses, Federal Emergency Management Agency, FEMA 386-2, August 2001.

Using Benefit Cost Review in Mitigation Planning, Federal Emergency Management Agency, FEMA 386-5, May 2007.

Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects, Federal Emergency Management Agency, FEMA 386-9, August 2008.

Workbook in Local Mitigation Strategy Development, James F. Murley, Secretary, Florida Department of Community Affairs, June 1997.

I. THE PLANNING PROCESS

Purpose

Hazard mitigation is a sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards. The Local Mitigation Strategy offers innovative approaches for combining funds and coordinating government leadership with the private sector. Through these efforts, it is the only avenue to reduce risks from disasters. Mitigation has become a cornerstone to emergency management. Mitigation activities may be implemented prior to, during or after an incident. However, it has been demonstrated that hazard mitigation is most effective when based on an inclusive, comprehensive, long-term plan that is developed before a disaster occurs. In response to the unacceptable loss of life and property from recent disasters, and the prospect of even greater catastrophic loss in the future, the Local Mitigation Strategy has been developed to provide a conceptual framework to reduce these losses by breaking the cycle of "disaster event-rebuilding-disaster."

Pasco County and its municipalities first developed a unified Local Mitigation Strategy (LMS) in the late 20th century, and the plan was updated in 2009 in response to guidelines set forth in Disaster Mitigation Act of 2000 (DMA 2000). This 2014 update represents unincorporated Pasco County; the five cities of Dade City, New Port Richey, Port Richey, San Antonio, and Zephyrhills; and the Town of St. Leo, in their combined commitment to mutual aid and mitigation planning. Coming together as such, the county is more resilient to the disruption and hardship of disasters, and positions itself to reduce the financial and emotional cost of disaster. The burden of recovery and price of rebuilding post-devastation greater than the cost of planning and preparing before disaster strikes.

The purpose of the Local Mitigation Strategy is to establish an ongoing process that will make hazard mitigation part of the daily function of the entire community. The Local Mitigation Strategy process assessed vulnerabilities of the community to different types of hazards, identified a comprehensive list of plans, programs and projects to decrease the magnitude of those vulnerabilities and prioritized the implementation of these initiatives.

The first step in the planning process was the development of definitive, realistic goals and objectives, and the examination of existing County policies. Pasco County currently has several existing programs and plans related to hazard mitigation and post-disaster redevelopment. These programs and plans include the Comprehensive Emergency Management Plan, Floodplain Management Plan, Local Comprehensive Plans, Local Land Development Regulations, National Flood Insurance Program, Stormwater Management Plan, Building Codes, Zoning Ordinances, establishment of the Environmental Lands Acquisition & Management Program, and the Hurricane Mitigation Ordinance. The review of existing programs and resources provided the foundation necessary to identify additional planning and regulatory requirements.

The Disaster Mitigation Act of 2000 mandated further expansion of the planning process by requiring the Local Mitigation Strategy to contain a description of the planning process. The description includes the sequence of events in the planning process, including who was involved in the process, how the proposed development was actually accomplished, and how the public was involved.

The second step in the process was a review of the hazards Pasco County is vulnerable to and conduct an assessment of the impact on people, property and public infrastructure. Finally, a list of potential mitigation programs and projects based on the community Goals and Objectives and hazard vulnerability was identified.

The tools and techniques for hazard mitigation fall into three broad categories: design and construction guidelines (structural), environmental interventions, and non-structural interventions. Structural mitigation projects identified through the Local Mitigation Strategy include the strengthening of vulnerable structures and public facilities to withstand wind and other forces, elevation of structures to protect them from damage caused by flooding, construction of storm water control facilities, completion of small scale drainage improvements to existing facilities, and participation in the State of Florida's My Safe Florida Homes Grant Program. Environmental intervention refers to actions that reduce the vulnerability of communities by armoring them against the elements. This term commonly evokes images of works of engineering as well as the purchase and/or the protection of environmental sensitive lands and wildlife habitats, beach restoration and planting vegetation on loose hillsides. Non-structural mitigation usually refers to policies for avoiding hazard impacts. These policies may include zoning restrictions, acquiring land in the floodplain, promoting citizen awareness of hazard risk, assessment of shelter mitigation initiatives identified in the Local Mitigation Strategy includes educational programs and development of a Post-Disaster Recovery Ordinance. The implementation of a mitigation program is a key component in the achievement of a "sustainable community", one in which citizens, businesses and institutions are protected from the disruptions and impacts of emergencies and disasters.

The implementation and adoption of the LMS benefits Pasco County and its jurisdictions. First, the implementation of the strategy will decrease the human and economic costs of disasters by addressing community vulnerabilities before a disaster strikes. A long-term plan for reconstruction of impacted areas after a disaster is instrumental in assuring the community's vulnerability to the costs of disaster continues to decrease. Second, it will be a tool for better planning between Pasco County and its municipalities. The strategy identifies the programs and projects needed for more effective hazard mitigation, places priorities on their implementation and has already sought public support for their realization. Third, it will support effective decision making after a disaster, which is critical during this time of chaos and confusion. The strategy provides a predetermined approach to decision making and guides redevelopment that can mitigate the impacts of future disasters.

All of these decisions involve individual consideration, and redevelopment planning will have identified how this can be accomplished and who will be responsible. Fourth, it will speed the post-disaster recovery process. In the aftermath of a disaster, extraordinary pressure will be exerted to return the entire community to normalcy as quickly as possible by restoring utilities, resuming community services, rebuilding housing and restarting the local economy. Finally, the strategy will help secure funding for the community that may not otherwise be available, or may be more time consuming to obtain. Communities who implement disaster-resistant planning techniques and strategies stand to receive more money after a disaster and will be given priority over communities who have not implemented a mitigation strategy. Quick access to state and federal dollars is a significant benefit in the development of the Local Mitigation Strategy. All government entities will formally adopt the LMS update by resolution after FEMA has conditionally approved it.

Public Involvement

An open public involvement process is essential to the development of an effective plan. Coordination and partnership among the governmental units involved in the planning effort is essential in the mitigation planning process. In addition, the planning process relies upon the close involvement of public and private sector organizations. The creation of the organizational structure was a priority in the development of the Local Mitigation Strategy. Additionally, it was imperative that the citizens of Pasco County were informed and educated about the Local Mitigation Strategy. The plan, prepared by the Pasco County Office of Emergency Management, was created with input of all interested individuals and agencies, with the public being given the opportunity to participate and contribute to its finalization.

Hazard Mitigation Planning Committee (HMPC)

The Hazard Mitigation Planning Committee (HMPC) is comprised of at least one voting representative each from the cities of New Port Richey, Port Richey, Zephyrhills, Dade City, St. Leo and San Antonio, as well as two appointed voting representatives from Pasco County. The HMPC is responsible for reviewing and approving the Local Mitigation Strategy (LMS), as well as reviewing and approving any future amendments.

The overall Hazard Mitigation Committee (HMC) includes participants, and other interested p parties (OIP). This group develops the Local Mitigation Strategy (LMS) by establishing a planning schedule, establishing goals and objectives for the LMS, identifying the hazards threatening the Community, estimating the level of risk posed by those hazards, determining the vulnerability to the identified hazards, analyzing current mitigation policies and programs, identifying and justifying proposed mitigation "initiatives", ensuring development of the LMS, and periodically reviewing and updating the LMS as necessary. The HMC will reconvene annually in January to review and amend (if deemed necessary) the LMS, and during the year as needed to address issues in a timely fashion.

Through the involvement of the members of the Participants and Other Interested Parties, the Hazard Mitigation Committee (HMC) coordinated the development of the LMS with neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, businesses, academia and other private and non-private interests. These agencies and groups were invited and encouraged to actively participate in the planning process by becoming Committee Members. The representatives' acceptance of the invitation and agreement to become Committee Members initiated their commitment to the effort. The representatives committed their time and available resources to develop a mitigation strategy that would protect life, property, and the environment as well as contribute to the economic well-being of the County.

Each participating agency and group presented its programs, identified mitigation opportunities and subsequently had an opportunity to comment on preliminary and draft versions of the LMS. The HMC reviewed each agency's function and identified more opportunities, including some applicable to agencies not present. The HMC incorporated appropriate comments and distributed a final copy of the LMS to all participants. At the conclusion of the 2014 update to the LMS and after approval is provided by FEMA, the LMS will, within the next twelve months, be formally executed and adopted by the legislative bodies of Pasco County and its municipalities.

Participants

Participants are defined as those entities that would be eligible applicants for federal assistance in case of a disaster. This includes public agencies and private non-profits assigned responsibilities under the Comprehensive Emergency Management Plan (CEMP). Participants also include Emergency Management staff, and support staff from county and city departments, such as Community Development, Development Review Services, GIS/Survey, Growth Management Zoning, Public Works, Environmental Lands Acquisition and Management Program, and Stormwater Management.

Other Interested Parties (OIP) – Public Participation

In order to ensure a cross-section of the community was involved in the development of the Local Mitigation Strategy (LMS), a designation of "Other Interested Parties" was established. Other Interested Parties (OIP) are citizens, businesses, contiguous counties, regional entities, etc. who may be affected by provisions in the plan. OIP do not have any requirement for participation. OIP were responsible for reviewing the work products developed by the Participants and providing comment to the Hazard Mitigation Committee (HMC). All interested parties were encouraged to review and comment on the plan and submit projects. Some of the agencies, organizations, associations and businesses represented in OIP are the American Red Cross, Greater Dade City Chamber of Commerce, Emergency Management representatives from surrounding counties, and the Pasco County Economic Development Council. Representatives from each of the six City governments were given the opportunity to appoint government and community members. A resolution is being presented to the Pasco County Board of County Commissioners to reconstitute the Mitigation Committee as one committee (currently three working groups) that includes countywide membership more than 50% of which is made up of community representatives affected by the LMS.

Pasco County is dedicated to involving the public directly in the continual reshaping and updating of the LMS. The HMC members are responsible for the annual review and update of the LMS. Although they represent the public to some extent, the public will be able to directly comment on and provide feedback concerning the LMS. Appendices A and O document community attendance at Mitigation Committee meetings.

Upon approval by FEMA of the plan, copies of the LMS Update will be catalogued and kept on hand at County Public Libraries, as well as the New Port Richey Library and published on the Pasco County Office of Emergency Management Website. The existence and location of these copies will be publicized in public notices. The copies in the libraries will have a first page in the binder containing the address and phone number of the County Emergency Management Staff Member(s) responsible for keeping track of public comments on the plan. A notice will also be posted on the County website regarding the public availability of the LMS Update copies in the libraries. A copy of the LMS Update will be placed on the Pasco County website. The site will also contain an e-mail address and phone number to which people can direct their comments or concerns.

A public meeting will be held in conjunction with each annual Hazard Mitigation Planning Committee meeting. This meeting will provide the public a forum for expressing concerns, opinions

and/or ideas about the LMS. The County Emergency Management Director will publicize and host this meeting. Interim meetings taking place between the annual meetings will also be advertised.

Multi-Jurisdictional Participation

In addition to Emergency Management, acting as the representative for Pasco County, the cities of New Port Richey, Port Richey, Zephyrhills, Dade City, San Antonio, St. Leo and existing members of the Local Mitigation Strategy (LMS) Working Group formed the core of the planning effort. No jurisdictions opted out of the planning process during this revision cycle. Each of these groups was charged with maintaining and increasing community participation in the LMS Working Group through contact with community and business organizations throughout the year. In addition, each of the participating members was charged with:

1. Assisting with the development of the plan.
2. Reviewing the initial drafts for accuracy relative to their jurisdictions.
3. Identifying potential mitigation projects for their areas of responsibility.
4. Providing assistance with project prioritization.
5. Reviewing and providing concurrence with the proposed risk analysis.
6. Adoption of the plan for their jurisdiction.

Planning Process

In January 2014 members of the Hazard Mitigation Working Group were informed by Emergency Management of the need to update the plan to meet new mitigation criteria as outlined in the 2013 Florida State Hazard Mitigation Plan. Members of the group were asked to review and update the LMS plan and project list for additions, changes, and determination of progress for projects underway and any completed projects. Simultaneously, Emergency Management Staff were tasked with updating the risk analysis section of the plan. Upon completion of all tasks, Emergency Management conducted a final review of the LMS Plan using the new criteria and verified the components against the required Mitigation Plan Review Checklist. Emergency Management believes that the Pasco County LMS was compliant with the new Federal criteria and submitted the plan to the Florida Division of Emergency Management for review.

Beginning with the first group meeting, Emergency Management initiated the process of the plan update by providing the entire group information related to the purpose of the Local Mitigation Strategy and background on the process of the plan review and update and the requirements for completing the update. In attendance at this meeting were representatives from the six municipalities in Pasco County, the Hazard Mitigation Working Group, local government and many other participants. The importance of the participation from the local jurisdictions, workgroup, and all citizens in the community in the plan review and update was emphasized and all attendees were encouraged to participate in the plan update and also to increase community participation through their contacts.

The entire group of attendees participated in the discussions regarding goal and objective setting and discussed the current strategy goals and objectives. The group was tasked with reviewing the current goals and objectives and providing input for revised or new goals and objectives. The group

submitted recommended goals and objectives, discussions followed until the final goals and objectives and were revised and approved by the entire group.

The group was given a copy of the current Local Mitigation Strategy Projects list and there was discussion regarding the projects on the list and also a review of the grant programs and eligible grant projects were discussed. The group was tasked with updating any projects they had on the list and also providing an application for any new projects. There was discussion from various agencies about the projects they would like to add to the list. Applications were presented to the Hazard Mitigation Working Group for review and inclusion on the project list.

A presentation was given by Emergency Management to the entire group regarding the STAPLEE methodology for project prioritization. The STAPLEE method assesses specific project elements and ranks projects based on a point system according to the element which the group considers to have the most value. The elements considered in the STAPLEE method include Social, Technical, Administrative, Political, Legal, Economic, and Environmental factors. The group decided to accept the STAPLEE method using the standard forms.

Potential mitigation programs and projects were discussed by the group on the basis of the identified community goals and objectives and hazard vulnerability. Existing projects were updated by their respective owners and new projects were identified, presented, and prioritized on the project list during this process.

The group was instructed to look at the approved 2009 Local Mitigation Strategy and specifically read over the Risk Assessments and Vulnerabilities for their review and input. Emergency Management took the lead on compiling the data required for updating the Risk Analysis and assembling that information into a comprehensive format. Of specific interest were comments from subject matter experts in flooding and wildfire as these are common risks in our region.

Each member reviewed the hazards that Pasco County is vulnerable to and the assessment of each hazard as well as the anticipated impact on people, property and any public infrastructure. At the conclusion of the review period, the committee provided additional input into the Risk Assessment which was used to further revise and update the plan. Emergency Management then reviewed existing County and any appropriate City policies, programs, ordinances and plans. Pasco County currently has several existing programs and plans related to hazard mitigation and post-disaster redevelopment. These programs and plans include the Comprehensive Emergency Management Plan, the Floodplain Management Plan, Local Comprehensive Plans, Local Land Development Codes and Regulations, Community Rating System Plan, National Flood Insurance Program, Stormwater Management Plan, Building Codes, Zoning Ordinances and the Environmental Sensitive Lands Program. After the review of these plans, they were discussed with the group. It was agreed that each of the aforementioned plans contained information that is very detailed and relevant to the mitigation efforts that further support the mission of the Local Mitigation Strategy.
In summary, the planning process was inclusive in that all individuals and groups were afforded the opportunity to review, comment and otherwise contribute to all aspects of the plan. At the core of the mitigation planning process was the coordination and partnership among the governmental units involved in the planning process as well as the input from private citizens and businesses.

As a final note, members of the LMS Working Group and OIPs are listed in Appendix L. This appendix also includes the legislative resolutions to be presented to the Pasco County Board of County Commissioners and other governing bodies certifying their approval and acceptance of the LMS update.

The Community Population

The population of Pasco County growing exponentially. In the process, there are changes in its demographic makeup and age distribution. From 2000 to 2010, Pasco County grew by 34.8 percent – the highest in the Tampa Bay Region. It has also grown younger, more mobile and diverse. Changing demographics include a shift from smaller, "empty-nest" families to bigger family households with two or more children. The county is also gradually becoming more ethnically diverse with considerable increases in its Asian, African-American and Hispanic population. Other trends include a spike in its rental population and a dip in its median age from 44.9 in 2000 to 43.6. Although the population is younger overall, 20 percent of residents are over age 65. The last decade saw a rise in per capita income with increased the median earnings for both men and women. But despite an overall improvement in economic health, household cost to income burden, homelessness, aging baby boomer populations are some of the trends that pose critical social and economic challenges for post-disaster redevelopment.

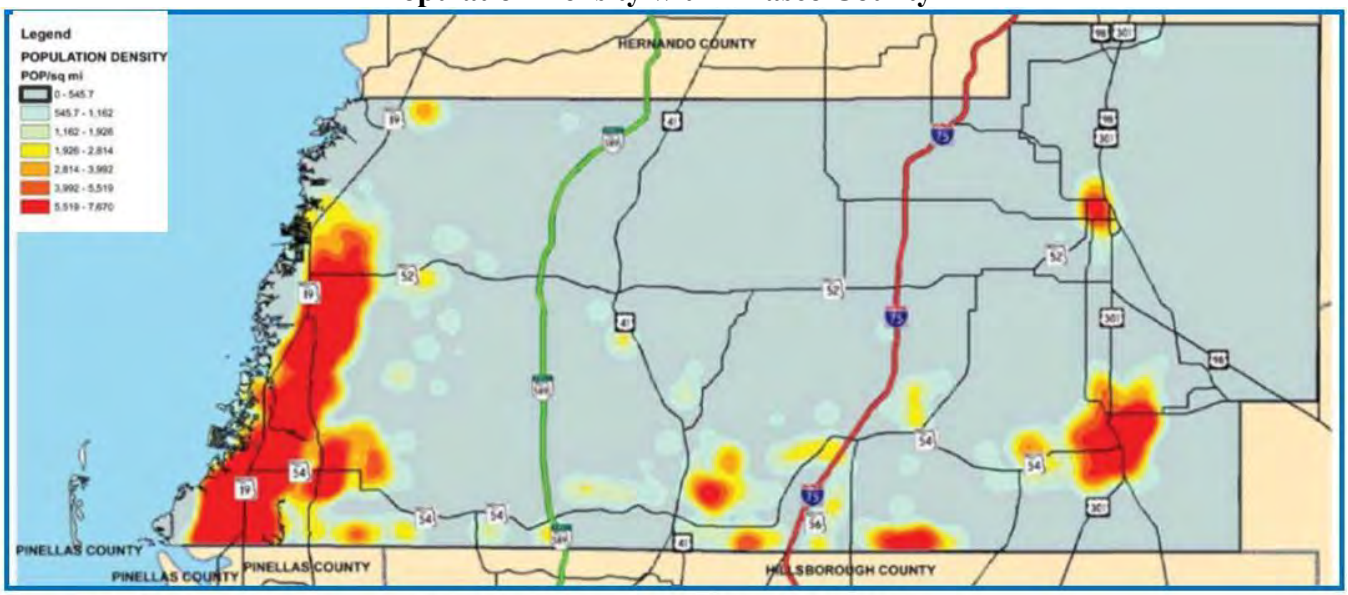
Population Density

With a land area of 745 square miles, Pasco County has the highest percentage of undeveloped land within the Tampa Bay Region. According to the 2010 U.S. Census, Pasco County has a population of 464,697 with the majority of its population (91.4%) still residing in the unincorporated areas (see Table 1). The highest concentration of population exists towards the western coast between US 19 and Little Road with a population density of at least 2000 to 4000 people per square mile. The next indicates the distribution of population density in Pasco County. maps show the population density within the Storm Surge Zones for the County's western coast.

Jurisdiction	Population 2000	Population 2010	% Change 2000 - 2010
City of New Port Richey	16,117	14,911	-7.5
City of Port Richey	3,021	2,671	-11.5
City of Zephyrhills	10,833	13,288	22.7
Dade City	6,188	6,437	4.0
City of San Antonio	655	1,138	73.7
Town of St. Leo	595	1,340	125.2
Total (Incorporated)	37,409 (10.8%)	39,785 (8.6%)	6.35
County Total	344,765	464,697	34.8

Source: U.S. Census Bureau 2000 and 2010 population.

Population Density within Pasco County



Pasco County Population Density Heat Map

Source: 2010 U.S. Census
Pasco County GIS Department

Other areas that have shown significant growth in the recent decade are south central and eastern portions, in close proximity to the I-75 corridor, SR 54 and SR 56 interchanges. Pasco County is expected to maintain these same growth patterns into 2035 and 2050, with the majority of the population still residing along the coastal and inland western areas of the County, and population increasing along the SR 54 and SR 56 corridor.

As Pasco County continues to experience growth pressures, it becomes extremely critical to effectively direct the new growth in a manner that efficiently utilizes and enhances its resources and protects life, property, and the environment from the impacts of disasters.

Vulnerable Populations

Seasonal Population and Migrant Workers

Pasco County also has a regular influx of seasonal population which includes tourists, short-term or long-term visitors, persons who live here part of the year which includes migrant farm workers. The coastal areas (i.e. evacuation zones) have a moderate concentration of tourist during the winter months, and the City of Zephyrhills is notable as a destination for seasonal residents. As per the 2010 U.S. Census, Pasco County has 15,634 vacant units (6.8% of the County's total housing units) under seasonal, recreational, or occasional use.

The Elderly

Almost 20 percent of the County's population is of the age 65 and above (see Table 2), out of which 13 percent is above the age of 85 (12,553). Moreover, the 65 years and above population has increased by 4 percent since 2000. Most of the 65 year and older population is concentrated along the western and south-eastern part of the County. A majority of the minority low-income elderly are concentrated primarily in east Pasco, with highest concentrations in Dade City, Lacoochee, and Tribly.

Age Distribution (2010)

Age	Population	Percentage
Under 5 years	25,664	5.5
5 to 19 years	83,322	17.9
20 to 34 years	71,398	15.3
25 to 64 years	237,275	51.1
65 years and above	96,245	20.7
Total Population	464,697	

Source: U.S. Census 2010 SF1 Table

Disasters usually affect older people more disproportionately. As mentioned in a Center for Disease Control (CDC) report, more than 70 percent of those who died as a result of Hurricane Katrina were elderly. Many of the 200 people who died as a result of the hurricane in Mississippi were also older adults. People above 65 years of age are specifically vulnerable due to both physical and financial reasons. In addition, according to the American Medical Association, there is a greater probability that seniors may be more susceptible to fraud and financial exploitation than other populations during times of crisis.

Children

Children are usually extremely vulnerable due to their high susceptibility to disease and post-disaster contamination. In addition, FEMA states that children are particularly vulnerable to post-disaster stress and anxiety and would require special and prolonged care. Also, having children that need to be cared for affects the ability of parents to resume their jobs/businesses in the recovery phase. Approximately 23.4% of Pasco County's 2010 population is of age 19 years or younger and 5.5% is below 5 years of age.

Disabled Persons

Approximately 16% of the County's population above the age of 5 years has some form of disability. As of January 2014, 2,623 persons were registered with the Pasco County Special Needs Assistance Population Program (SNAPP) for evacuation transportation or shelter assistance. Roughly 78% of the people registered (2,049 people) are either in the hurricane evacuation areas (Level A through E) or in mobile homes elsewhere in the County. Approximately 30% of the persons registered require a level of medical care beyond what is offered in a mass shelter. Pasco County Deaf Service Bureau reports approximately 3,000 hearing impaired citizens residing in the County. Table 3 shows people of different age groups who report having a disability of some type.

Disability Status of the Civilian Non-Institutionalized Population

Population under 5 years With a disability	27,293 163	100% 0.59
Population 5 to 17 years With a disability	71,856 3,375	100% 4.7
Population 18 to 64 years With a disability	273,647 35,782	100% 13
Population 65 years and over With a disability	95,934 31,707	100% 33
Population 5 years and over With a disability	441,437 71,027	100% 16.1

Source: U.S. Census Bureau American Community Survey 2009 Estimates.
Table B18101. Sex by Age by Disability Status.

Notes: The U.S Census Bureau defines disability as a long-lasting sensory, physical, mental, or emotional condition or conditions that make it difficult for a person to do functional or participatory activities such as seeing, hearing, walking, climbing stairs, learning, remembering, concentrating, dressing, bathing, going outside the home, or working at a job.

Special County Outreach: Special Needs Disaster Preparedness Packet

Recognizing the large number of disadvantaged and disabled persons living in the county, the Office of Emergency Management (OEM) prepared a unique outreach packet for those who may require special assistance during a time of disaster, including finding a place to shelter and transportation during evacuation. Appendix B includes a Special Needs Disaster Preparedness Packet that includes a registration form, Special Needs Shelter Fact Sheet, and information the resident would need if driving themselves to the shelter. The database of registered citizens includes roughly 1500 people who have advised the county of their need for disaster support.

Homeowner vs. Rental Population

Understanding the percentage of renters in a community is essential as not owning a home makes this group extremely mobile and most likely to leave the County in the event of a major disaster. According to the 2010 U.S. Census, approximately 23% of the County's population lives in renter occupied housing units.

Loosing population following a catastrophic event can have severe impacts on the County's economy making it increasingly difficult to recover quickly. This is a major concern for Pasco County especially since the County has seen a substantial increase of more than 300% in renter occupied housing units from 2000 to 2010 (see Table 4).

Table 4: Renter vs. Owner Occupied Housing Units

Year	Renter Occupied Housing Units	Owner Occupied Housing Units
2000	26,023	121,543
2010	109,156	146,239

Source: U.S. Census Bureau 2000 and 2010 Population.

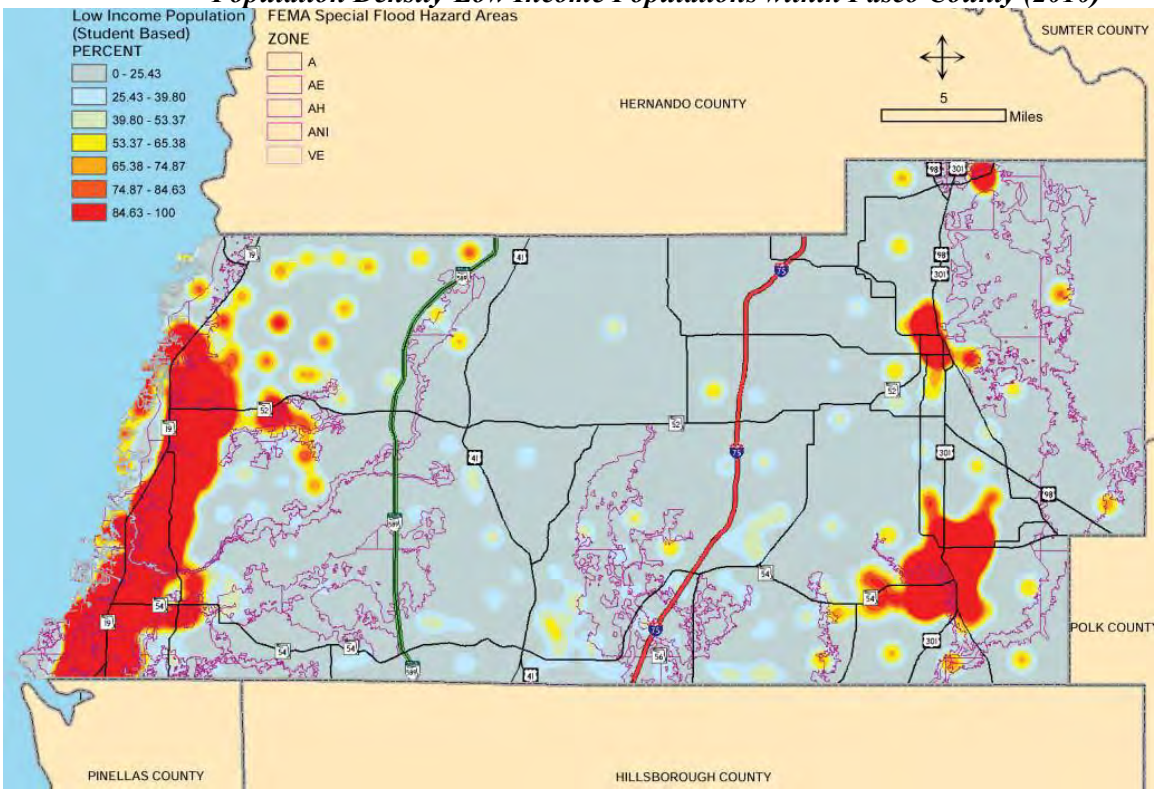
Income

A strong socio-economic status enables communities to quickly absorb and recover from losses whereas a weak one hampers their recovery and return to normalcy. As per the 2010 American Community Survey Estimates approximately 27% of Pasco County households had a household income less than $25,000 and around 7.1 percent had less than $10,000. Moreover, in 2010 approximately 15.1% of the population was below the poverty line in comparison to 11% in 2000.

According to the Pasco County Environmental Scan Report (November 2011), areas surrounding Dade City have the highest concentration of the population at low (<80% Area Median Income) to moderate (<120% Area Median Income) income levels, with many of the areas having 71.1 to 80% low to moderate incomes. However, many areas in west Pasco County, as well as north central Pasco, also have as high as 70% of the population at low to moderate income levels. The concentration of poverty remains higher in the areas that have been historically low-income and with higher concentrations of minority populations. The next map shows low-income population density within the county. ***NOTE:*** This low income distribution map is based on the 2011 student data received from Pasco County Schools and is only indicative of the distribution of low-income population within the County.

Low-income and lack of sufficient affordable housing choices are two factors that can drastically limit our ability to recover quickly from a major disaster. Low-income households are most likely to suffer greater relative losses and face difficulty in finding sufficient shelter options after a disaster as the available housing stock becomes limited, uninhabitable or too costly to afford.

Population Density-Low Income Populations within Pasco County (2010)



Economic Vulnerability

Small businesses are at greater risk of not recovering from a major disaster. This is a key concern for Pasco County as a majority of the County's establishments are small businesses. The County Business Patterns show that 96.5% of establishments within Pasco County employ less than 50 employees and 99.9% employ less than 500. The ones that employ 500 or more are mostly involved in Educational Services, Health and Social Assistance and Accommodation and Food Services. The following table indicates the employment by industry type for region.

Employment Estimates by Type of Industry

Employment Sector (NAICS code description)	Total Establishments	Employees	Percentage of Employees
Mining, quarrying, and oil and gas extraction	7	20-99	
Industries not classified	9	0-19	
Management of companies and enterprises	12	185	0.2
Forestry, fishing, hunting, and Agriculture support	21	63	0.1
Utilities	22	791	1.0
Educational Services	81	2297	3.0
Information	89	849	1.1
Arts, Entertainment, and Recreation	111	1505	1.9
Transportation and Warehousing	189	791	1.0
Manufacturing	195	2737	3.5
Wholesale Trade	342	1771	2.3
Real Estate and Rental and Leasing	421	1252	1.6
Finance and Insurance	506	2502	3.2
Accommodation and Food Services	538	10074	13.1
Administrative and Support and Waste Management and Remediation Services	576	4819	6.2
Other Services (except public administration)	810	4265	5.5
Professional, Scientific, and Technical Services	874	3157	4.1
Construction	1027	5236	6.8
Health Care and Social Assistance	1051	15762	20.4
Retail Trade	1356	19055	24.7
Total for all sectors	8237	77194	

Source: U.S. Census Bureau, 2009 County Business Patterns (NAICS)

Major Employers

According to the Pasco-Hernando Workforce Board, Pasco County has approximately 23 big companies that employ more than 500 people. Some of these major employers include the Pasco County School District, Pasco County Government, State of Florida, Pasco County Sheriff, Regional Medical Center – Bayonet Point, HCA Health Services of Florida, Community Hospital of New Port Richey, Saddlebrook Resort, Florida Hospital Zephyrhills, and Pasco Hernando State College. Table 6 lists down the major private sector employers within the County.

Major Private Sector Employers

Employer	# Employees	Employer	# Employees
Pall Aeropower Corporation	579	B.E.T.E.R Mix, Inc.	119
Zephyrhills Spring Water Co.	325	Earth Tech, Inc.	106
VLOC, subsidiary of IIOVI, Inc.	200	American Food Distributors, LLC	104
Zephy Egg LLC	175	Great Bay Distributors	104
Preferred Materials, Inc.	125	APAC – Southeast, Inc.	101

Source: Pasco County Profile, Enterprise Florida

Identifying employers located within high hazard areas and assessing the number of people employed by each will indicate how susceptible Pasco County's economy is to a large-scale disaster. To understand our economic vulnerability, employer distribution within the County was studied using data from the Pasco-Hernando Workforce Board. The employers' addresses were geocoded using GIS and hazard layers (flood zones and storm surge zones) were overlaid on top to ascertain the number of employers in each of the zones. The analysis has determined that approximately 41% of our employers (that employ 5 or more employees) are located within the flood zones – A, AE and VE while 42% are located within the Storm Surge zones – Category 1 to 5. Table 7 lists the number of employers by flood and storm surge zone.

Employers within Storm Surge Zones and Flood Zones

Storm Surge/Flood Zone	# Employers
Flood Zone A	325
Flood Zone AE	815
Flood Zone AH	3
Flood Zone ANI	5
Flood Zone VE	155
Category 1 Storm Surge Zone	453
Category 2 Storm Surge Zone	282
Category 3 Storm Surge Zone	266
Category 4 Storm Surge Zone	213
Category 5 Storm Surge Zone	156

Source: *Pasco-Hernando Workforce Board Employer Data (2009).*
Note: *The table above only includes employers within Pasco County with 5+ employees.*

Understanding the distribution of employees is equally important as identifying the distribution of employers within the County. Post-disaster, decisions related to distribution of employment assistance, provision of public transportation and other supporting services will have to take these factors into consideration. The next table shows the distribution of population and employees within the County's transportation evacuation zones.

Population and Employees Distribution in Transportation Evacuation Zones.

Name	Population	Homes	Mobile homes	# Employees
Hudson Beach (North) Aripeka	6,560	5,608	952	680
Heritage Pines-Hudson (East)	13,772	10,302	3,470	1,098
Shady Hills	18,315	12,725	5,590	546
Greenfield-Fivay	4,719	3,644	1,075	284
Pasco-Darby	3,606	3,016	590	361
Blanton-Tribly	6,425	5,391	1,034	566
San Antonio-St. Leo	4,452	3,967	485	1,331
Dade City	14,521	13,112	1,409	4,501
Lacoochee-Green Swamp	3,953	3,332	621	298
Hudson Beach (South)-Salt Springs	7,922	6,180	1,742	2,293
Hudson	23,343	18,869	4,474	5,080
Bayonet Point-Jasmine Estates	34,623	34,157	466	4,147
Moon Lake-Hidden Lake	26,996	21,845	5,151	2,969
Connerton Preserve	5,985	5,910	75	483
New Port Richey	27,971	25,425	2,546	8,021
New Port Richey (East)	11,021	9,429	1,592	1,999
Holiday (West)-Beacon Square	30,212	28,504	1,708	2,293
Elfers	11,696	11,398	298	2,957
Holiday (East)	33,329	32,226	1,103	4,703
Land O' Lakes	48,663	46,310	2,353	15,166
Wesley Chapel	7,957	74,002	5,070	7,957
Pasadena Hills	14,728	9,826	4,902	601
Zephyrhills	32,230	22,606	9,624	7,188
Crystal Springs	28,852	17,401	11,451	939

Source: Tampa Bay Regional Evacuation Study – Estimates of 2010 population and housing, for evacuation transportation planning, modeling, and shelter analysis.

Repetitive Loss Properties and Development of Repetitive Loss Areas (RL)

Pasco County received its repetitive loss (RL) property information from FEMA, who identified 496 repetitive loss parcels. Staff reviewed these properties and noted those already mitigated or not located within the jurisdiction of unincorporated areas. It was then determined that a total of 461 properties need to be counted for the Community Rating System (CRS) purposes. These were located on property appraiser parcel maps and repetitive loss areas were defined through the use of contour information from the Southwest Florida Water Management District topographic maps and available flood elevation information. After evaluating RL locations, map information, and site inspections, it was determined that 16 RL areas existed in Pasco County. Other RL properties were isolated, identified by the drainage basin in which they are located. By using the Geographical Information System (GIS), an inventory was conducted of each repetitive loss area. The total number of underdeveloped and developed properties was identified along with the year in which the structures were built to determine how many structures were pre-Flood Insurance Rate Map (FIRM) (built prior to Pasco County joining the National Flood Insurance Program, or NFIP) and post-FIRM (built after Pasco County joined NFIP). These were then further subdivided into type of structure based on the use codes assigned to structures by the Appraiser's Office. Identifying RL areas and using this information for long-term redevelopment decision making is essential to build resiliency. Appendix D includes extensive information about RL properties and the county's CRS program.

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II. RISK ASSESSMENT

Introduction

This section of the LMS includes the critical element in the Local Mitigation Strategy that is the risk assessment. The risk assessment is a comprehensive and accurate assessment of the natural hazards that could potentially affect Pasco County and its widely dispersed communities. Other than the six municipalities, the county geography is largely rural and unincorporated. The communities include the six municipalities (New Port Richey, Port Richey, San Antonio, Hudson, Dade City and Zephyrhills), and the rest of the land falls into unincorporated Pasco County. To the degree possible, the working group tried to identify specific communities affected by a hazard. In some instances, data is only available on a countywide basis, so the hazard will be discussed as affecting the entire county. The hazard analysis and vulnerability assessment process includes, among other facets, identifying the hazards with the highest probability of affecting the county; and which populations or communities are most vulnerable to each hazard. This information forms the basis on which the mitigation strategy is developed.

During the spring of 2009, Pasco County's Natural Hazards Analysis was updated to comply with the contemporary FEMA standards for LMS five-year updates, with this current document serving as a second update. For certain hazards an analysis provided by the Florida Division of Emergency Management (FDEM), and through a partnership with the University of Central Florida formed at the time of the 2009 update, allowed Pasco County to develop a higher level of detail related to hazard vulnerability. This document, included here as Appendix H, continues to be the best available data despite the fact that it is now more than five years old, includes hazards not included in the LMS, and does not include other hazards that are included in the LMS. As part of the 2014 revision, the Committee reconsidered the overall hazards with an eye to focusing on the ones most likely to cause property damage or loss of life. In addition to reviewing the list of hazards included in the 2009 plan, the working group reviewed the State of Florida's recently updated (2014) mitigation strategy, and these data sources were used to determine which hazards possess the greatest threat to Pasco County.

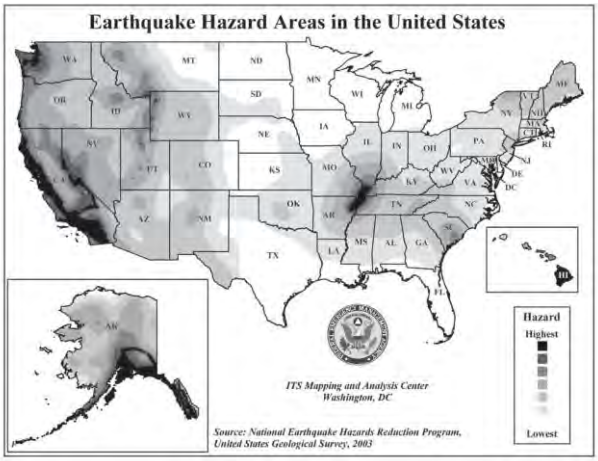
- Locally documented historical data for major events.
- FEMA declarations in which Pasco County was included.
- Conversations with subject matter experts, such as the Florida Division of Forestry.
- The National Weather Service NCDC data compilations.
- Local strategic planning, emergency operations, comprehensive plans, transportation and stormwater management documents; conversations with agency or departments plan "owners. "
- Conversations discussions with local emergency managers.
- Internet research that included using the Hazard Analysis Toolbox provided by the Mitigation Bureau of FDEM.
- Hazard Impact and Loss Estimation (University of Central Florida/Florida Division of Emergency Management), produced with the software called The Arbiter of Storms (TAOS).

A significant number of natural, man-made and technological hazards have been identified by FEMA Region IV for analysis and possible inclusion in our LMS. Due to the low probability associated with a number of these, Pasco County's LMS Working Group elected to discuss these minimally in this section. For hazards which posed a credible risk to Pasco County and/or any of its six municipalities, discussion includes history/background, location, vulnerability, extent (impacts) and probability,

Natural Hazard Analysis*: Low Probability Hazards*

The following are considered hazard for which there is extremely low probability of occurrence based on Pasco County's climate, geography, and hazard historical occurrence. They are being mentioned because they were covered in slightly more detail in the 2009 LMS. All of the images were taken from the FEMA publication *Are You Ready? An In-Depth Guide to Citizen Preparedness*.

Avalanche An avalanche is a large mass of snow, ice, etc., detached from a mountain slope and sliding or falling suddenly downward. Given its location in the semi-tropical latitudes, Pasco County does not have the environmental conditions required for such an event. Earthquakes: The U.S. Geological Survey, National Seismic Mapping Project (website), locates Pasco County in the 1% (peak acceleration) area. Because of this very low rating the Florida Division of Emergency Management does not require local Comprehensive Emergency Management Plans to address earthquakes as a hazard that is likely to affect the community.



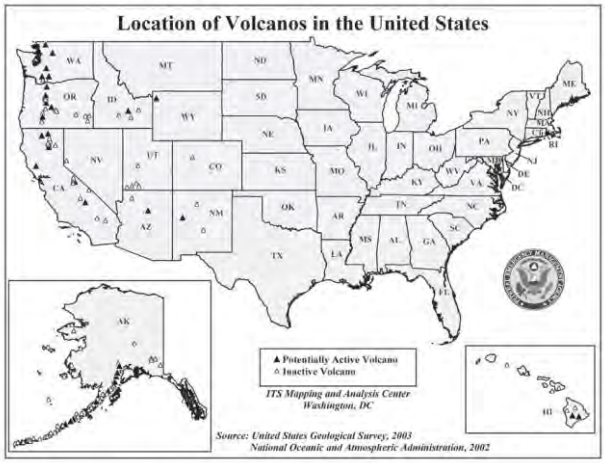


Photo credits: Are You Ready? A Citizen's Guide to Community Preparedness, *FEMA, August 1, 2004.*

Dam/Levee Failure There are no significant dams or levees in or near Pasco County that can fail and create a flood hazard. This is shown in the image above showing national earthquake hazard areas.

Volcanoes There are no active or inactive volcanoes in the State of Florida. The map above shows that New Mexico is the easternmost state with potential volcano exposure.

Landslides A landslide is the downward movement of earth on a slope. According to the USGS website, Pasco County has less than 1.5% susceptibility for a landslide incident. There is no data to support that a landslide has occurred in Pasco County.

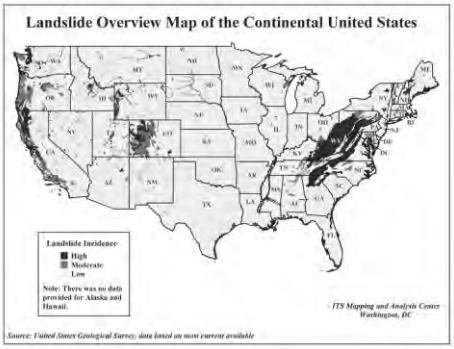


Photo credit: Are You Ready? A Citizen's Guide to Community Preparedness, *FEMA, August 1, 2004.*

Natural Hazard Analysis*: Moderate-to High Probability Hazards*

The following hazards were identified as having previously affected Pasco County or as having the potential to do so in the future, and therefore further analysis has been conducted. For each hazard, the most significant information related to vulnerability and impact is encapsulated at the end of this section in a summary table. As aforementioned, more detailed information from the previously mentioned TAOS study at UCF, is shown in the study results included as **Appendix H**.

Discussion of each hazard's historical occurrence is covered not only in the text within this section, but in the following appendices:

Appendix F:	NCDC Weather Data 1974-2014 (first 500 events)
Appendix G:	Documentation of HazMat Inspection Program
Appendix H:	Local Enhanced Plan and Mitigation Integration Summary
Appendix I:	*Tampa Bay Times* Article about "Sinkhole Alley"
Appendix J:	Monthly Tornado Average by State and Region
Appendix K:	Rising Storm Surge Risk to Atlantic and Gulf Properties
Appendix M:	Community Wildfire Protection Plan (CWPP)
Appendix N:	2014 Flood Information Study

The reader is hereby directed to include a review of each appendix listed above in connection with its associated hazard.

Hurricanes and Coastal/Severe Storms

Description

A hurricane is a severe tropical storm that forms in the southern Atlantic Ocean, Caribbean Sea, or the Gulf of Mexico. Hurricanes develop in warm, tropical waters, where moisture is plentiful, and winds are light. A hurricane can produce violent winds, incredible waves, torrential rains and floods. Hurricanes are categorized by the Saffir-Simpson hurricane scale: a violent storm becomes a hurricane as winds exceed 64 knots (approximately 75 miles per hour). Because they are weather driven, hurricanes have a clear seasonal aspect and provide predictable lead-time for preparation. They begin over the oceans and usually make landfall before dissipating their energy. The advances of meteorological science in identifying and tracking tropical storms is the primary reason for the decline in their death toll in spite of skyrocketing coastal populations. Hurricanes pose a significant threat to Florida, especially for coastal residents. Hurricanes are unstable and unreliable, but their brief life onshore can wreak extensive damage.

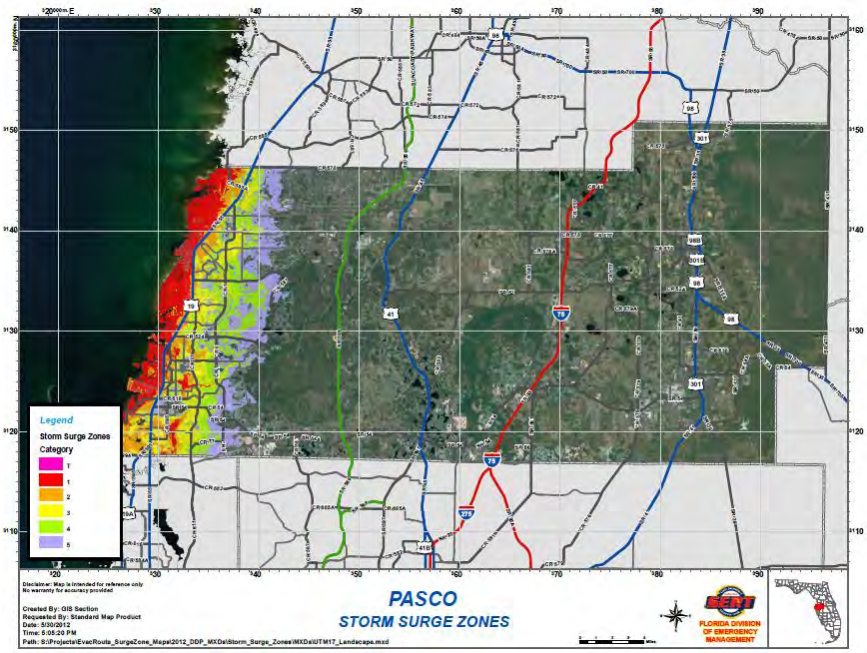
The Saffir-Simpson Hurricane Scale

Category	Sustained Wind Speed	Storm Surge	Damage
1	74-95 mph	4-5 feet	Minor
2	96-110 mph	6-8 feet	Moderate
3	111-129 mph	9-12 feet	Major
4	130-156 mph	13-18 feet	Extensive
5	>156 mph	>18 feet	Catastrophic

Severe storms (and tornadoes, discussed later) disrupt daily lives more than any other form of weather. The National Weather Service defines a severe thunderstorm as one which produces winds of 58 mph or greater, ¾ inch hail or larger or tornadoes. Because Pasco County borders the Gulf of Mexico, its westernmost severe storms are also coastal storms. A coastal storm has several factors that are common to all storms such as strong winds, large waves and storm surge. The sudden formation, the impact area that is primarily along the coast and the type of damage would be considered factors unique to a coastal storm. Other severe coastal storms produce effects that are lesser, but similar. Hurricanes developing in the Pacific Ocean are called cyclones or typhoons. These weather events have little chance of effecting Pasco County unless they are affected by steering currents that force the storm into the Gulf of Mexico as they travel up the Mexican Baja Peninsula.

Pasco County has experienced minor to severe effects from hurricanes, tropical storms and other coastal storms. The area west of US 19 is designated as a wind-borne debris region and is subject to wind gusts from hurricanes as well as storm surges. The remainder of the western half of the county is a 120 mph basic wind speed zone. The eastern half of the county is in the 110 mph basic wind speed zone. The next map (p. 38) shows that all but three Florida counties rank hurricanes as moderate- to high- probability events.

Pasco County Storm Surge Zones



The previous map shows the degree to which storm surge affects residents in western Pasco County. A hurricane can combine storm surge, powerful winds, tornados, and torrential rains into a devastating combination. Most of the hurricane's destructive work is done by the general rise in the height of the sea called storm surge. The storm surge is by far the most dangerous of the four hazards, historically causing nine out of ten hurricane-related deaths. This surge, when coupled with the breaking waves, will cause great destruction. The more intense the hurricane, and the closer to perpendicular its track in relation to the coastline, the higher the storm surge and resulting destruction will be. Also, impacting on the height of storm surge is the depth of the water along the threatened coastline. Due to the high shoaling factor (shallow water and gradual slope of the Gulf bottom) off the central West Coast of Florida, Pasco County will receive higher surges than those indicated in the Saffir/Simpson Hurricane Scale. High winds will also render large segments of the population vulnerable to the passing hurricane.

As winds increase, pressure against objects is added at a disproportionate rate. Tall structures, like radio towers, can be destroyed by gusty hurricane force winds and some structures, such as mobile homes are particularly at risk. Pasco County has over 50,000 mobile homes registered in the County and all mobile home residents are required to evacuate in the event of a hurricane, irrespective of their location in the County. *Tornados* can also be produced by the hurricane's destructive power. Although they are not the most violent form of these whirlwinds, they add to the toll exacted by the hurricane. Finally, *heavy rains and flooding* can prove quite destructive.

Hurricanes can bring six to twelve inches of rainfall to the area it crosses, and some have brought much more. Rainfall, in itself, will not normally require the emergency evacuation of large numbers of residents during the passage of a hurricane as does storm surge and flooding. The ensuing rain, however, has the potential to slow traffic, overtax the stormwater drainage system, and hamper evacuation routes that could severely reduce the number of hours available for the overall evacuation. Flooding is a major threat to areas well inland of the hurricane impact that requires the evacuation of coastal residents and mobile home residents. The potential wind and flood damage from a Category 5 hurricane could result in over $30 billion in damage to homes, businesses, employers and public service providers and displace almost half of the residents in Pasco County. The permanent population living within evacuation levels A-E totals 172,356 or 50% of the population, excluding the mobile home population elsewhere in the County.

The map below shows the degree to which damage from wind-borne debris may accompany hurricanes or severe storms affecting the county. Note that the portion of county identified as being potentially exposed to severe winds was expanded in the 2010 forecast, shown by the green striped region on the map.

Florida Wind-Borne Debris Map

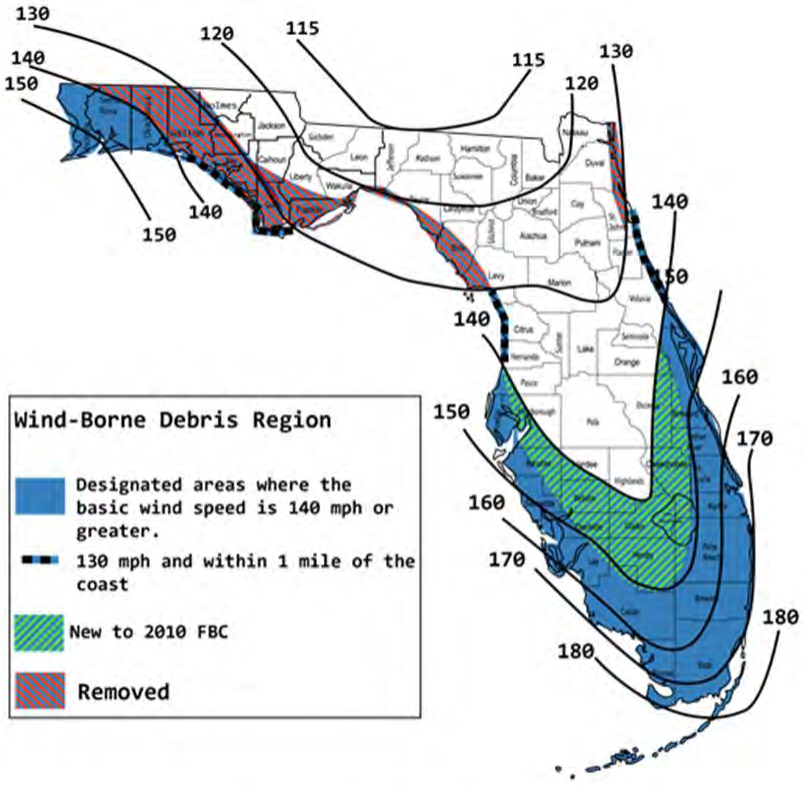


Figure 1609A Wind-Borne Debris Region, Category II and III Buildings and Structures except health care facilities

Historical Occurrence

According to the NOAA coastal services center web site, no hurricanes have made landfall in Pasco County. Since 1950, thirty hurricanes/tropical storms have passed within 50 miles of Pasco County. Of those thirty, only seven have had tracks that crossed over Pasco County and of those seven, only two were hurricanes.

In 2004, three back to back hurricanes skirted Pasco County. While each event was classified as a hurricane, Pasco County's impact was limited to tropical storm force winds. Nevertheless, the County's documented approximately $5 million in damages, of which $3.5 million was directly related to debris collection and disposal.

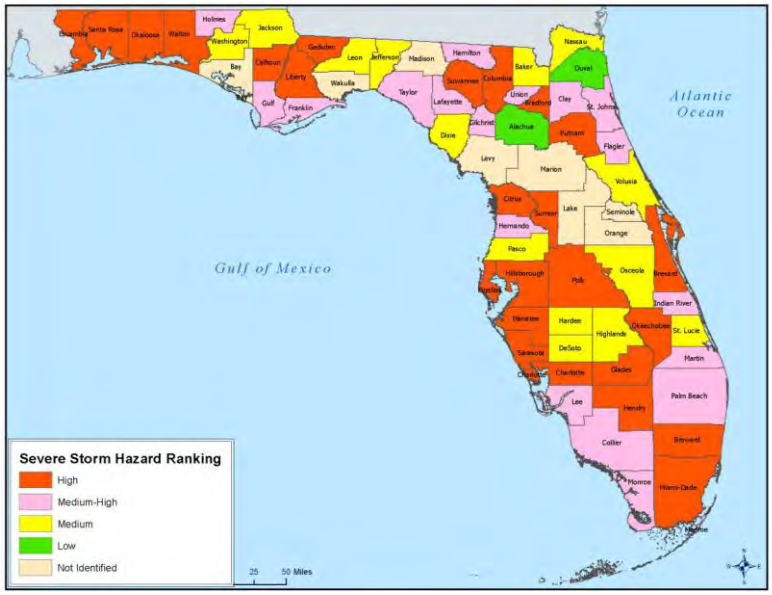
Pasco County has been impacted by eleven hurricanes and tropical storms over the last sixteen years: Hurricane Elena, Hurricane Erin, Hurricane Opal, Tropical Storm Josephine, Hurricane Georges, Tropical Storm Gabrielle, Hurricane Charley, Hurricane Frances, Hurricane Jeanne, Tropical Storm Alberto and Tropical Storm Fay. The impact of hurricanes/tropical storms has typically been to the coastal portions of the county but has had minimal impact on the coastal municipalities. Tropical Storm Josephine was the exception, as the city of Port Richey sustained significant flooding due to storm surge. The damage as a result of Elena, Erin, Georges, Charley, Frances, and Jeanne was mostly due to power outages, fallen trees, debris, and minor localized flooding from rainfall. The eastern portion of the county, including Zephyrhills, Dade City, San Antonio and St. Leo, sustained

far less impact from hurricanes/tropical storms. Pasco County was also impacted in 1993 by the March 13th No Name Storm which caused significant damage to coastal Pasco County, including the municipalities of New Port Richey and Port Richey. Several thousand homes and businesses were inundated with between two and five feet of water. However, according to the Pasco County Incident Database and the historical records of the Office of Emergency Management, the threat of a hurricane impacting the area occurs annually. The economic impact associated with hurricanes (both emergency response costs associated with warnings and damage from impact) has totaled millions of dollars.

Storms traveling within 50 miles of Pasco County since 1950 are shown in the table below.

Year	Month	Day	Storm Name	Wind Speed (knots)	Category
1950	10	18	King	65	H1
1950	9	5	Easy	100	H3
1959	6	18	Not Named	30	TD
1960	9	11	Donna	105	H3
1960	7	29	Brenda	30	TD
1960	9	25	Florence	25	TD
1964	6	6	Not Named	30	TD
1968	10	19	Gladys	70	H1
1969	10	4	Jenny	25	TD
1970	5	25	Alma	25	TD
1974	6	25	Subtrop 1	45	SS
1976	9	13	Subtrop 3	15	SD
1982	6	18	Subtrop 1	30	SD
1984	9	28	Isidore	45	TS
1988	11	23	Keith	55	TS
1990	10	11	Marco	40	TS
1991	7	1	Ana	20	L
1995	8	2	Erin	50	TS
1995	8	24	Jerry	35	TS
2000	9	17	Gordon	65	H1
2001	9	14	Gabrielle	45	TS
2002	9	5	Edouard	20	TD
2003	9	6	Henri	30	TD
2004	8	14	Charley	75	H1
2004	9	6	Frances	55	TS
2004	9	26	Jeanne	55	TS
2005	10	24	Dennis		TS
2006	6	13	Alberto	37	TS
2007	6	2	Barry	40	TS
2008	8	22	Fay	36	TS
2012	6	24	Debby		TS

Florida Severe Storm Hazard Ranking



The NCDC table below shows the regularity with which severe storms affect Pasco County.

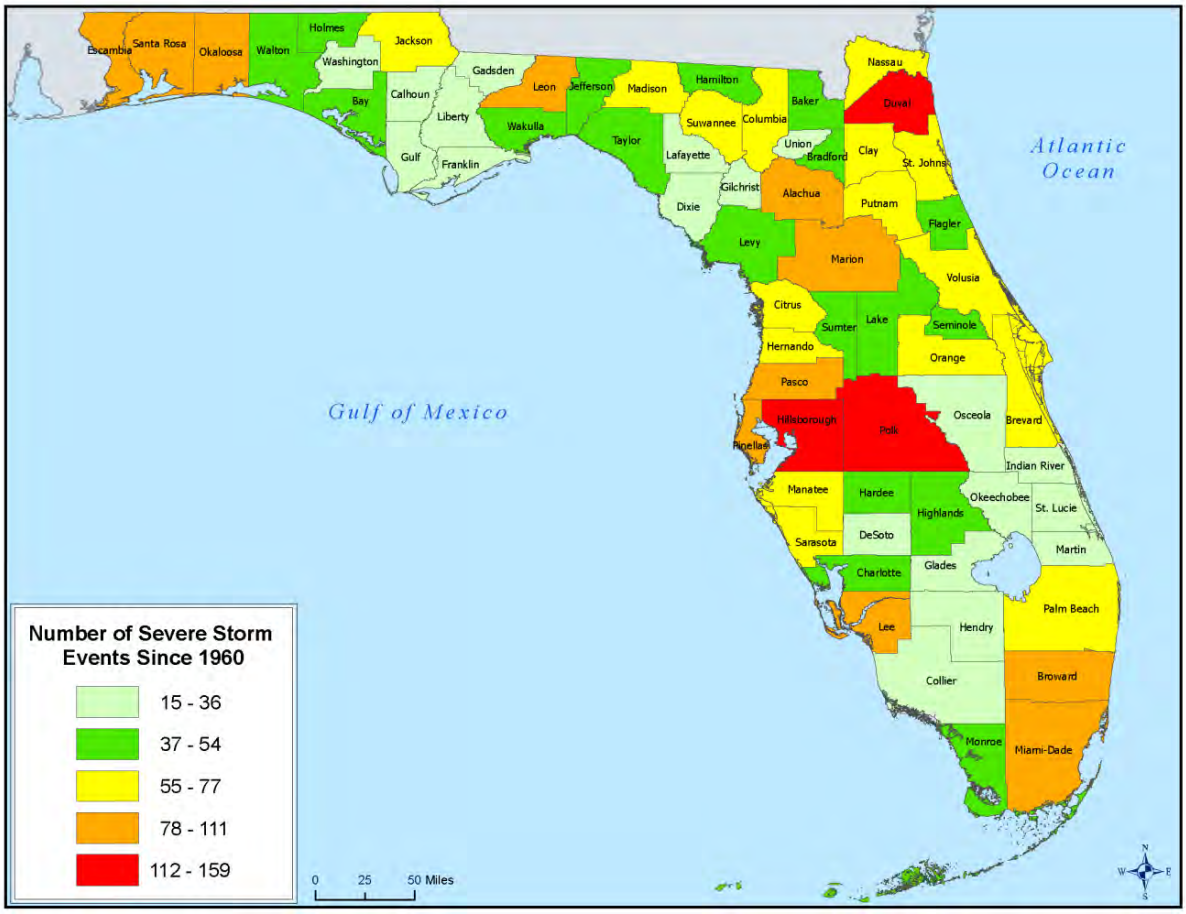
Location	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
Totals:				0	1	435.00K	0.00K
LAND O LAKES	03/27/2003	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ST LEO	05/14/2003	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
NEW PORT RICHEY	06/23/2003	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ZEPHYRHILLS	07/08/2003	Thunderstorm Wind	58 kts. EG	0	0	40.00K	0.00K
ZEPHYRHILLS	06/08/2004	Thunderstorm Wind	50 kts. EG	0	0	50.00K	0.00K
LAND O LAKES	08/03/2006	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SAN ANTONIO	12/25/2006	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
DADE CITY	04/11/2007	Thunderstorm Wind	55 kts. EG	0	1	25.00K	0.00K
DADE CITY	04/15/2007	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LAND O LAKES	06/08/2007	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
DADE CITY	06/09/2007	Thunderstorm	50 kts. EG	0	0	0.00K	0.00K

		Wind					
ARIPEKA	08/14/2007	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
ODESSA	09/20/2007	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
NEW PORT RICHEY	12/16/2007	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
PORT RICHEY	01/19/2008	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
PORT RICHEY	01/19/2008	Thunderstorm Wind	63 kts. EG	0	0	5.00K	0.00K
ELFERS	01/19/2008	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K
PORT RICHEY	01/19/2008	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
ARIPEKA	02/26/2008	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ZEPHYRHILLS	06/30/2008	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ZEPHYRHILLS	04/14/2009	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ZEPHYRHILLS	05/28/2009	Thunderstorm Wind	43 kts. EG	0	0	7.00K	0.00K
HUDSON	12/02/2009	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
GULF HARBORS	03/02/2010	Thunderstorm Wind	43 kts. EG	0	0	5.00K	0.00K
JASMINE ESTATES	03/02/2010	Thunderstorm Wind	43 kts. EG	0	0	5.00K	0.00K
ZEPHYRHILLS	03/11/2010	Thunderstorm Wind	52 kts. EG	0	0	80.00K	0.00K
ARIPEKA COMPS SITE	04/25/2010	Thunderstorm Wind	52 kts. EG	0	0	20.00K	0.00K
PORT RICHEY COMPS SITE	04/25/2010	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
WORTHINGTON GARDENS	05/16/2010	Thunderstorm Wind	48 kts. EG	0	0	10.00K	0.00K
CRYSTAL SPGS	06/03/2010	Thunderstorm Wind	52 kts. EG	0	0	18.00K	0.00K
RICHLAND	07/14/2010	Thunderstorm Wind	43 kts. EG	0	0	7.00K	0.00K
HUDSON	03/30/2011	Thunderstorm Wind	56 kts. EG	0	0	25.00K	0.00K
MOON LAKE ESTATES	03/30/2011	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K

DADE CITY	03/30/2011	Thunderstorm Wind	56 kts. EG	0	0	15.00K	0.00K
ANCLOTE GULF PARKS COMP SITE	03/31/2011	Thunderstorm Wind	53 kts. MG	0	0	0.00K	0.00K
MOON LAKE ESTATES	03/31/2011	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LAND O LAKES	03/31/2011	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
ARIPEKA	06/01/2011	Thunderstorm Wind	48 kts. EG	0	0	5.00K	0.00K
JESSAMINE	06/06/2011	Thunderstorm Wind	52 kts. EG	0	0	10.00K	0.00K
ARIPEKA COMPS SITE	06/06/2012	Thunderstorm Wind	39 kts. EG	0	0	10.00K	0.00K
NEW PORT RICHEY	06/24/2012	Thunderstorm Wind	45 kts. EG	0	0	5.00K	0.00K
WESLEY CHAPEL	07/10/2012	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WESLEY CHAPEL	08/06/2012	Thunderstorm Wind	45 kts. EG	0	0	5.00K	0.00K
ZEPHYRHILLS	08/08/2012	Thunderstorm Wind	45 kts. EG	0	0	2.00K	0.00K
DADE CITY	03/24/2013	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ZEPHYRHILLS	04/14/2013	Thunderstorm Wind	39 kts. EG	0	0	3.00K	0.00K
CRYSTAL SPGS	05/20/2013	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
PASCO CO.	07/03/2013	Thunderstorm Wind	50 kts. EG	0	0	5.00K	0.00K
PASCO CO.	07/04/2013	Thunderstorm Wind	50 kts. EG	0	0	2.00K	0.00K
PASCO CO.	08/21/2013	Thunderstorm Wind	50 kts. EG	0	0	30.00K	0.00K
Totals:				0	1	435.00K	0.00K

The historical record shows that the entire state of Florida experiences a number of storms annually, but Pasco County experiences more than most other counties. This is illustrated in the map below.

Florida Number of Severe Storm Events Since 1960 Map



Western Coast-Population Density within Storm Surge Zone Category 1

Vulnerability

Pasco County is considered highly vulnerable to hurricanes and severe storms given the level of existing development, coastal population, the population age, the history of events. The number of people affected by hurricanes and tropical storms is significant, the economic costs are high, the likelihood of hurricanes and tropical storms is moderate, and the vulnerability is high. All buildings and infrastructure in the County are vulnerable to hurricanes and tropical storms. Pasco County is divided into three wind- borne debris regions.

A large portion of Pasco County's non-mobile home housing stock consists of older and less substantially constructed homes built before the Florida Building Code enacted in 1994. These structures would be vulnerable to wind events and are more likely to suffer damage in the case of a major disaster. Countywide, 56% of the housing structures were built before the Florida Building Code was enacted. A majority (67.6%) of these structures are single family units (16,834), while 4,075 or 16.4% are mobile homes, mobile home subdivisions and recreational vehicles. The criteria used for identifying the least, moderate and most vulnerable to wind are shown on the first chart below, followed by a chart showing vulnerability percentages based on when structures were build.

Wind Vulnerability Categories

Category	Structure Effective Year Built Range
Least Vulnerable	Built from 2002 to present
Moderately	Built from 1994 to 2001
Most	Built prior to 1994

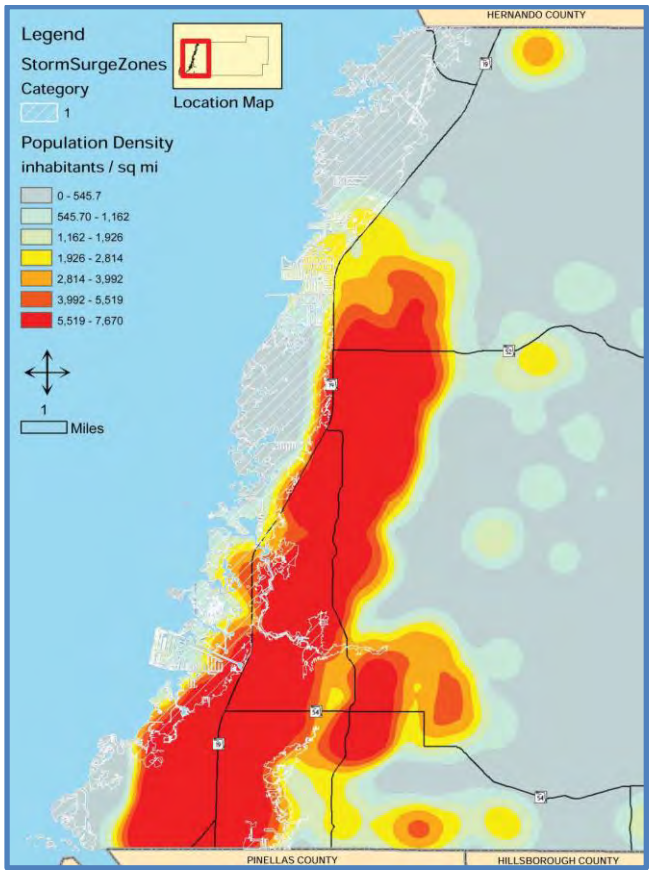
Wind Vulnerability – Count and Percentage by Year Built

Year Built	Residential	Non-Residential	Total by Year Built
Built Prior to 1994	24,887 (91.5%)	2,292 (8.4%)	27,179 (100%)
Built from 1994 to 2001	5,184 (95.1%)	265 (4.8%)	5,449 (100%)
Built 2002 and later	14,240 (96.6%)	500 (3.4%)	14,740 (100%)
Total by Use	44,311 (93.5%)	3,057 (6.4%)	47,368 (100%)

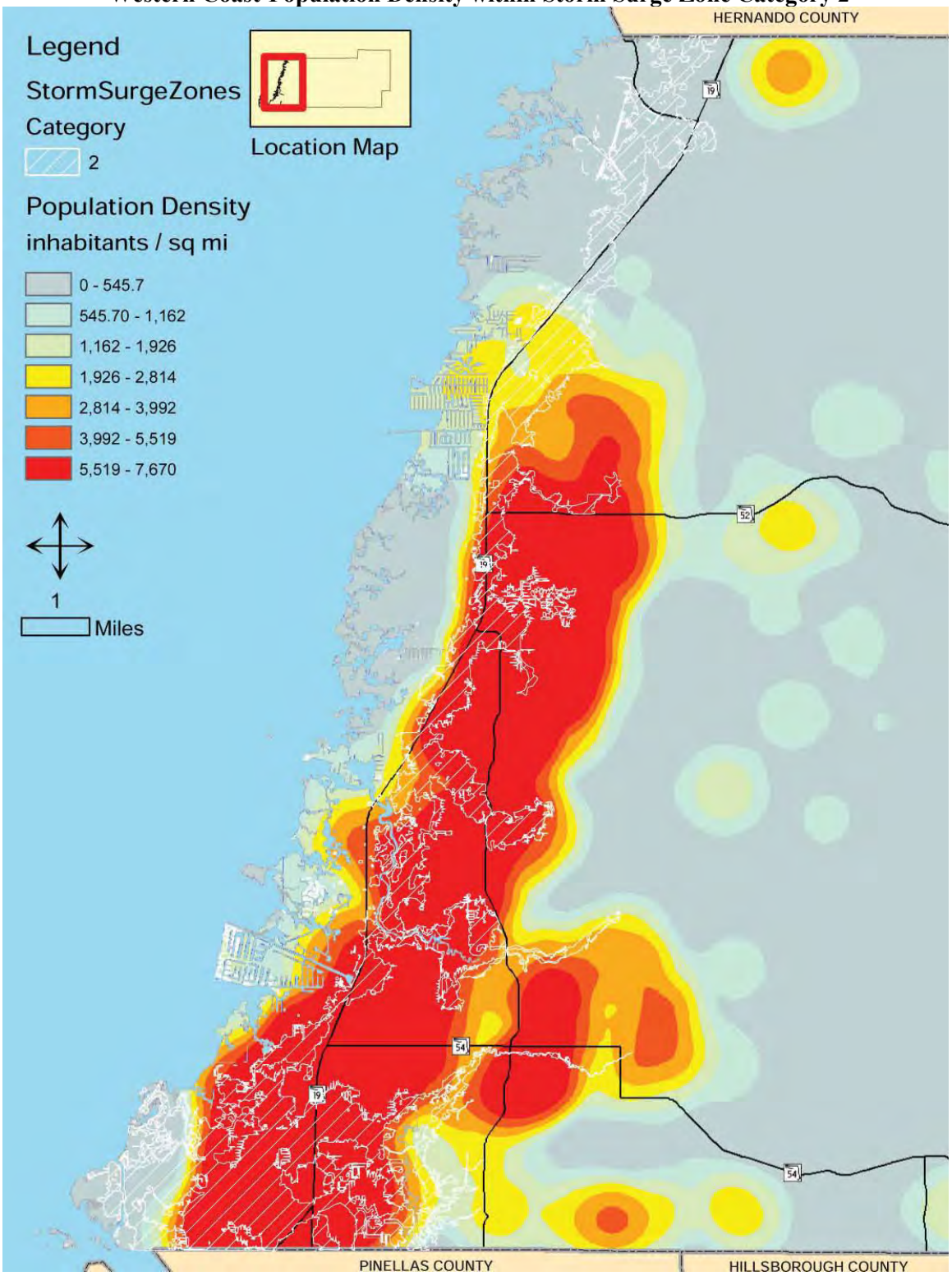
Source: *Pasco County Property Appraiser's Data*

New construction is required to be built to withstand the impact of wind-borne debris and to include appropriate window protection (shutters or shatter-resistant glass). Both as a result of changes in Florida are building code and the County's participation in the NFIP and Community Rating System, Pasco County strictly and consistently applies higher standards required by the construction codes. It is generally anticipated that, with strict application of building codes, future development will have less susceptibility to damages from both storm surge and storm force winds.

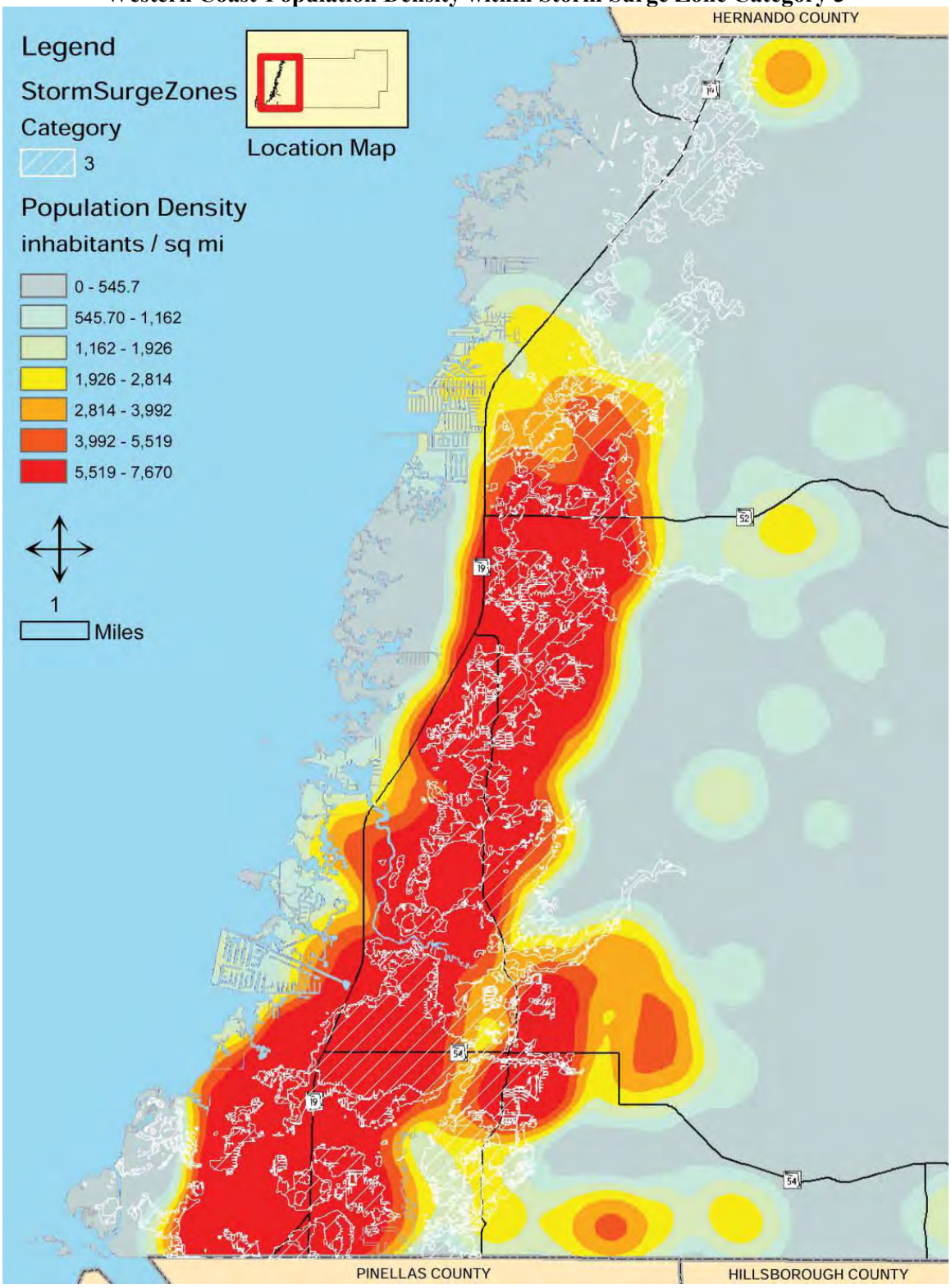
Focusing on Pasco County, maps on the following pages show population vulnerability for storm categories 1-3, those most likely to hit western Florida.



Western Coast-Population Density within Storm Surge Zone Category 2



Western Coast-Population Density within Storm Surge Zone Category 3



Vulnerability of Mobile Home Parks in Storm Surge

Property records of the Pasco County Property Appraiser's Office indicate that there are 311 mobile homes and recreational vehicle parks in Pasco County. Of these, 42 are located in Dade City, 85 are located in Zephyrhills, and 7 are in Wesley Chapel. On the west side of Pasco County, 12 are located in Holiday, 37 are in Hudson, 32 are in New Port Richey, and 17 are in Port Richey. In the central part of Pasco County, there are a considerable number of parks. In Land O' Lakes, 22 parks exist and another 15 are located in Spring Hill.

Approximately 154,770 residents live in mobile homes, which constitute a high percentage of the county's affordable housing stock. The table below shows the large number of mobile homes located within high hazard zones. These properties are like to be uninhabitable after a major storm.

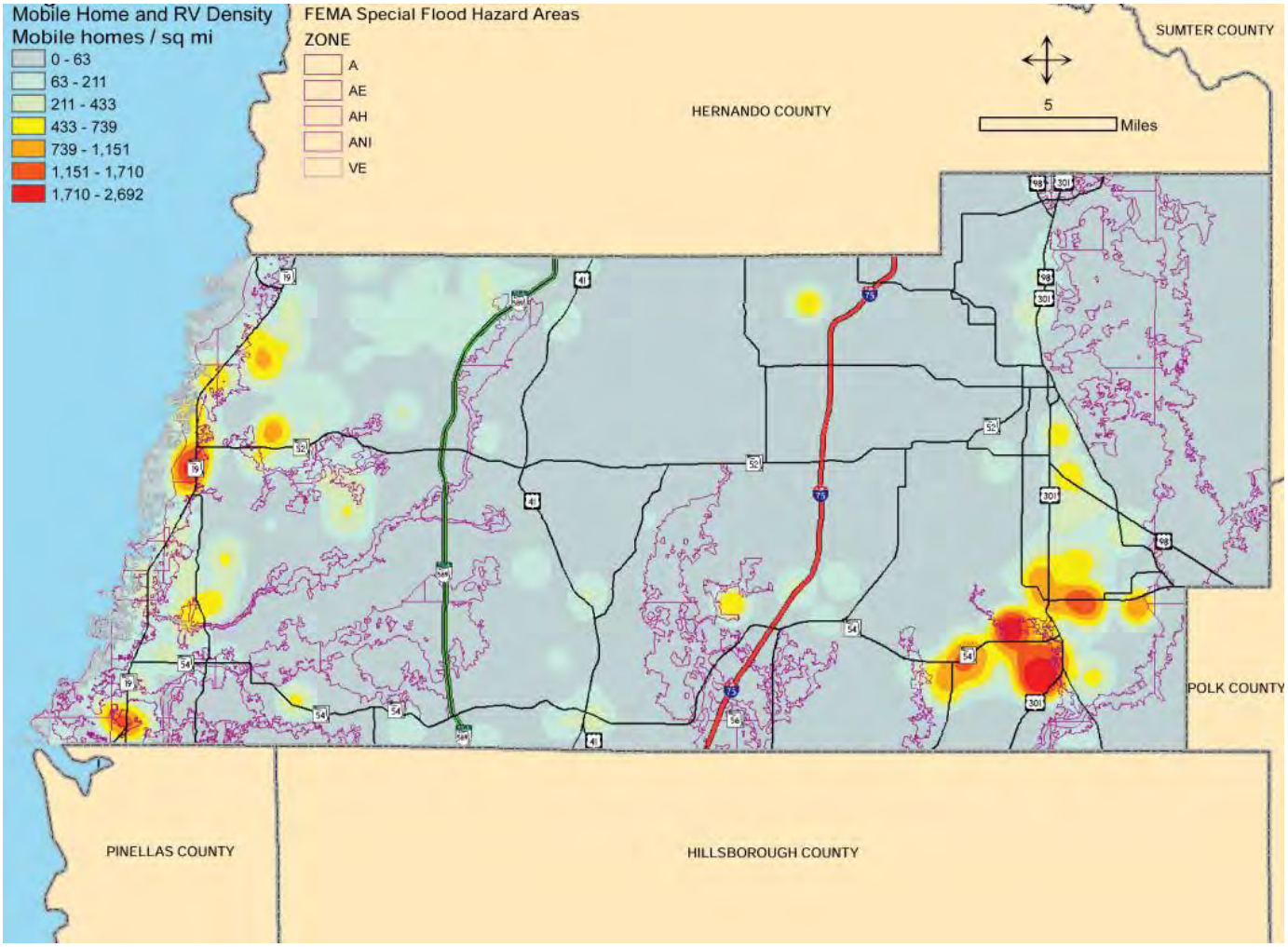
Distribution of Mobile Home Units within Storm Surge and Flood Zones

Storm Surge/Flood Zone	Mobile Homes Within Mobile Home Parks	Mobile Homes Within RV Parks	Mobile Homes Outside Mobile Home Parks
Flood Zone A	1,839	1,018	1,333
Flood Zone AE	6,123	3,148	1,731
Flood Zone AH	52	196	11
Flood Zone VE	45	0	16
Category 1 Storm Surge Zone	2,289	2,216	572
Category 2 Storm Surge Zone	2,601	687	307
Category 3 Storm Surge Zone	2,510	440	1,013
Category 4 Storm Surge Zone	1,526	1,261	816
Category 5 Storm Surge Zone	828	97	450

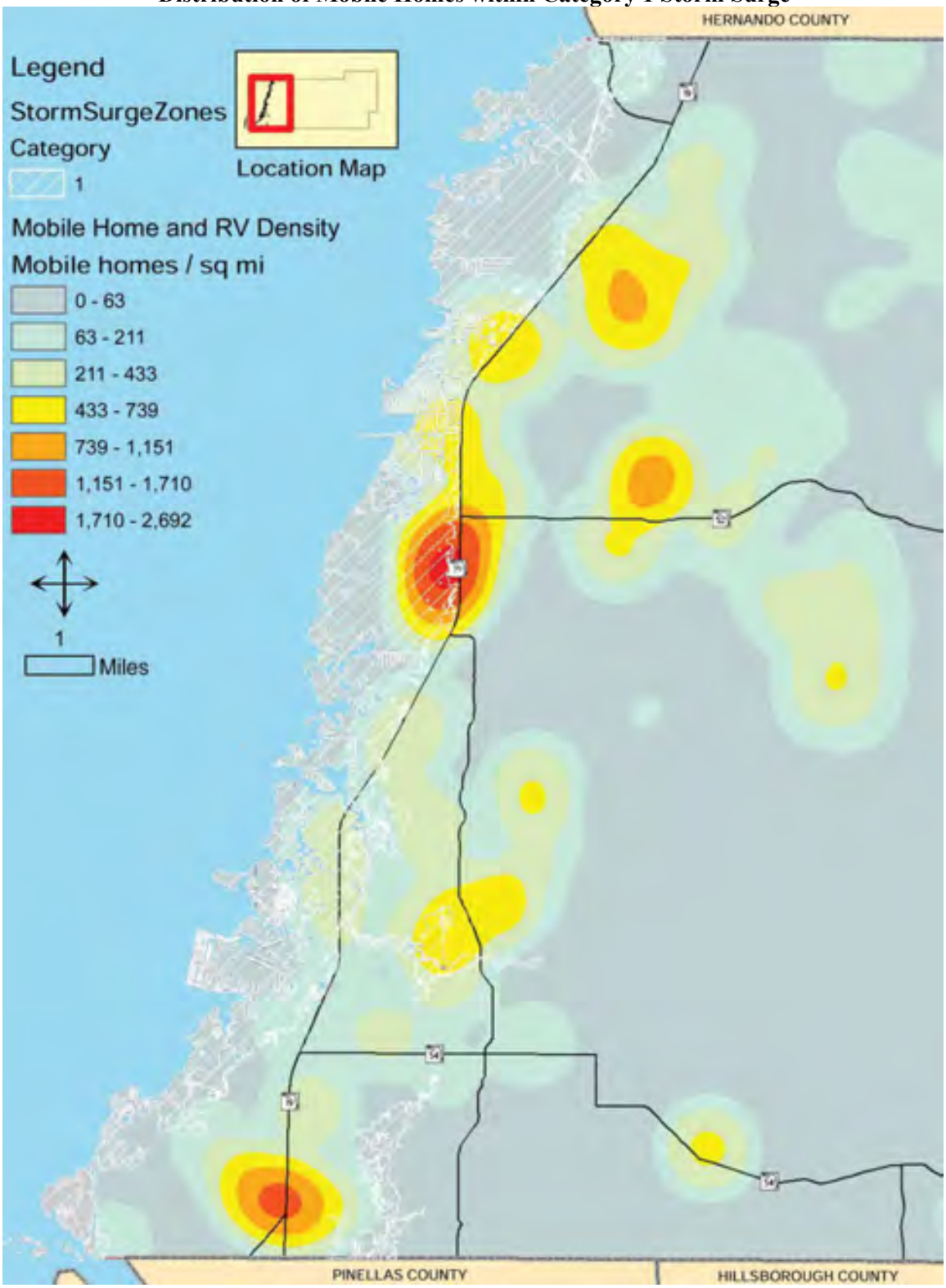
Source: Pasco County Property Appraiser's Office and GIS Data

To determine the vulnerability of the mobile homes to natural hazards, an overlay analysis was conducted using GIS. Storm Surge Zones and Flood Hazard Areas were overlaid on parcels with mobile homes and RV parks. The following are some of the examples of the maps that were created to understand the vulnerability of mobile homes within Pasco County. The map below shows the distribution of mobile homes within the Flood Zone AE and Map 7 shows the distribution of mobile homes within the Category 1 Storm Surge.

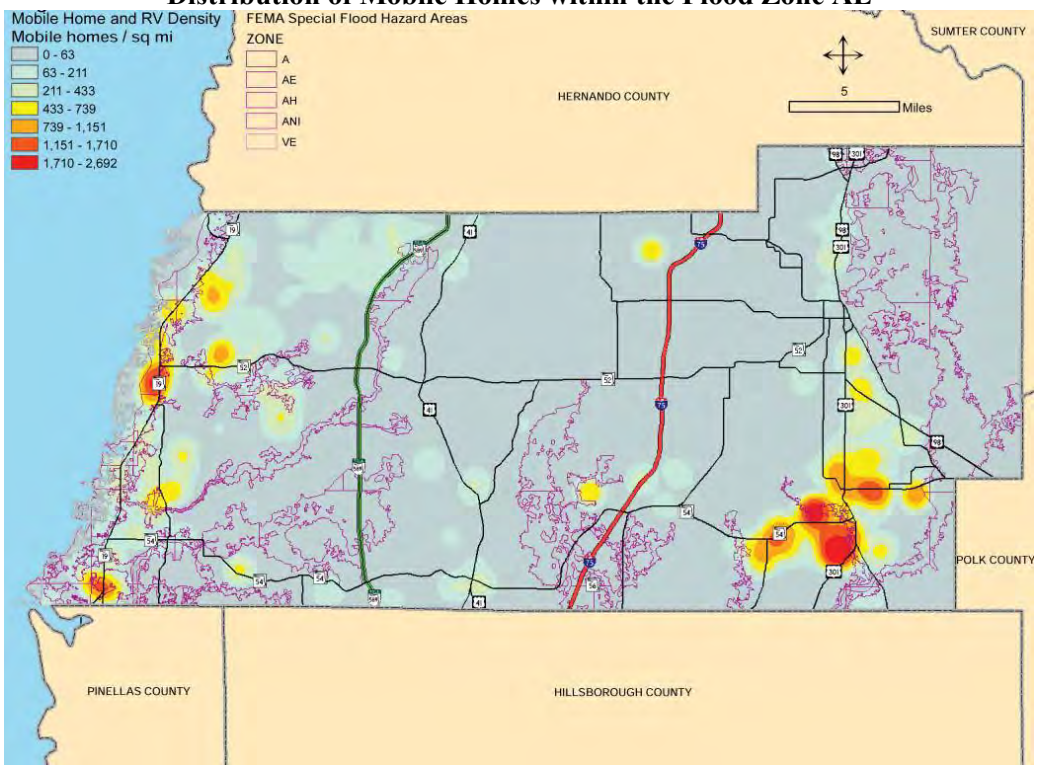
Distribution of Mobile Homes within the Flood Zone AE



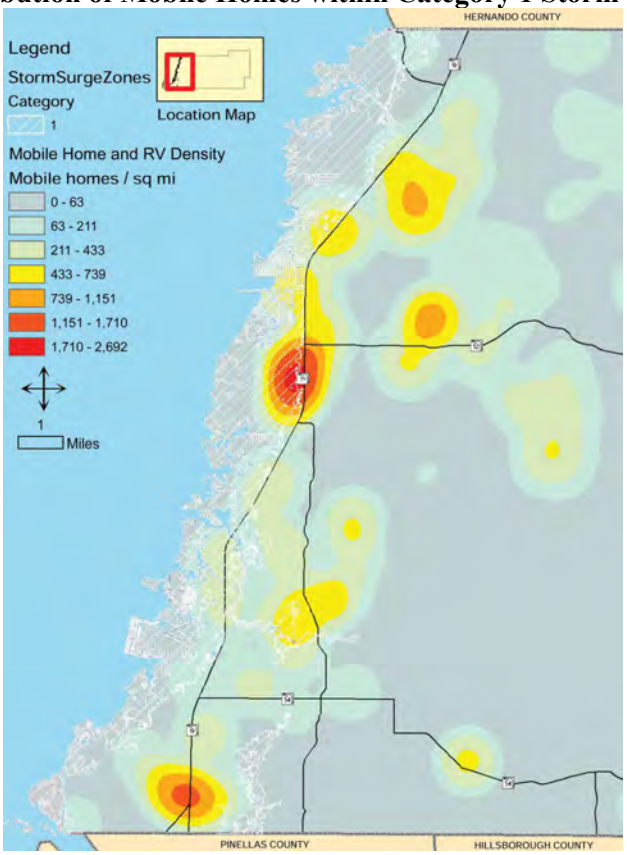
Distribution of Mobile Homes within Category 1 Storm Surge



Distribution of Mobile Homes within the Flood Zone AE



Distribution of Mobile Homes within Category 1 Storm Surge



Probability

According to the renown researchers at the Department of Atmospheric Science of Colorado State University, Pasco County's 50-year probabilities for tropical storm and hurricane activity are as follows: 61.5% chance of at least one named storm making landfall in the county, 28.0% change of at least one hurricane making landfall, and 16.6% chance of one or more intense hurricanes making landfall. Based upon the high probability of the occurrence of tropical storms and hurricanes, Pasco County can be expected to have a tropical storm, hurricane threat or impact at least once a year.

According to the Colorado State University, Tropical Meteorology Project website, Central Florida has a 28% probability of being impacted by a named storm. Recent history indicates that we can expect a storm to affect our county every 2 to 3 years, and the most likely event will be a Category 3 or lesser storm. However, the threat of a hurricane impacting Pasco County occurs annually. The United States land falling hurricane web project has been co-developed by William Gray's Tropical Meteorology Research Project at Colorado State University and the GeoGraphics Laboratory at Bridgewater State College.

Climatology data and probability assessments generated by the National Weather Service, with a regional office located 60 miles away in neighboring Hillsborough County, are shown below.

Current State Data (Climatology in Parentheses)

State	Probability of Hurricane Impact	Probability of Major Hurricane Impact
Florida	63.1% (51.0%)	28.1% (21.0%)

Current Regional Data (Climatology in Parentheses), Including Pasco County

Region Number	Probability of 1 or More Named Storms Making Landfall in the Region	Probability of 1 or More Hurricanes Making Landfall in the Region	Probability of 1 or More Intense Hurricanes Making Landfall in the Region
5	28.8% (21.6%)	11.1% (8.1%)	6.3% (4.6%)

Current County Data (Climatology in Parentheses):

County	Probability of 1+ Named Storms Making Landfall	Probability of 1+ Hurricanes Making Landfall	Probability of 1+ Hurricanes Making Landfall	Probability of Tropical Storm-Force (>= 40 mph) Wind Gusts	Probability of Hurricane-Force (75+ mph) Wind Gusts	Probability of Intense Hurricane-Force (>= 115 mph) Wind Gusts
Pasco	2.6% (1.9%)	.9% (.7%)	.5% (.4%)	23.0% (17.1%)	6.9% (5.0%)	2.2% (1.6%)

50-Year Regional Data

Region Number	50 Year Probability of 1 or More Named Storms Making Landfall	50 Year Probability of 1 or More Hurricanes Making Landfall	50 Year Probability of 1 or More Intense Hurricanes Making Landfall
5	>99.9%	98.8%	90.9%

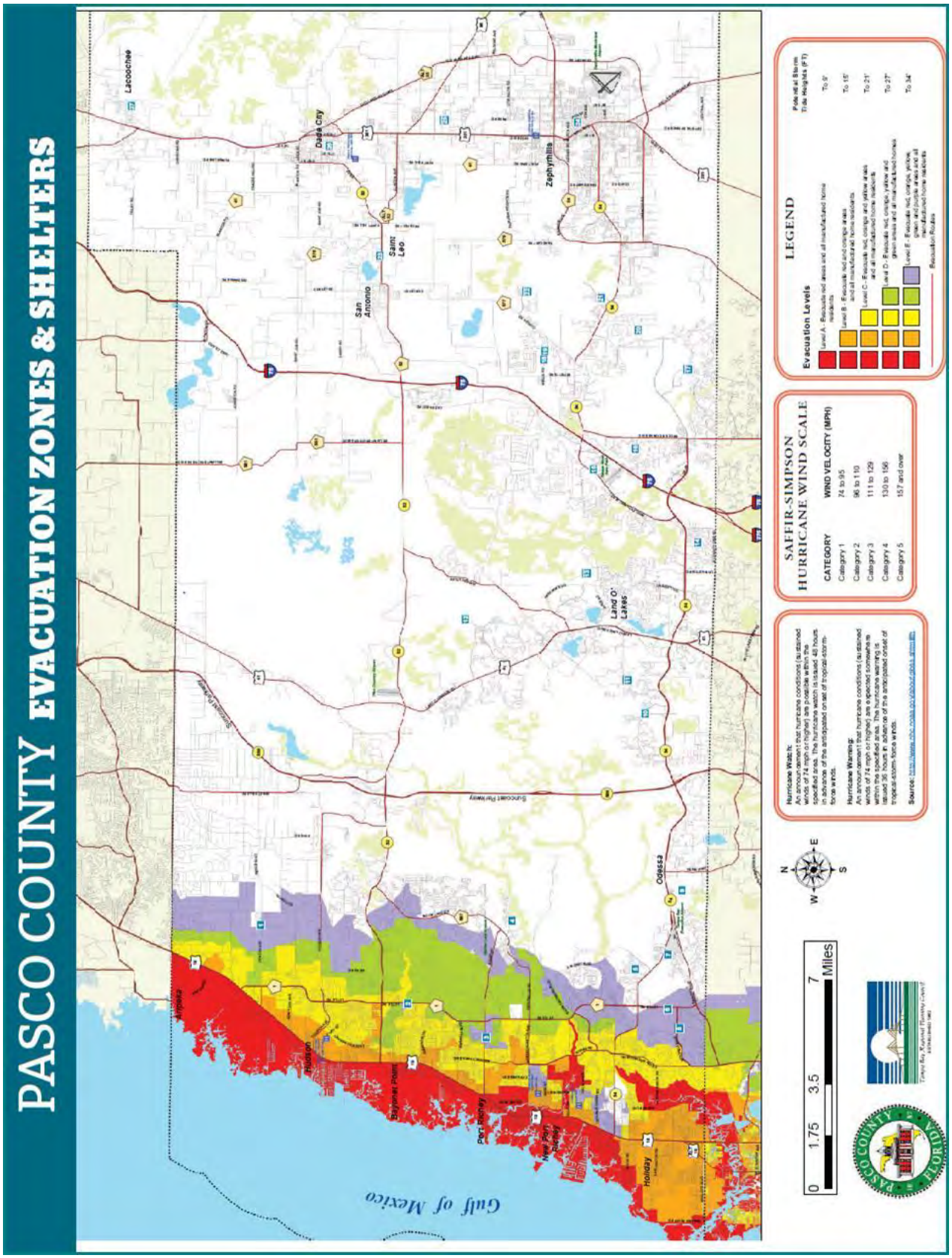
50-Year County Data

County	50-Year Probability of 1+Named Storms Making Landfall	50-Year Probability of 1 or More Hurricanes Making Landfall	50-Year Probability of 1 or More Intense Hurricanes Making Landfall	50-Year Probability of Tropical Storm-Force (40+ mph) Wind Gusts	50 Year Probability of Hurricane-Force (75+ mph) Wind Gusts	50-Year Probability of Intense Hurricane-Force (115+ mph) Wind Gusts
Pasco	61.5%	28.0%	16.6%	>99.9%	92.7%	55.4%

Extent

Following the direct impact of a hurricane many residents will be unable to return to their homes. Many mobile/manufactured homes will be destroyed and repairs to other homes that are uninhabitable may take weeks/months to complete. Some may choose to never return to their homes as was the case following Hurricane Andrew. The economic impact will vary greatly. Many small businesses will close forever while others will prosper. Home repair, carpet and appliance businesses will experience short-term increases in business. Other businesses, particularly those associated with tourism or real estate sales, will see significant declines, potentially for the long term.

Based on the previously shown storm surge maps, the County created an evacuation map that goes into effect based on anticipated extent of the event. Wind velocity during a mild storm can be relatively light, with 0-40 miles per hour (mph) considered average winds for a normal storm. The map, shown on the next page, shows that wind velocity can range during a major storm event, such as a hurricane, from 75 to 150+ miles, and that tide heights from 9' to 34' can affect coastal areas. Evacuation Levels A through E correspond to the tide heights showing how the storm can affect a given location. A small copy of the Pasco County Evacuation Map, is shown on page 33, but a larger version is included on the next page. It is also available on the County web site at A larger evacuation map is http://www.pascocountyfl.net/DocumentCenter/View/15452.


PASCO COUNTY EVACUATION ZONES & SHELTERS
Gulf of Mexico
Lacoochee
Dade City
Zephyrhills
Saint Leo
San Antonio
Land O' Lakes
Odessa
Aripeka
Hudson
Bayonet Point
Port Richey
New Port Richey
Holiday
Suncoast Parkway
0 1.75 3.5 7 Miles
N
E
S
W
Hurricane Watch:
An announcement that hurricane conditions (sustained winds of 74 mph or higher) are possible within the specified area. The hurricane watch is issued 48 hours in advance of the anticipated onset of tropical storm-force winds.
Hurricane Warning:
An announcement that hurricane conditions (sustained winds of 74 mph or higher) are expected somewhere within the specified area. The hurricane warning is issued 36 hours in advance of the anticipated onset of tropical storm-force winds.
Source: http://www.nhc.noaa.gov/aboutsshws.shtml#
SAFFIR-SIMPSON
HURRICANE WIND SCALE
CATEGORY
WIND VELOCITY (MPH)
Category 1
74 to 95
Category 2
96 to 110
Category 3
111 to 129
Category 4
130 to 156
Category 5
157 and over
LEGEND
Evacuation Levels
Potential Storm Tide Heights (FT)
Level A - Evacuate red areas and all mobile/factory home residents
To 9'
Level B - Evacuate red and orange areas and all mobile/factory home residents
To 15'
Level C - Evacuate red, orange and yellow areas and all mobile/factory home residents
To 21'
Level D - Evacuate red, orange, yellow and green areas and all mobile/factory home residents
To 27'
Level E - Evacuate red, orange, yellow, green and purple areas and all mobile/factory home residents
To 34'
Evacuation Routes
PASCO COUNTY FLORIDA

Flooding

Description

Floods are the most common and widespread of all natural disasters, with the exception of wildfire. A flood, as defined by the National Flood Insurance Program is "A general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or of 2 or more properties from: overflow of inland or tidal waters, unusual and rapid accumulation or runoff of surface waters from land source, or a mudflow." Floods can be slow or fast rising, but generally develop over a period of days.

Flooding typically involves the overflowing of the normal flood channels, rivers or streams as a result of prolonged rainfall. The lateral spread of floodwater is largely a function of the terrain, becoming greater in wide, flat areas, and affecting narrower areas in steep terrain. Variations in circumstances affect the duration of the inundation of the floodplain with rapid water movement draining floodplains faster. The duration of storm patterns also affects the length of the period of inundation. Many storms unleash considerable amounts of rain within just hours, producing very short-term, but damaging floods in localized areas. The key contributing factors in identifying the scope of the local flood hazard are: the size of the watershed; development within the watershed affecting stormwater runoff; soil characteristics; topographic characteristics affecting the direction and flow of flood waters; and regional climate. Increasing impervious surface, building obstructions to the flow of water along the riverbank, or allowing sedimentation through stream bank erosion all contribute to an escalation of the probabilities of flooding, and thus change 100- year floodplains into 80-year or 50-year floodplains.

Historical Occurrence

The National Weather Service differentiates flood events based on the cause. Riverine and closed basin flooding occur due to rainfall events and are fresh water floods. Coastal flooding is a salt water flood that occurs as a result of storm surge (wind driven water) or heavy rain, which is exacerbated by an astronomical high tide. Pasco County is subject to riverine flooding, closed basin flooding, and coastal flooding. Sometimes these floods occur as flash floods.

The Withlacoochee River lies within the northeast quadrant of the County and the Anclote River lies within the southwestern section of the County. The Pithlachascotee River enters the mid-section of the County from the Gulf of Mexico. The areas surrounding the Withlacoochee and Anclote Rivers are subject to flood damage because they are high-density population areas.. The "no name" storm of 1993 and Tropical Storm Josephine in 1998 caused flood surges from the Gulf of Mexico to travel up the Pithlachascotee River. There is potential for repeat occurrences of flood surges along this heavily populated river during future tropical storms and hurricanes. Rainfall over several days causes these rivers to exceed their banks and tend to overflow. Many of the residents along these rivers are in a floodplain that can flood on almost an annual basis at least once per year, and most residents are aware of this hazard and plan accordingly.
Flood damage probability is high in Pasco County because a large number of the existing homes were built pre-Flood Insurance Rate Map (FIRM), there are insufficient stormwater systems to handle rainfall accumulation, and people tend to settle in areas previously impacted by a flooding event.

Pasco County is a Category C Repetitive Loss Community because it has ten or more repetitive loss properties. Pasco County's repetitive loss properties are located in areas developed prior to the County joining the National Flood Insurance Program (NFIP). These areas have streets and drainage systems, which were developed prior to the delineation of the floodplain. Structures in these areas were almost always placed on the existing grade and very few were elevated to the base flood elevations designated by the NFIP. Local drainage problems, freshwater rainfall, tropical storms, hurricanes and rivers overflowing their banks have caused flooding within Pasco County.

The most recent flooding in the County occurred in June 2014 during Tropical Storm Debbie. The second recent flooding in the County occurred from May through September of 2003, nine years earlier. While many areas were affected, areas in the Northwest portion of the County experienced sustained levels of flooding over a period of several weeks as rains continued on almost a daily basis. Several areas not previously designated as floodplain areas experienced flooding for the first time. Additional historical data is included in the NCDC table below.

#	Location	County	St.	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
1	Countywide	Pasco	FL	9/27/1997	5:00	EST	Flash Flood	0	0	200,000	0
2	Countywide	Pasco	FL	11/30/1997	8:00	EST	Flood	0	0	100,000	0
3	Countywide	Pasco	FL	12/13/1997	13:00	EST	Flash Flood	0	0	2,950,000	500,000
4	Countywide	Pasco	FL	2/2/1998	21:00	EST	Flood	0	0	10,000	0
5	Countywide	Pasco	FL	2/16/1998	10:00	EST	Flood	0	0	40,000	100,000
6	Countywide	Pasco	FL	2/19/1998	22:45	EST	Flood	0	0	30,000	0
7	Countywide	Pasco	FL	2/28/1998	10:00	EST	Flood	0	0	40,000	0
8	Countywide	Pasco	FL	3/19/1998	3:00	EST	Flash Flood	0	0	1,500,000	0
9	Countywide	Pasco	FL	3/21/1998	20:00	EST	Flood	0	0	450,000	0
10	Countywide	Pasco	FL	7/20/1998	18:00	EST	Flood	0	0	10,000	0
11	Countywide	Pasco	FL	9/22/1998	12:00	EST	Flash Flood	0	0	100,000	0
12	Countywide	Pasco	FL	6/26/2000	14:00	EST	Flood	0	0	0	0
13	Countywide	Pasco	FL	8/12/2000	11:00	EST	Flood	0	0	100,000	0
14	Countywide	Pasco	FL	8/26/2000	16:00	EST	Flood	0	0	25,000	0
15	Countywide	Pasco	FL	9/14/2001	9:00	EST	Flash Flood	0	0	150,000	0
16	Countywide	Pasco	FL	12/14/2002	3:00	EST	Flood	0	0	0	0
17	Countywide	Pasco	FL	6/19/2003	8:40	EST	Flash Flood	0	0	250,000	0
18	Countywide	Pasco	FL	6/22/2003	13:30	EST	Flood	0	0	0	0
19	Countywide	Pasco	FL	7/1/2003	0:00	EST	Flood	0	0	0	0
20	Countywide	Pasco	FL	8/2/2003	16:54	EST	Flood	0	0	150,000	0
21	Countywide	Pasco	FL	9/1/2003	0:00	EST	Flood	0	0	0	0
22	Countywide	Pasco	FL	9/6/2004	12:00	EST	Flood	0	0	0	0
23	Dade City	Pasco	FL	9/2/1997	17:00	EST	Flood	0	0	30,000	0
24	Dade City	Pasco	FL	9/3/1997	17:30	EST	Flood	0	0	30,000	0
25	Dade City	Pasco	FL	9/26/1997	17:30	EST	Flood	0	0	20,000	0
26	Dade City	Pasco	FL	12/21/1997	8:00	EST	Flood	0	0	200,000	0
27	Dade City	Pasco	FL	7/19/1998	16:00	EST	Flood	0	0	10,000	0
28	New Port Richey	Pasco	FL	2/2/1996	23:00	EST	Flood	0	0	0	0
29	New Port Richey	Pasco	FL	8/5/1996	17:30	EST	Flood	0	0	0	0

#	Location	County	St.	Date	Time	T.Z.	Type	Dth	Inj	PrD	CrD
30	New Port Richey	Pasco	FL	8/12/1996	11:55	EST	Flood	0	0	15,000	0
31	New Port Richey	Pasco	FL	7/9/1998	1:30	EST	Flood	0	0	25,000	0
32	New Port Richey	Pasco	FL	12/13/2002	8:00	EST	Flood	0	0	0	0
33	New Port Richey	Pasco	FL	6/24/2012	0:00	EST	Flood	1	0	2,000,000	0
34	Zephyrhills	Pasco	FL	1/29/1997	21:25	EST	Flood	0	0	75,000	0
35	Zephyrhills	Pasco	FL	12/12/1997	8:00	EST	Flood	0	0	10,000	0
36	Zephyrhills	Pasco	FL	1/1/1998	0:00	EST	Flood	0	0	10,000	0
37	Zephyrhills	Pasco	FL	1/22/1998	8:00	EST	Flood	0	0	0	0
38	Zephyrhills	Pasco	FL	2/3/1998	8:00	EST	Flood	0	0	5,000	0
39	Zephyrhills	Pasco	FL	3/1/1998	0:00	EST	Flood	0	0	10,000	0
40	Zephyrhills	Pasco	FL	3/21/1998	20:00	EST	Flood	0	0	300,000	0
41	Zephyrhills	Pasco	FL	4/1/1998	0:00	EST	Flood	0	0	2,000	0
42	Zephyrhills	Pasco	FL	9/21/1998	8:00	EST	Flood	0	0	5,000	0
43	Zephyrhills	Pasco	FL	10/1/1998	0:00	EST	Flood	0	0	1,000	0
44	Zephyrhills	Pasco	FL	12/31/2002	19:00	EST	Flood	0	0	0	0
	Totals:							1	0	**$6,410,000.00**	**$ 600,000.00**

Vulnerability

Due to the low elevation along the western coast, adjacent to the Gulf of Mexico, the area west of US 19 is particularly vulnerable, especially during high tides, coastal storms (surge) and heavy rain events. Occasionally, moderate rain events also cause flooding due to ground saturation or poor drainage. To the victims of a flood, the impacts are great. Most cannot return to or live in their homes until repairs and clean-up are completed. Even with flood insurance, the cost to the homeowner can be in the thousands. Conversely, floods are often profitable for some businesses, such as those specializing in flooring, appliances and furniture.

There are 44 critical facilities located in the 100-year flood plain and several sections of road that are normally affected. Damages are usually minor and repaired quickly. Approximately 150 homes that have been/can be affected in the future, 137 of those are NFIP repetitive flood loss properties (129 coastal and 8 inland). Of the 137, according to NFIP records, sixteen have been mitigated. The 121 properties remaining on the list are the object of targeted outreach programs and HMPG grantwriting efforts.

According to the Tampa Bay Region Hurricane Evacuation Study Update (2006), approximately 35.1% of Pasco County is located in the 100 Year Flood Plain (166,540 acres) and vulnerable to localized freshwater flooding. Pasco County also contains significant wetland area. Approximately 8% (4,291.8 acres) of the County is located in the coastal high hazard area (Source: Growth Management Report) and subject to saltwater flooding. Moreover, a good number of the existing structures would be moderately or highly vulnerable to floods based on the year they were built (see upcoming tables). The criteria used for identifying least, less, moderate and most vulnerable to floods are as follows shown on the tables.

Flood Vulnerability Categories

Category	Structure Effective Year Built Range	Reason
Least Vulnerable	2004 to present	Flood Ordinance modified to adopt 1-foot freeboard in 12/2003
Less	1986 to 2003	Hydrostatic vents were placed into Federal standards in 1985 and local enforcement of these standards followed
Moderate	1982 to 1985	Original Flood Ordinance adopted November 18, 1981
Most	1981 and prior	No flood mitigation required

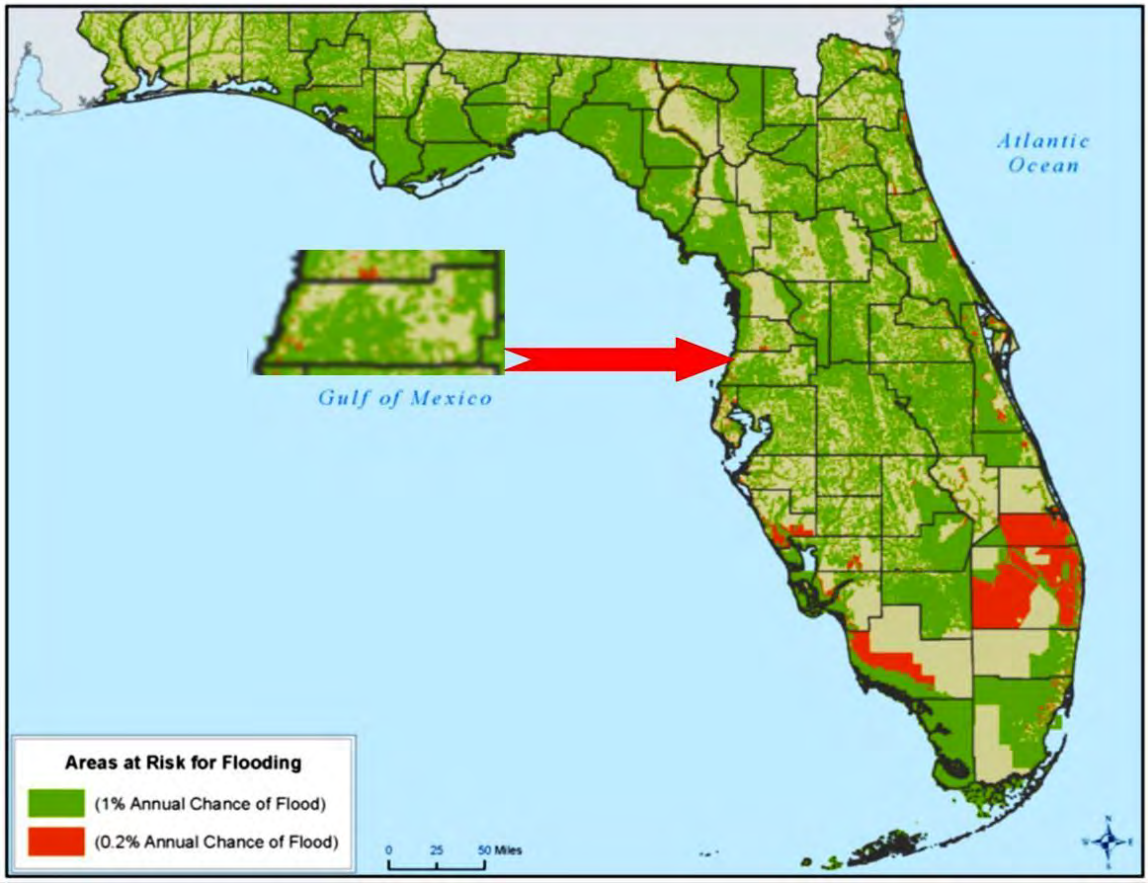
Flood Vulnerability – Count and Percentages by Year Built

Year Built	Residential	Non-Residential	Total by Year Built
1981 and prior	16,032 (91.8%)	1,432 (8.2%)	17,464 (100%)
1982 to 1985	3,235 (91%)	321 (9%)	3,556 (100%)
1986 to 2003	13,655 (94%)	869 (6%)	14,524 (100%)
2004 to present	11,389 (96.3%)	435 (3.7%)	11,824 (100%)
Total by Use	44,311 (93.5%)	3,057 (6.4%)	47,368 (100%)

Source: *Pasco County Property Appraiser's Office*

Note: *Parcel data used for the wind and flood vulnerability analysis was obtained from the Pasco County Property Appraiser's Office. The analysis pertains to structures only and not total housing units (i.e. 1 multifamily structure may contain 16 units). If the data did not indicate that there was a structure built on it (i.e. Year Built = zero), the property was removed from analysis.*

Florida and Pasco County Areas at Risk For Flooding
Arrow Points to Pasco County Location

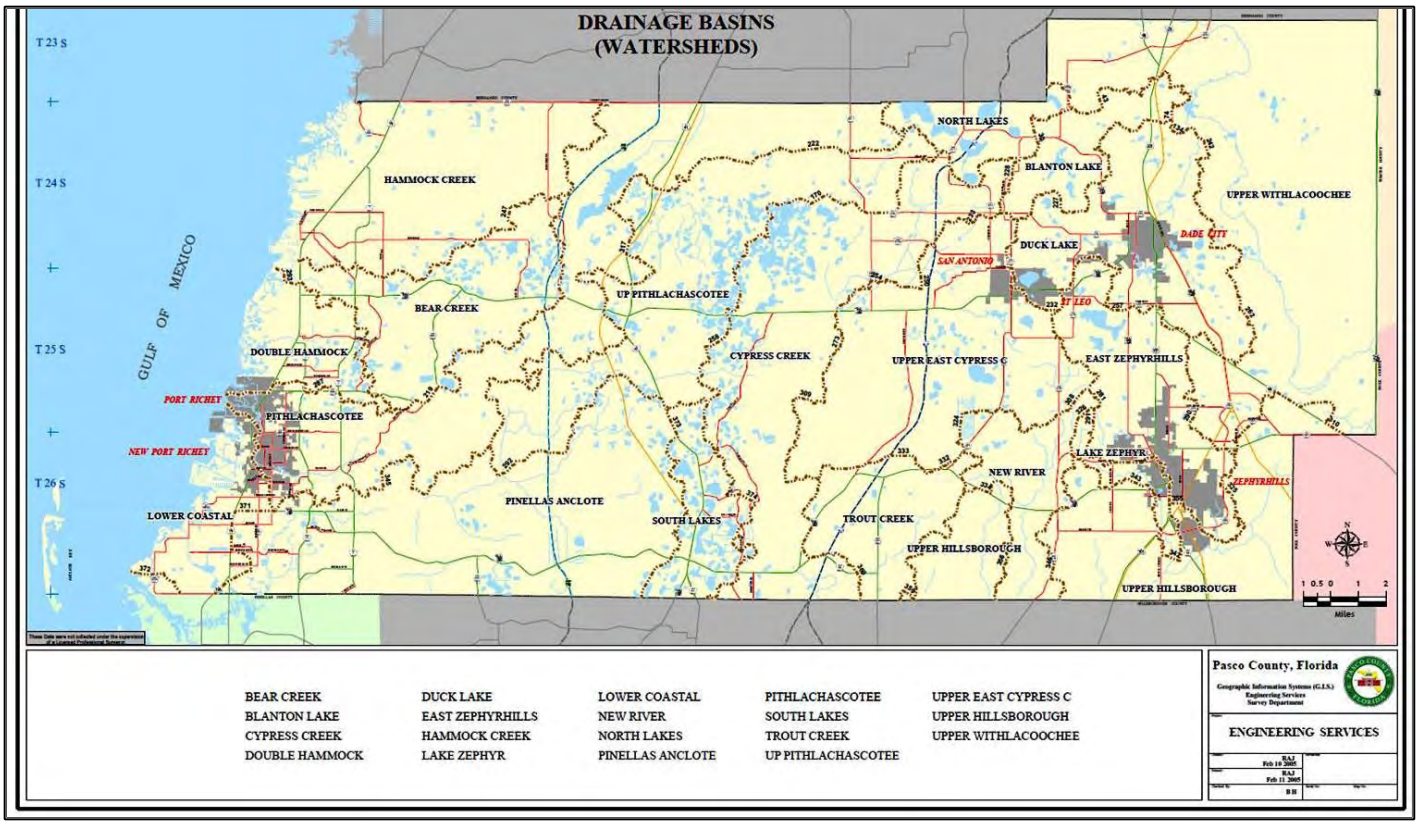


Extent

A flood event can cause minor inconvenience or major devastation. The NCDC table on page. 50 shows that between 1997 and 2012 property damage from flooding totaled $6,410,000 and crop damage totaled $600,000. The financial losses ranged from zero to significant losses reported by FEMA in 2012 from Tropical Storm Debbie, losses that are still mounting and being paid for either Individual Assistance or Public Assistance. To date, 6,758 households have received $27,800,267 for housing and Other Needs assistance. Public Assistance funding current stands at $5,806,147, divided between Emergency Work (Categories A + B) and Permanent Work (Categories C through G). With numbers that are still in flux, $33,606,414 has been obligated as of July 9, 2014. The map shown on p. 56 shows extent in that it indicates flood heights determined by the NFIP and used in FIRMs.

Flooding may result from hurricanes, winter storms and prolonged summer thunderstorm activity. The problem becomes more severe when heavy rainfall occurs during high tide. This combination of factors prevents rainfall from flowing through the drainage system into the Gulf of Mexico, thereby causing coastal flooding. While Pasco County imposes structural elevation requirements and has an extensive stormwater runoff system, flooding still occurs. The map above shows most of Pasco County as being highly vulnerable to flooding, with most of the land being in areas with a 1% annual chance of flooding. The green-shaded areas show this level of probability. The map clearly reflects statements in the Executive Summary about the county's geography including high ridges separated by valleys. The beige areas (outside the 1% probability range) show small areas in the northwest corner and far eastern segments of the county. Given that flooding does occur countywide in some instances, the beige sections have a probability of 0.25 to 0.50 % annual chance of flooding.

A new Flood Insurance Study (FIS) was completed in March 2013 as part of FEMA's effort to update Pasco County's FIRMs. The FIS is included as Appendix N. Pending FIRM updates, scheduled to be released in September 2014, are on the MSC web site. There are seven major FIRMs comprised of 159 maps covering smaller county segments. The Pasco County GIS department tried to create a single FIRM by combining all of the major maps but was unable to complete the task for two reasons: data assigned to maps was incorrectly uploaded to the web site (per conversation between GIS and the MSC); and the limited time for data gathering. Such a map would have indicated all areas of the county and the expected flood height for a given 1% storm. Alternatively, the LMS includes on the map below, which shows county watersheds. This map can be used to complement information presented in the updated FIS.



During the FIS, approximate analyses were used to study areas having low development potential or minimal flood hazards. Topographic and land use information, in conjunction with aerial imagery, were used to estimate approximate floodplains. The elevation in the study area ranges from approximately 249 feet NAVD88 in the north-central parts to the sea level along the Gulf Coast. The Anclote Keys, in the extreme southwest of the county, are the low-lying offshore barrier islands. North of these keys there is an indistinct salt marsh shoreline averaging 1 to 2 feet above sea level. The FIRM details the hydrologic studies used to estimate potential flood levels throughout the county. The next two images show Table 4 of the study, Summary of Stillwater Elevations, and Table 5: Rainfall Volume, along watershed routes in Pasco County.

Table 4: Summary of Stillwater Elevations

	Water Surface Elevations (Feet NAVD)			
Flooding Source and Location	**10-percent-annual-chance**	**2-percent-annual-chance**	**1-percent-annual-chance**	**0.2-percent-annual-chance**
ANCLOTE RIVER				
At confluence with Duck Slough	5.1	8.1	9.1	11.6
GULF OF MEXICO				
At U.S. Highway 19	5.4	9.1	11.1	14.1
At Main Street	5.3	8.6	10.1	13.7
At Aripeka	6.0	10.0	11.8	15.6
At Port Richey	5.6	9.4	11.2	14.6
At Bird Key	5.2	8.8	10.5	13.6
Millers Bayou Along Bay Boulevard	5.5	9.4	11.1	14.5

Table 5: Rainfall Values

Watershed	Datum Offset (ft)	Study Type	Total Rainfall Volume (in) 1 Day 100 yr	Multi-Day Rainfall Used *	Date of Model
Bear Creek	-0.84	Effective Transfer	12.0	-	09/30/92
Blanton Lake	-0.84	Effective Transfer	11.0	-	09/30/92
Cypress Creek	-0.84	Detailed	12.4	15.0	04/27/10
Double Hammock	-0.84	Effective Transfer	12.0	-	09/30/92
Duck Lake	-0.84	Effective Transfer	11.0	-	09/30/92
East Pasco	-0.84	Detailed	12.0	17.0	02/23/10
East Pinellas Anclote	-0.84	Detailed	12.0	-	04/26/11
Hammock Creek	-0.84	Effective Transfer	12.0	-	09/30/92
Lower Coastal	-0.84	Effective Transfer	12.1	-	09/30/92
North Lakes	-0.84	Effective Transfer	NA	-	09/30/92
Pithlachascotee	-0.84	Effective Transfer	12.0	-	09/30/92
Trout Creek	-0.84	Detailed	12.4	15.0	06/29/10
Upper Hillsborough	-0.84	Effective Transfer	11.0	-	05/01/79
Upper Pithlachascotee	-0.84	Effective Transfer	12.0	-	09/30/92
Upper Withlacoochee	-0.84	Effective Transfer	10.9	-	05/01/79
West Pinellas Anclote	-0.84	Effective Transfer	12.0	-	09/30/92

These tables and the watershed map provide information about water depth throughout the county – depth with additional rainfall and depth when the waters are still. A more complete list of all points in communities across the county can be found in the FIS (Appendix N).

Naturally, communities located in the flood zones described above are the most vulnerable. The County's inability to remedy existing drainage problems due to a lack of funding, and the location of the pre-FIRM housing stock in SFHAs add to the level of vulnerability. Most pre-FIRM housing is located west of US 41 in New Port Richey, Port Richey, and unincorporated coastal areas. Appendix D provides for more information about flooding, including information about repetitive loss (RL) and Sever Repetitive Loss (SRL) properties are outlined in the CRS report. Those who recognize their vulnerability and are serious about flood preparedness secure flood insurance. The table below captures recent statistics from the NFIP reporting center showing participation broken down by community.

Pasco County, FL NFIP Participation Data Available through 04/15/2014		
Community	**Policies in Force**	**Coverage**
Pasco County (unincorporated)	27,492	5,910,423,500.00
Dade City	64	14,951,700.00
New Port Richey	1,713	289,303,100.00
Port Richey	884	173,961,600.00
San Antonio	1	210,000.00
St. Leo	0	-
Zephyrhills	173	35,198,900.00
Total	**30,327**	**$ 6,424,048,800.00**
Source: Southeast Office, NFIP iService, 07/10/2014		

Disconcertingly, the figures show a decrease in participation since the 2009 LMS submission. At that time, there were 32,000 policies in force, which represents a decrease of 1,673 policies in a county that experienced a steady population increases in recent years, as shown below.

US Census	US Census Annual Estimate of Population Increases							
4/1/2010	7/1/2010	Increase	7/1/2011	Increase	7/1/2012	Increase	7/1/2013	Increase
464,697	465,547	0.18%	466,682	0.24%	470,631	0.85%	475,502	1.03%
Source: *U.S. Census Fact Finder*								

The current dollar value for policies in force represents a dollar value increase of $1,849,181,300 of the 2009 policy values total of 4,574,867,500. While the reason for decreased participation is not yet clear, the matter calls for additional research and increasing community awareness of the county's flood risk and the importance of mitigation by purchasing flood insurance. It should be noted that the City of San Antonio was admitted to the NFIP on an emergency basis in 2009 and is in the process of becoming a permanent member of the program. The Town of St. Leo is also in the middle of applying for membership. Extensive rainfall that caused flooding in both communities over the years has propelled the municipalities to give residents access to flood insurance through the program.

Probability

Although flooding does result from hurricanes, it can also occur during winter storms, as well as during prolonged summer thunderstorm activity. Prolonged periods of rainfall have shown increased potential for causing damage to property and the need for evacuation of residents due to flooding. The problem becomes more severe should the heavy rainfall occur at the same time as the astronomical high tide, thus preventing much of the rainfall from flowing through the drainage system into the Gulf of Mexico. Heavy rains and fresh water flooding occur in cycles that many now attribute to the "El Nino". Whatever the reason, there is a long history of flooding in Pasco County and most of central Florida. This trend is expected to continue and the probability of flooding is high for Pasco County, especially in the low lying areas.

The 2010 Flood Plain Management Plan provides a more thorough review of the flooding probabilities in Pasco County in the areas of coastal zone flooding, closed basin flooding, and riverine flood areas. Each of these areas has locations that are mapped on the existing effective FEMA flood maps, which were produced in September 1992. The existing FIRM will be replaced under the current Map Modernization Program, with new maps expected to be presented to the county in September 2014. This updated maps show that there are significant areas of the County which have a 1% chance of flooding but were not identified in the original FIS. This is to be expected given the tremendous damage caused by hurricanes and major storms during the 22-year period in which the older maps have been, and remain, in use.

Coastal and Riverine Erosion

Description

Erosion changes the shape and structure of the coastal areas and river banks. Pasco County's western boundary is adjacent to the Gulf of Mexico; therefore, the region is subject to coastal erosion resulting from tropical storms, hurricanes, strong waves, and high winds. Coastal erosion is the wearing of land or the removal of beach or dune sediments by wave action, tidal currents, wave currents, or drainage. Waves generated by storms cause coastal erosion, from long-term losses of sediment and rocks, to a temporary redistribution of coastal sediments.

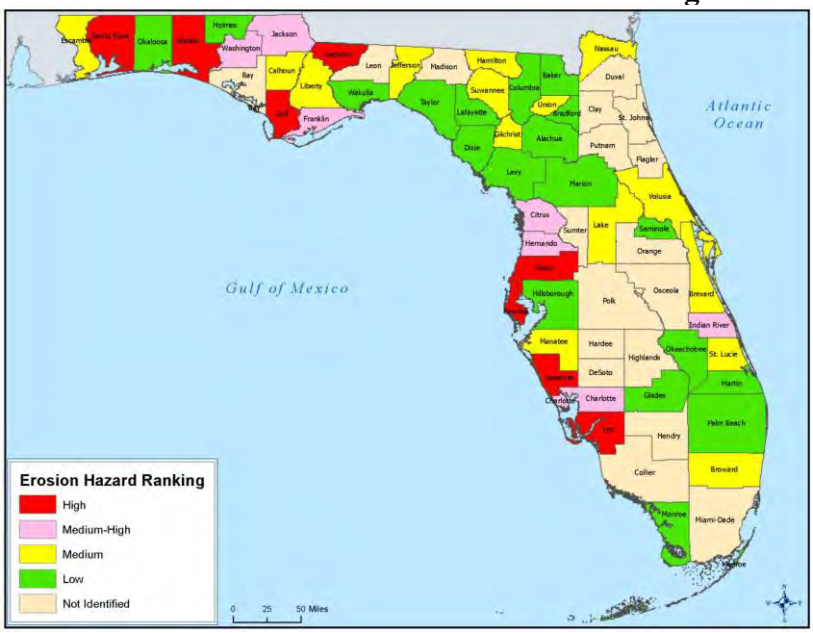
Inland, the course of any given river is fluid, constantly alter course, changing shape and depth, trying to find a balance between the sediment transport capacity of the water and the sediment supply. This process, called riverine erosion, is usually seen as the wearing of riverbanks and riverbeds over a long

period of time. Riverine erosion is often initiated by failure of a riverbank causing high sediment loads or heavy rainfall. This generates high volume and velocity run-off which will concentrate in the lower drainages within the river's catchment area. When the stress applied by these river flows exceeds the resistance of the riverbank material, erosion will occur. As the sediment load increases, fast-flowing rivers will erode their banks downstream. Eventually, the river becomes overloaded or velocity is reduced, leading to the deposition of sediment further downstream or in dams and reservoirs. The deposition may eventually lead to the river developing a new channel. Riverine erosion has many consequences including the loss of land and any development on that land. It can cause increased sedimentation of harbors and river deltas. It can hinder channel navigation and affect marine transportation sources.

Historical Occurrence

Some erosion changes are slow, inevitable, and usually gradual. The changes on a beach in contrast, can happen overnight, especially during a storm. Even without storms, sand may be lost to long shore drift (the currents that parallel coastlines) or sand may be pulled to deeper water and then lost to the coastal system. The Withlacoochee, Hillsborough, Pithlachascotee and Anclote Rivers are major permanent streams and surface drainage systems in the County; therefore, these rivers make Pasco County susceptible to riverine erosion. While historical data has not been identified, the next two maps were created based a resource that enabled designers to generate comparative studies.
The first map compares the level of erosion in Pasco County to that of other counties in Florida. Of the 67 Florida counties – 36 of which border the Atlantic Ocean or the Gulf of Mexico – only eight rank high for the erosion hazard, and all but one of these are located on the Gulf of Mexico.

Florida Counties Erosion Hazard Ranking



The next map shows shoreline erosion statewide. The arrow points to Pasco County. In the northwestern corner of the county, the red dot shows the segment of the county experiencing critical erosion. This is due to the counterclockwise rotation of Gulf currents, and areas jutting more

prominently into the Gulf appear to erode more than those slightly further eastward along the state's irregular western coastline. In contrast, the east coast of the state runs more or less in a straight line and experiences almost total critical erosion.

Critical and Non-Critical Shoreline Erosion

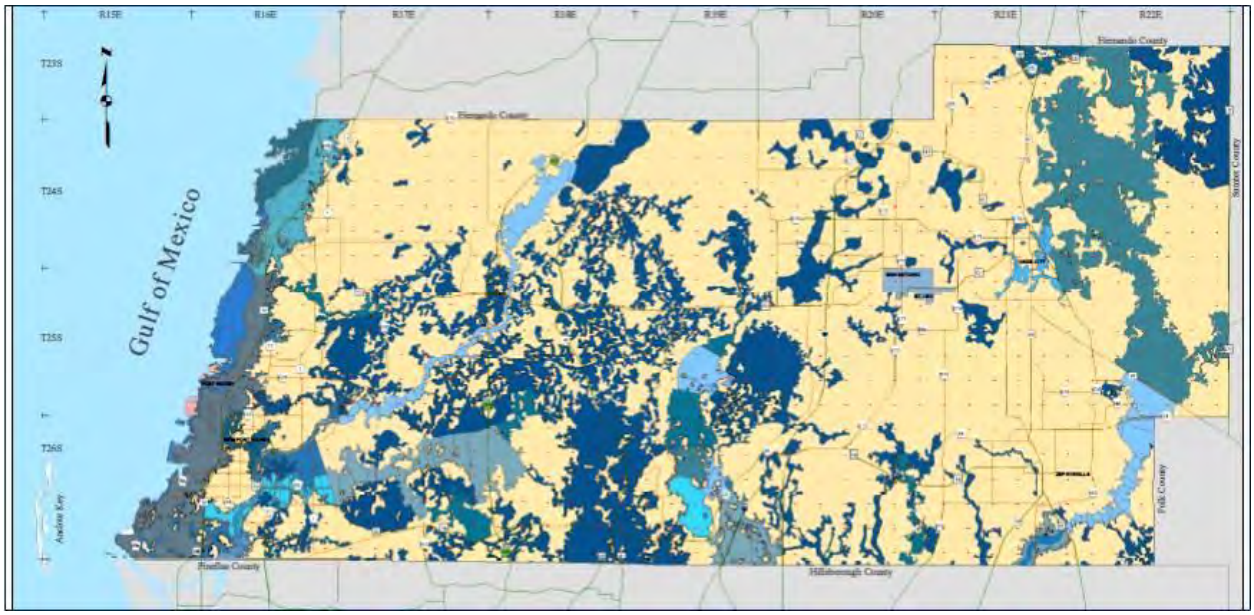
This information dovetails with what was revealed in the Florida Department of Environmental Protection Strategic Beach Management Plan done for the Bureau of Beaches and Coastal Systems. One of the three subregions studied for the plan is the Sun Coast, defined here as the coastal segment that extends from the Withlacoochee River in Citrus County (two counties north of Pasco) to the Anclote River, immediately north of the Pinellas-Pasco County line. Erosion is attributed to tropical storms, hurricanes, and the natural geomorphic changes caused by the pattern of littoral transport of sediments in this area. The most erosive storms in recent years were Hurricane Agnes (1972), Hurricanes Elena and Kate (1985), a severe extratropical storm in March 1993, Tropical Storm Josephine (1996), Hurricane Gordon (2000), and Tropical Storm Frances (2004). The same northwest segment of coastal area is identified in both of the above maps as being critical erosion areas.

Vulnerability

A significant number of people living along the coast would be affected by coastal erosion. Relative to the number of people living along the coast, the number of people living along the rivers, and potentially impacted by riverine erosion, is significantly less. The economic costs are high, the

likelihood of coastal erosion is extremely high, and therefore the vulnerability of coastal erosion resulting from tropical storms and hurricanes is moderate because the county is at highly vulnerable to storms and hurricanes. As such, the coastal cities of New Port Richey and Port Richey and coastal unincorporated areas, are vulnerable to coastal erosion. It is difficult to define areas of the County that are vulnerable to riverine erosion because the county holds four rivers within its boundaries and each has many tributaries. In 1998 and 2003 the County had significant periods of rainfall which caused the rivers and tributaries to swell, resulting in widespread flooding which affected all areas of the county and its municipalities.

The degree to which erosion could be considered widespread and moderate is shown in the following map, produced by the County GIS department to show flood plains through the county.
The map below reflects information shown in the map on page 52, identifying areas most at risk for flooding. It was mentioned in that context that the geography of the county is comprised primarily of low level valleys with ridges in the northwest corner of the county and in a line in the eastern section of the county.



Probability

The probability of coastal and riverine erosion is moderate base on what little data can be gleaned from the above identified resources. Coastal and riverine erosion occurs in small amounts and has not occurred significantly enough to generate overall statistics. If and when significant erosion occurs, Pasco County will experience a change in the shape of the coastline and riverbanks, as well as loss of structures business and residences located in vulnerable areas.

Extent

The impact of erosion is cumulative. Water encroaching homes located along the coast or a river may not see the level of coastal ground diminish until a significant "wash" (for a river) or major storm carries away sediment that has been loosened over time. Endangered homes may need to be raised, moved elsewhere, or demolished. The same goes for businesses located in these areas, which are more likely to be small businesses rather than large industry.

Extent is discussed in a 2004 report of the U.S. Geological Services and the U.S. Department of Interior titled *USGS National Assessment of Shoreline Change Part 1 Historical Shoreline Changes and Associated Coastal Land Loss Along the U.S. Gulf of Mexico (Open-File Report 2004-1043)*. The report addresses the fact that erosion is lower in west Florida than might be expected given its Gulf location. A report segment shown below discusses extent of erosion in both geographic and economic terms.

> "Compared to shoreline erosion in some other Gulf Coast states, the average long-term erosion rate of -0.8 ± 0.9 m/yr for west Florida (Table 7a) is low, primarily because wave energy is low. Even though erosion rates are generally low, more than 50% of the shoreline is experiencing both long-term and short-term erosion. The highest rates of erosion in west Florida are typically located near tidal inlets. Long-term and short-term trends and rates of shoreline change are similar where there has been little or no alteration of the sediment supply or littoral system (see Dog Island, St. George Island, and St. Joseph Peninsula). Conversely, trends and rates of change have shifted from long-term erosion to short-term stability or accretion where beach nourishment is common (see Longboat Key, Anna Maria Island, Sand Key, and Clearwater, Panama City Beach, and Perdido Key). A shift from long-term relative stability to short-term erosion occurred on Santa Rosa Island, probably as a result of beach erosion and overwash deposition associated with Hurricane Opal in October 1995. Slow but chronic erosion along the west coast of Florida eventually results in narrowing of the State's valuable recreational beaches (Figs. 14-16), and many highly developed beaches retain no dunes to protect buildings from large storm waves and flooding. Lighthouse Point, south of Tallahassee, presents a good example. Situated in the low energy sector of the coast, past storms have still destroyed park facilities and some roads (Fig. 15) that are now protected by rock revetments. In places where beach erosion is chronic, these structures have replaced the beaches (Fig. 16) except where artificially nourished (Fig. 17)."

Given the historically low rate of erosion in the county, it is safe to say that the rate of coastal erosion cited above for west Florida overall -- 0.8 ± 0.9 m/yr – is a figure comparable to rate of loss in Pasco County. The author found no resources documenting the rate of riverine erosion. This subject will be researched for inclusion in the next five-year LMS update.

Sinkholes

Definition

Sinkholes are a common, naturally occurring geologic phenomenon and one of the predominant landforms in Florida. Many of the lakes in Florida were formed by sinkholes. Sinkholes are depressions or holes in the land surface that occur throughout west central Florida. They can be shallow or deep, small or large, but all are a result of the underlying limestone dissolving when mixed with acidic water. Contrasting conditions can cause sinkholes, including lack of rainfall, lowered water levels, or excessive rainfall in a short period of time can all contribute to sinkhole development. Water inundation can cause the soil "roof" over a cavity in the limestone to collapse resulting in a sinkhole. Sinkholes can also be caused by droughts that lower groundwater levels. The lower groundwater levels reduce the buoyant support of a cavity roof which can prompt a collapse. Sinkholes can be classified as geologic hazards, sometimes causing extensive damage to structures and roads, resulting in costly repairs. Sinkholes can also threaten water supplies by draining unfiltered water from streams, lakes and wetlands, directly into the water.

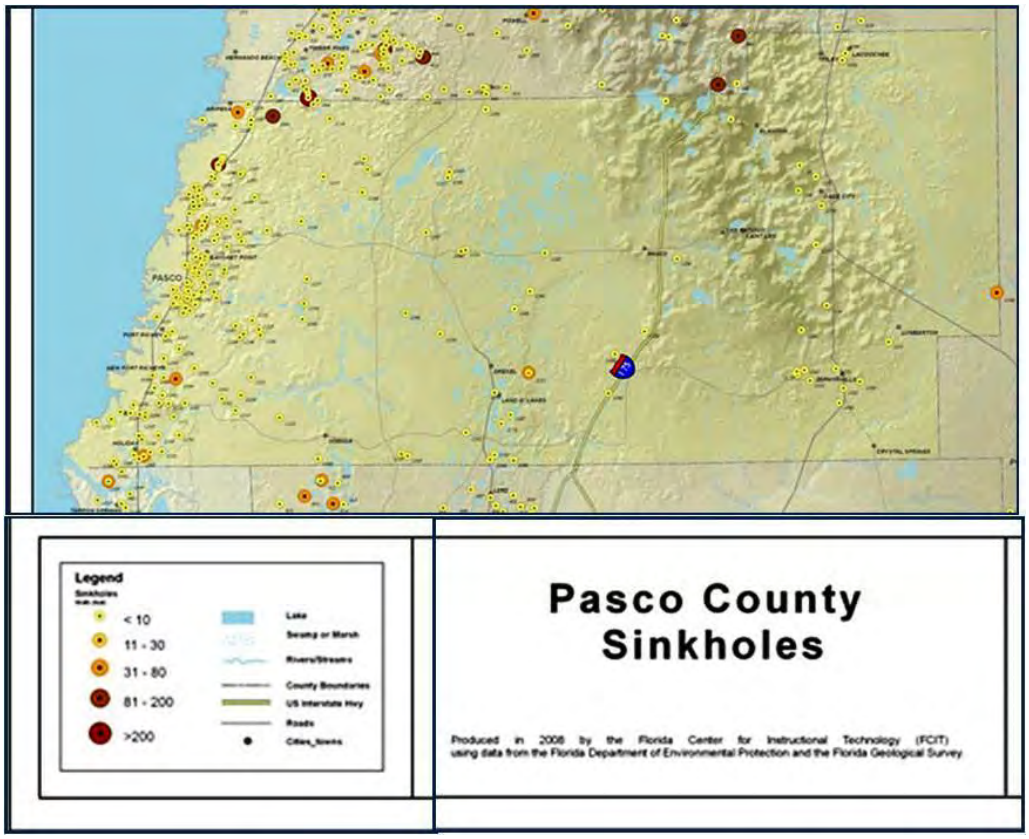
Historical Occurrence

According to the Pasco County Development Review Services Department, 1,836 permits were pulled for incidents of sinkhole subsidence repairs between 2003 and 2008. There were 2291 reported incidents between 1996 through 2008, for an average of 191 sinkholes reported annually. Sinkhole repair requires the property owner or contractor to secure a building permit. Most sinkholes occurred on private property and were investigated by the property owner's insurance company. The Office of Emergency Management does not investigate sink holes to determine if they are in fact sinkholes, or just subsidence from other causes. OEM documents all voluntary reports of subsidence on public or private property. More recently, reports from the Pasco County Permitting Office show the number of sinkholes to be rising at a rate of concern. The Permitting database allows citizens to run reports broken down in several formats.

These reports for the period correspond roughly to that covered by this LMS update: 01/01/2009 to present. The numbers show that during this time, 6,933 individuals and businesses requested investigation into a sinkhole on their property, and 3,685 requested permits to begin repair work. While there could be duplication in numbers in that a person who requested an investigation may have later requested a permit, the numbers are still significant. Dividing the total number of investigation requests (6933) by the number of days in a five-year period (1,825) results in an average of 3.798 sinkhole investigations. These numbers do not take into account weekends and holidays on which municipal offices are closed. The geographic breakdown indicates that the sinkhole hazard is countywide, and also affects surrounding counties.

	Pasco Community	# Sinkholes	Community	# Sinkholes	County
*	Bayonet Point	108	Brooksville	10	Hernando
	Dade City	25	Clearwater	26	Pinellas
*	Elfers	8	Largo	15	Pinellas
*	Holiday	300	Lutz	130	Hillsborough
*	Hudson	1223	Palm Harbor	17	Pinellas
*	Land o' Lakes	430	Springhill	145	Hernando
	New Port Richey	1844	Tampa	44	Hillsborough
*	Odessa	71	Tarpon Springs	25	Pinellas
	Port Richey	641			
	San Antonio	16			
*	Trinity	210			
*	Wesley Chapel	301			
	Zephyrhills	100			
*	*Unincorporated Pasco County*				

Vulnerability



The above map was produced in 2008 by the Florida Department of Environmental Protection and the Florida Geological Survey. The colors chosen as the map background and for use on the legend make it difficult to easily see sinkhole markings. Close observation shows that the yellow category, corresponding to areas with less than 10 sinkholes, are scattered throughout the county, although

there is preponderance along the coast. A segment in south-central Pasco (west of I-75) shows 11-30 occurrences, and other locations with orange markers document between 31-80 occurrences.

Probability

A review of historical occurrences shows that the probability of a sinkhole occurring in the county is extremely high. Twice as many sinkhole incidents are reported during the rainy season as in the dry season. The maps on pages 60-61 show that all locations countywide are vulnerable, but the most vulnerable are those located in western Pasco County: the municipalities of New Port Richey and Port Richey, and the unincorporated areas of Holliday, Hudson and Bayonette Point. If the Pasco County SFHAs have a 1% chance of experiencing a flood in any given year, its high-risk communities have a 25% chance of experiencing a sinkhole in any given day. This is based on an average of four reported incidents per day, with a given household representing one of the possible four incidents.

Extent

Each sinkhole incident affects a small number of people or businesses, but the collective large number of incidents means that many in the community are affected over a period of time. The earlier statistic of an average of four reports a day becomes cumulatively significant when a number of events happened in a given neighborhood. This indicates that the ground is unstable and that those unaffected must pay careful attention to whether their home or business structure is shifting, or be on the lookout for the unexpected appearance of large holes in the street or yard. Appendix I is an article that appeared in the Tampa Bay Times on 07/09/2014 titled "Map predicting sinkhole-prone areas closer to reality." Focusing on the state's "Hurricane Alley" identified as the four counties of Pasco, Hillsborough, Pinellas and Hernando, where most sinkhole events occur, the Florida Division of Emergency Management (DEM) has created software it hopes will identify properties prone to subsidence. Economic costs are tremendous: claims against insurers average of $200,000 to level a home's foundation. The cost of an engineering study, to have an inspector review the structure and estimate repair cost, can easily run $3,000 to $4,000, and there is no guarantee that an insurer will pay an appropriately filed claim because companies are overwhelmed with claims.

In addition to the economic magnitude of sinkhole damage cited above, the following two photos show the potential extent for one property, from mild to severe magnitude. The house on the left, which experienced significant damage, belongs to a client of ATLAS Construction and Foundation Repair and is featured on their web site at http://static.wixstatic.com/media/31351e. The right photo shows Pasco County EM Coordinator David Paloff inspecting the property of a local resident, who requested assistance identifying whether the depression on her property was sinkhole-related.

The photos show the extent of damage ranging from a small hole on a property to collapse of all or part of a structure. Tragically, sinkhole incidents occasionally include death of persons inside a home or business. The photo below appeared on the local television channel BayNews 9 on February 28, 2014. The date marked the one-year anniversary of a man who was killed during a sinkhole that struck his home in the middle of the night. The body of victim Jeffrey Bush has not yet been recovered.

http://www.baynews9.com/content/news/baynews9/news/article.html/content/news/articles/bn9/2014/2/28/seffner_sinkhole_one.html, accessed 08/10/2014.

Wildfires

Definition

History/Background: With the exception of fires triggered by lightning strikes, which are usually mitigated in their impact by the precipitation of an accompanying thunderstorm, wildfires tend to be the culmination of hot, dry weather patterns that merely create the conditions for their occurrence. Once those conditions and the buildup of dry fuel to feed a fire are in place, the occurrence of a conflagration depends simply on the right spark in the right place and the disaster is set in motion. Wildfires often begin unnoticed. The three factors contributing directly to the behavior of wildfires are topography, fuel and weather. Wildfires spread quickly igniting brush, trees and homes. Every year, thousands of acres of wildland and many homes are destroyed by fires that can erupt at any time of the year from a variety of causes including arson, lightning and debris burning.

There are four types of forest fires:

1. **Surface:** A surface fire is the most common type and burns along the floor of the forest, moving slowly while killing or damaging trees.
2. **Ground:** Ground fires (muck fires) are usually started by carelessness. They burn on or below the forest floor. These fires are hard to detect, and even harder to extinguish.
3. **Crown:** Crown fires are spread rapidly by the wind and move fastest of all types of fires by jumping along the tops of trees.
4. **Wildland-Urban Interface:** WUI fires occur in a geographical area where structures and other human development meet or intermingle with wild lands or vegetative fuels.

In the wildland, fires have historically performed an important role in the cycle of forest growth, clearing underbrush to allow the regeneration of certain plant species at the expense of others. With or without the human presence, fire is a part of nature. Human efforts to eliminate wildfires from the natural environment, rather than helping matters, have served to make such fires more severe when they occur. Vegetative fuels accumulate in the forest understory, and when fires occur, they are more severe and disastrous than might otherwise have been the case. Thoughtful mitigation involves integrating the role of wildfires in ecosystems, and to incorporate this understanding in development planning for construction that occurs at the interface between growing urban areas and wildland. This interface is the focus of hazard identification efforts.

Historical Occurrence

Florida Division of Forestry reported 286 wildfires in Pasco County from 2003 to 2008 involving over 6,248 acres, bringing the total number of wildfires from 1994 to 2008 to 348. The Pasco County Fire Rescue department reported 234 events over a one-year period ending May 31, 2014. The call center responds to nearly 58,000 calls annually (159 per-day average).

In contrast to the large call response figures, Appendices E (State of Florida Weather Incidents: 1953-2011) and F (NCDC Data - All Hazards, Pasco County) show few major fire events taking place in Pasco County. Appendix E includes all FEMA Fire management Declarations, none of them for the Pasco community. Appendix F, NCDC data for all hazards in Pasco County, lists only the three events taking place in 2001, with no financial or crop damage listed. It is fair to say that most fires are relatively small and easily handled.

Vulnerability

The level of vulnerability is high due to the patterns and location of new development, probability of occurrence based on fuel types, and costs associated with these events. Several of the most vulnerable identified by the Florida Department of Agriculture and Consumer Services-Division of Forestry as problem areas. These areas include:

1) Old Dixie Highway in Hudson (Sections 11, 12, 14, 22, 27, 28, Township 24, Range 16),
2) Tanglewood Subdivision in New Port Richey (Sections 25 and 36, Township 25, Range 16),
3) River Ridge Subdivision in New Port Richey (Sections 29, 30, 31, 32, 33, Township 25, Range 17)
4) Trinity Communities in New Port Richey (Sections 34, 35, 36, Township 26, Range 16), and
5) Quail Hollow Subdivision in Wesley Chapel (Sections 1, 2, 3, Township 26, Range 19, and Sections 34, 35, 36, Township 25, Range 19).

Approximately one-third of Pasco County acreage is undeveloped, forested, or pastureland. As more development occurs adjacent to or intermixed within these areas, the vulnerability of wildfire impacts to people and improved property increases.

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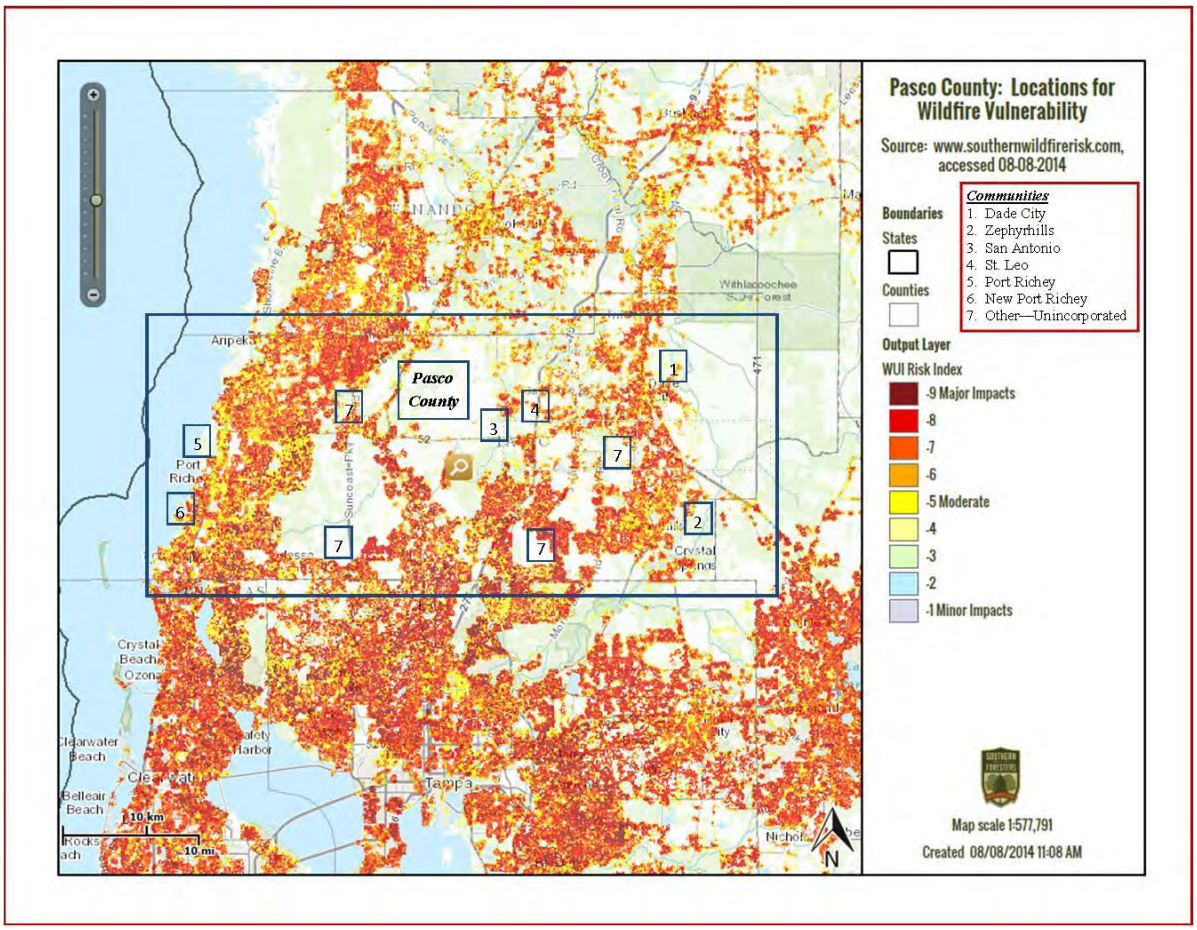
The ***Pasco County Community Wildfire Protection Plan*** (CWPP) discusses wildfire vulnerability, analyzes historical patterns, and identifies communities at risk. It delineates nine risk-based Levels of Concern (LOC), where Levels 4 through 9 are considered medium to very high risk. As per the CWPP, 22% of the Pasco County's land is within LOCs 4 through 9 and approximately 19.7% of the population resides in these medium to high risk areas. This document is included with the LMS as Appendix M. The CWPP was written in 2011 and based on data available in 2009. But an 08/08/2014 conversation with Florida Forestry Service representative Judith Tear confirmed that little has changed in the years since. Recently recruited to the Pasco County Mitigation Committee, she asserted that information for the CWPP generated in 2011 is the same as that shown on today's wildfire vulnerability map (below). Both were created used the mapping portal at http://www.southernwildfirerisk.com. Two local forestry representatives, Withlacoochee Forestry Center (WFC) Mitigation specialist Don Ruths and Pasco County Forest Area Supervisor Dave Fogler, served on the WCPP working group since the WFC includes significant acreage in northeastern Pasco County. Thus, their feedback on changes and updates is considered solid. Nonetheless, the LMS used the portal to create the updated Wildfire Vulnerability Map (below) so reviewers can compare the current map with information in Appendix M.


Pasco County: Locations for Wildfire Vulnerability
Source: www.southernwildfirerisk.com, accessed 08-08-2014
Communities
1. Dade City
2. Zephyrhills
3. San Antonio
4. St. Leo
5. Port Richey
6. New Port Richey
7. Other—Unincorporated
Boundaries
States
Counties
Output Layer
WUI Risk Index
-9 Major Impacts
-8
-7
-6
-5 Moderate
-4
-3
-2
-1 Minor Impacts
Map scale 1:577,791
Created 08/08/2014 11:08 AM
Pasco County
Port Richey
Crystal Beach
Ozona
Clearwater Beach
Belleair Beach
Tampa
Withlacoochee State Forest
Crystal Springs
10 km
10 mi
N

FEMA records that at least 57 fire incidents led to Fire Management Assistance Declarations in the state of Florida. (http://www.fema.gov/disasters/grid/state-tribal-government/47). Not all of these declarations list the exactly location or extent of the event, but a June 17, 2014 update from the Pasco County Fire Rescue office noted that approximately 279 brush fires or wildfires took place between 06/01/2013 and 5/31/2014.

The table below shows the Pasco County Communities most at risk for wildfire. These are identified in the CWPP as those with the highest levels of wildfire user interface (WUI), where homes and businesses are located near heavily wooded lands.

Pasco County Communities at Risk, 2009

Community at Risk	Rank	Community at Risk	Rank
Forrest Hills	High	Holiday	Low
Quail Hollow	High	Jessamine	Low
Bayonet Point	Medium	Lake Pasadena Heights	Low
Clay Sink	Medium	Land O' Lakes	Low
Dade City	Medium	New Port Richey	Low
Ehren	Medium	New Port Richey East	Low
Hudson	Medium	Odessa	Low
Jasmine Estates	Medium	Pasadena Shores	Low
Lacoochee	Medium	Richland	Low
Wesley Chapel	Medium	Saint Joseph	Low
Beacon Lakes	Low	San Antonio	Low
Beacon Square	Low	Seven Springs	Low
Blanton	Low	South Clinton Heights	Low
Clinton Heights	Low	St. Leo	Low
Crystal Springs	Low	Trilby	Low
Dade City North	Low	Trilcoochee	Low
Darby	Low	Zephyrhills	Low
Elfers	Low	Zephyrhills North	Low
Gowers Corner	Low	Zephyrhills South	Low
Gulf Pine	Low	Zephyrhills West	Low

Source: Community Wildfire Protection Plan (CWPP), Florida Department of Forestry (FDOF)

A ranking of low, medium or high risk was determined by using a Florida Wildfire Risk Assessment Checklist for three segments of the county: the western, central and eastern geographic areas. The checklist assigned points for elements such as (but not limited to) ingress and egress, road width, vegetation, and building construction. A maximum number of points was assigned for each element, based on vulnerability, although the highest number of possible points for each element ranged from 2 to 25. The hazard assessment breakdown after points were tallied is as follows:

HAZARD ASSESSMENT	POINT RANGE
Low Hazard	less than 50
Moderate Hazard	50-74
High Hazard	75-99
Very High Hazard	100-120
Extreme Hazard	more than 120

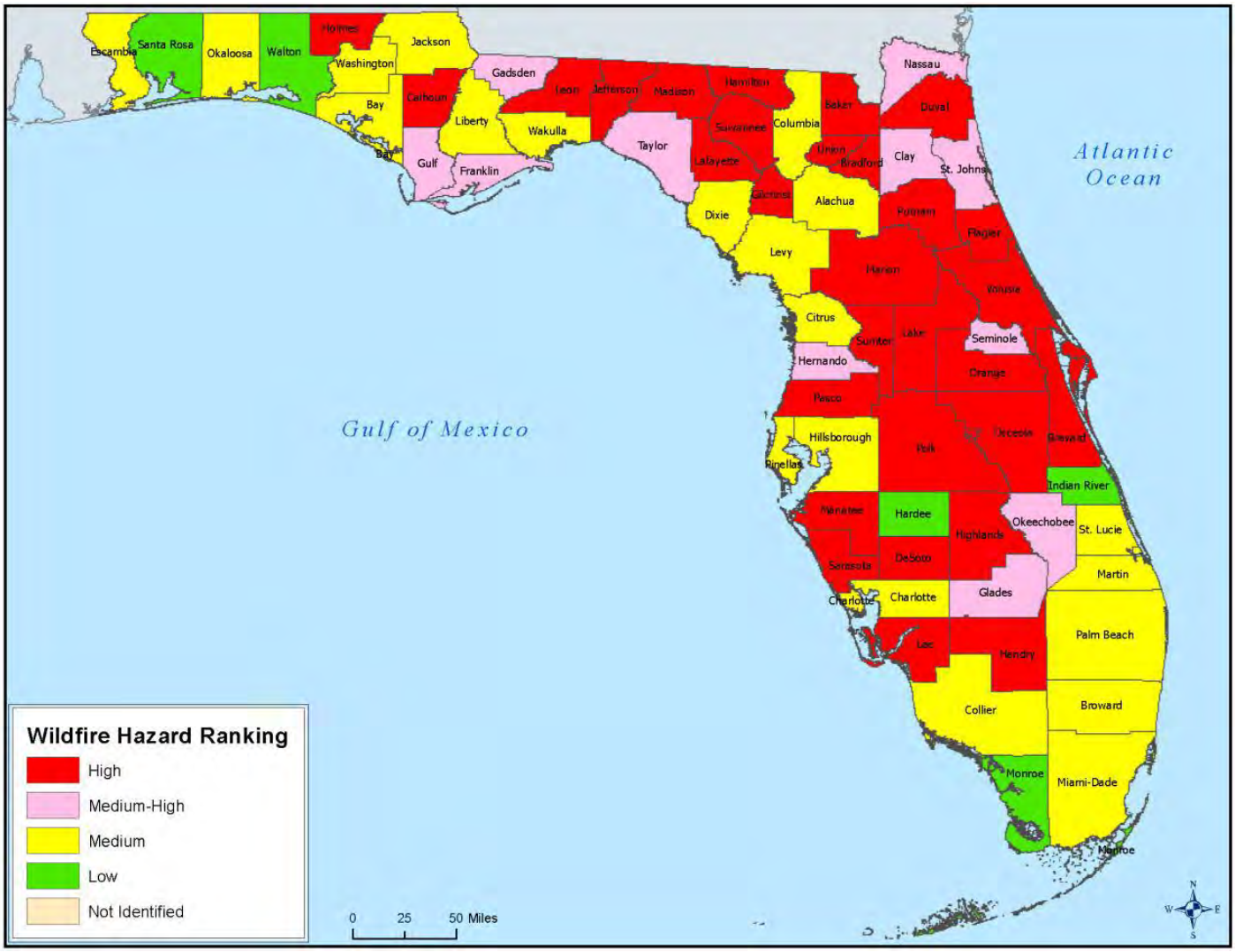
Enhanced discussion of these observations can be found on in Appendix M, the CWPP.

Probability

The predominance of forested acreage, current patterns of development and historical weather conditions indicate the probability of occurrence is high. The threat of fires cannot be eliminated, but public education and the use of prescribed burns can be used to better manage this hazard. The local Fire Rescue department suggests that the probability exists for at least five wildland fires in Pasco County per year. Florida's wildfire season normally runs from December to June, with the largest/greatest number of acres burned peaking in May. April and May are typically considered dry in Florida. This is because the frontal passages from the north and west are no longer moving through the State and the summer thunderstorm pattern has not yet begun. Wildfires can erupt at any time of the year from a variety of causes, including arson, lightning and debris burning. Forest fires from natural causes such as lightning account for only a very small percentage of Florida's wildfires, whereas man is by far the leading cause of wildfires. As an aside, the LMS Working Group this summer welcomed a new member, one from the state forestry service.

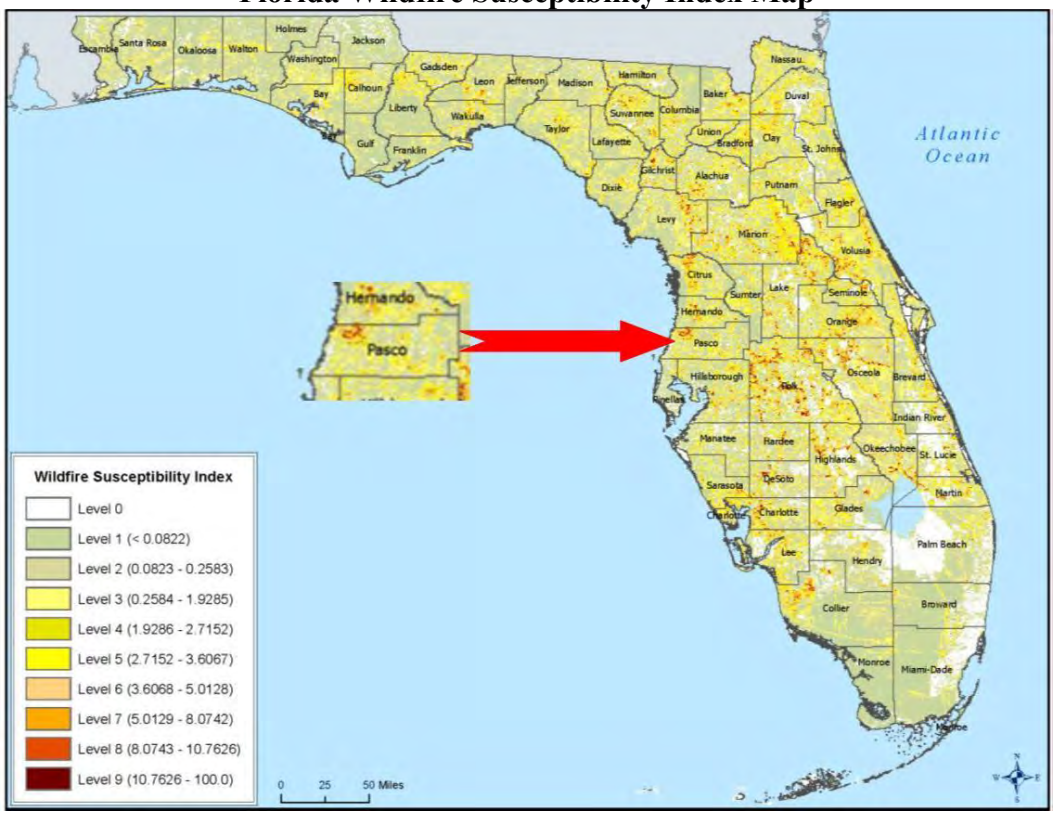
In a state where the wildfire hazard ranks high overall, Pasco County is one of 30 (nearly half) the counties for which the state considers the county particularly vulnerable. This point is illustrated on the map below.

Florida Wildfire Hazard Ranking Map



The next map also document's the county's vulnerability to fire. The map legend shows Pasco County land as falling into the susceptibility Levels 5 through 9, with Level 9 showing the greatest susceptibility to wildfire.

Florida Wildfire Susceptibility Index Map



Extent

The National Interagency Fire Center website rates Florida in the low fire damage class. However, several tracts of the Withlacoochee State Forest and two large wooded preserves are located in Pasco County. Perhaps the best comparative snapshot of extent is captured on the next page, which features a section of the Florida State Fire Marshall's 2011 Annual Report. Statistics for the entire state are included on page 66 for the benefit of FEMA and FLDEM reviewers familiar with LMS plans from all counties. The chart on page 76 is limited to figures from Pasco County and a few others for the purpose of illustration.

County	Total Fires		0.1 - 0.2 Acres		0.3 - 9 Acres	
	# Fires	# Acres	# Fires	# Acres	# Fires	# Acres
All Counties	4,781	221,755.50	1,105	119.3	2,673	6,368.50
Alachua	135	1,465.20	26	2.1	85	206.1
Baker	86	896.10	26	3	45	127.8
Bay	102	998.80	31	3.6	54	122.2
Bradford	87	5,865.80	31	2.6	50	104.2
Brevard	71	20,813.00	3	0.3	45	130.4
Broward	17	4,187.20	2	0.2	6	17
Calhoun	41	212.40	9	1.1	24	48.3
Charlotte	87	2,766.90	12	1.6	48	90.8
Citrus	56	1,046.20	10	1.1	38	79
Clay	91	991.40	20	2.3	55	140.8
Collier	109	9,962.40	14	1.2	61	139.6
Columbia	95	333.40	34	3.7	54	111.2
DeSoto	23	264.20	3	0.3	13	43.2
Dixie	60	319.00	24	2.6	27	69
Duval	97	710.70	17	2.3	68	146.7
Escambia	75	525.40	10	1.2	52	122.9
Flagler	111	6,292.70	41	4.7	54	152.8
Franklin	30	473.30	11	1.2	15	33.1
Gadsden	53	258.80	13	1	32	85.9
Gilchrist	27	431.80	3	0.3	16	37.5
Glades	75	7,338.30	12	1.2	28	58.9
Gulf	43	1,802.60	11	1.3	23	36.3
Hamilton	82	972.30	16	1.8	54	87.1
Hardee	30	590.30	2	0.3	15	53.5
Hendry	35	2,938.80	2	0.1	19	48.7
Hernando	36	256.80	6	0.6	24	44.8
Highlands	122	3,088.80	43	5.5	58	103.4
Hillsborough	44	1,368.40	1	0.2	29	82.2
Holmes	74	569.70	14	1.5	45	76
Indian River	43	914.40	7	0.8	21	47.6
Jackson	81	666.00	13	1.6	55	161.4
Jefferson	46	449.00	8	0.5	28	70.5
Lafayette	51	131.10	23	2.6	22	31.3
Lake	75	1,568.90	13	0.7	46	103.3
Lee	95	2,290.20	4	0.4	61	123.8
Leon	28	104.90	7	0.7	19	39.2
Levy	140	6,764.30	18	2.2	84	175.4
Liberty	21	152.10	5	0.4	12	23
Madison	97	181.60	48	5.5	43	76.1
Manatee	30	346.20	4	0.3	15	43.1
Marion	103	1,117.30	6	0.5	66	161.3
Martin	83	3,101.60	21	2.1	41	119.6
Miami-Dade	73	70,667.60	14	1.6	44	139
Monroe	7	1.20	5	0.5	2	0.7
Nassau	84	507.90	29	3.4	46	93.2
Okaloosa	41	930.80	6	0.7	21	67.8
Okeechobee	81	5,361.60	15	1.7	44	110.9
Orange	71	5,383.40	12	1.3	37	108.4
Osceola	62	3,645.10	3	0.4	32	121.2
Palm Beach	55	10,646.10	7	0.6	27	67.3
Pasco	31	711.00	4	0.5	19	68.7
Pinellas	4	47.50	0	0	1	4.5
Polk	161	5,773.40	12	1.1	90	291.9
Putnam	194	3,772.30	69	4.6	97	205.7
Santa Rosa	146	1,774.60	43	5	80	176.6
Sarasota	60	923.50	15	1.9	35	73.2
Seminole	21	55.30	8	1.1	11	31.2
St. Johns	136	2,538.20	35	4.1	72	185.2
St. Lucie	49	801.00	13	1.3	23	52.5
Sumter	18	746.00	5	0.5	6	21.9
Suwannee	94	290.20	36	4.2	49	111
Taylor	74	209.20	30	3.5	41	83.8
Union	38	1,297.30	12	0.9	20	32.7
Volusia	237	8,952.20	67	8.3	139	357.9
Wakulla	24	75.00	8	0.9	14	30.4
Walton	76	692.10	25	3.2	35	66.9
Washington	57	424.70	8	0.8	38	90.9

Florida Wildfire Statistics
Annual Report of the Florida State Fire Marshall

County	Total Fires		0.1 to 0.2 Acres		O.3-0.9 Acres	
	# Fires	# Acres	# Fires	# Acres	# Fires	# Acres
Pasco	**31**	**711.00**	**4**	**0.50**	**19**	**68.70**
Polk	191	5,773.40	12	1.10	90	291.00
Brevard	71	20,813.00	3	0.30	45	130.40
Miami-Dade	73	70,667.60	14	1.60	44	139.00
Putnam	194	3,772.30	69	4.60	97	205.70
Volusia	237	8,952.20	8	0.90	14	30.40
Palm Beach	55	10, 646.10	7	0.60	27	63.70
All Florida Counties	***4,781.00***	***221,755.50***	***1,105.00***	***119.30***	***2673***	***6,368.50***

Source: http://www.myfloridacfo.com/Division/SFM/FFIRS/documents/sfm2011ar.pdf

State figures show that the extent of most wildfires in Pasco County run from 0.1 to 0.9 acres in size. CWPP figures in the next two tables show that the single-family homes are the most exposed type of residential structure in the areas most susceptible to wildfire.

Countywide Structure Value (millions) by Wildfire Risk and Land Use

	Risk	Millions	%	Single Family Residential	Multi-Family Residential	Mobile Homes	Vacant Residential
Low	LOC 0	$13,004.65	45.2%	$8,266.83	$726.91	$714.30	$184.85
	LOC 1	$1,669.18	5.8%	$916.81	$77.37	$43.16	$48.32
	LOC 2	$1,216.94	4.2%	$639.04	$56.22	$41.38	$47.12
	LOC 3	$5,985.88	20.8%	$3,467.45	$407.17	$231.05	$171.40
	Subtotal	$21,876.65	76.1%	$13,290.13	$1,267.68	$1,029.88	$451.69
Medium	LOC 4	$2,026.10	7.0%	$1,081.65	$98.14	$70.80	$55.56
	LOC 5	$1,407.23	4.9%	$724.04	$52.77	$51.97	$52.10
	LOC 6	$1,401.23	4.9%	$745.89	$39.88	$55.93	$61.24
	Subtotal	$4,834.56	16.8%	$2,551.57	$190.78	$178.70	$168.91
High	LOC 7	$1,236.74	4.3%	$625.61	$62.95	$78.58	$51.85
	LOC 8	$439.85	1.5%	$208.82	$25.07	$32.96	$19.34
	LOC 9	$370.16	1.3%	$164.53	$15.14	$36.21	$19.49
	Subtotal	$2,046.74	7.1%	$998.96	$103.16	$147.76	$90.68
	TOTAL	$28,757.95	100.0%	$16,840.66	$1,561.62	$1,356.34	$711.28

	Risk	Agricultural	Commercial	Institutional/ Government	Industrial	Vacant Commercial/ Industrial/ Institutional	Misc/ Undefined
Low	LOC 0	$366.64	$1,516.01	$769.40	$254.80	$186.42	$18.50
	LOC 1	$365.23	$18.79	$181.98	$2.48	$2.74	$12.32
	LOC 2	$272.63	$18.65	$119.25	$5.46	$5.18	$11.99
	LOC 3	$452.75	$497.10	$492.07	$109.92	$130.36	$26.61
	Subtotal	**$1,457.24**	**$2,050.55**	**$1,562.71**	**$372.66**	**$324.69**	**$69.41**
Medium	LOC 4	$175.78	$251.28	$180.34	$31.89	$68.04	$12.61
	LOC 5	$107.53	$124.65	$199.36	$34.03	$52.12	$8.68
	LOC 6	$115.77	$141.88	$150.28	$20.59	$61.17	$8.61
	Subtotal	**$399.07**	**$517.81**	**$529.98**	**$86.51**	**$181.33**	**$29.90**
High	LOC 7	$95.76	$121.31	$129.81	$9.37	$55.33	$6.15
	LOC 8	$26.20	$58.13	$41.89	$10.74	$14.19	$2.51
	LOC 9	$18.49	$50.01	$35.09	$5.50	$22.68	$3.02
	Subtotal	**$140.45**	**$229.46**	**$206.79**	**$25.61**	**$92.20**	**$11.68**
	TOTAL	**$1,996.76**	**$2,797.82**	**$2,299.48**	**$484.78**	**$598.22**	**$111.00**

Source Data: 2010 Florida Assessor Data, 2010 Florida Dept of Revenue Parcel Data

Single-family homes, commercial structures, and institutional/government structures located within the CWPP areas ranked LOC 7, 8 and 9 (areas most at risk) are collectively worth $,435,210,000.00.

Tornado

Definition

Tornadoes materialize at the trailing edge of large frontal cyclones that result from the clash of high pressure and low-pressure weather systems moving at continental scales across North America. Because of climatic differences, southern states like Florida experience their most violent tornadoes in winter. Unlike the EF 4 or 5 tornadoes that make national headlines, most tornadoes are of short duration and do not touch down. But damage may occur even in areas not located at the center of the tornado path, or if the tornado does not touch down.

Tornadoes are categorized by the Enhanced Fujita Scale, which is an update to the original Fujita scale produced by a team of meteorologists and wind engineers. The Enhanced Fujita Scale was implemented in the United States on February 1, 2007.

Fujita Scale			**Derived EF Scale**		**Operational EF Scale**	
F #	Fastest ¼ mile (mph)	3 Second gust (mph)	EF #	3 Second gust (mph)	EF #	3 Second gust (mph)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Historical Occurrence

Tornado data was integrated from several sources in order to secure an accurate historical perspective. 1994 and 2008, there were 49 reported tornado touch downs in Pasco County, mostly minor, but all with varying amounts of damage. Pasco County receives tornado watch/warnings from the National Weather Service Office in nearby Ruskin, and response is documented in the Pasco County Incident Management Database.

Appendix J: Monthly Tornado Average by State and Region, includes information taken from the web site www.ustornadoes.com. The site breaks down the incidence of tornadoes by U.S. Region and, within each region, by state. Data is extracted from NCDC reports, with the table covering the 20-year period 1991-2010. Author David Livingston points out that overall the number and averages would be roughly the same even if they covered a more recent time period (e.g. 1993-2012). The most astonishing thing about the ranking is that Florida comes in third behind Texas and Kansas, and head of the Midwestern Tornado Alley states one generally considers as tornado stomping grounds.

Later NCDC Pasco County events are included in the table below.

Pasco County Tornado Events 2003-2013

Location	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
Totals:				0	2	5.560M	0.00K
DADE CITY	06/29/2003	Tornado	F0	0	0	40.00K	0.00K
NEW PORT RICHEY	08/14/2004	Tornado	F0	0	0	0.00K	0.00K
ARIPEKA	09/06/2004	Tornado	F0	0	0	0.00K	0.00K
LAND O LAKES	05/31/2005	Tornado	F1	0	0	80.00K	0.00K
LAND O LAKES	07/20/2006	Tornado	F0	0	0	0.00K	0.00K
PASCO	12/25/2006	Tornado	F2	0	2	3.500M	0.00K
LAND O LAKES	12/16/2007	Tornado	EF1	0	0	1.000M	0.00K
HOLIDAY	04/14/2009	Tornado	EF1	0	0	240.00K	0.00K
WESLEY CHAPEL	04/14/2009	Tornado	EF0	0	0	30.00K	0.00K
ZEPHYR HILLS MUNI AR	07/07/2011	Tornado	EF0	0	0	20.00K	0.00K
NEW PORT RICHEY	06/24/2012	Tornado	EF1	0	0	650.00K	0.00K
Totals:				0	2	5.560M	0.00K

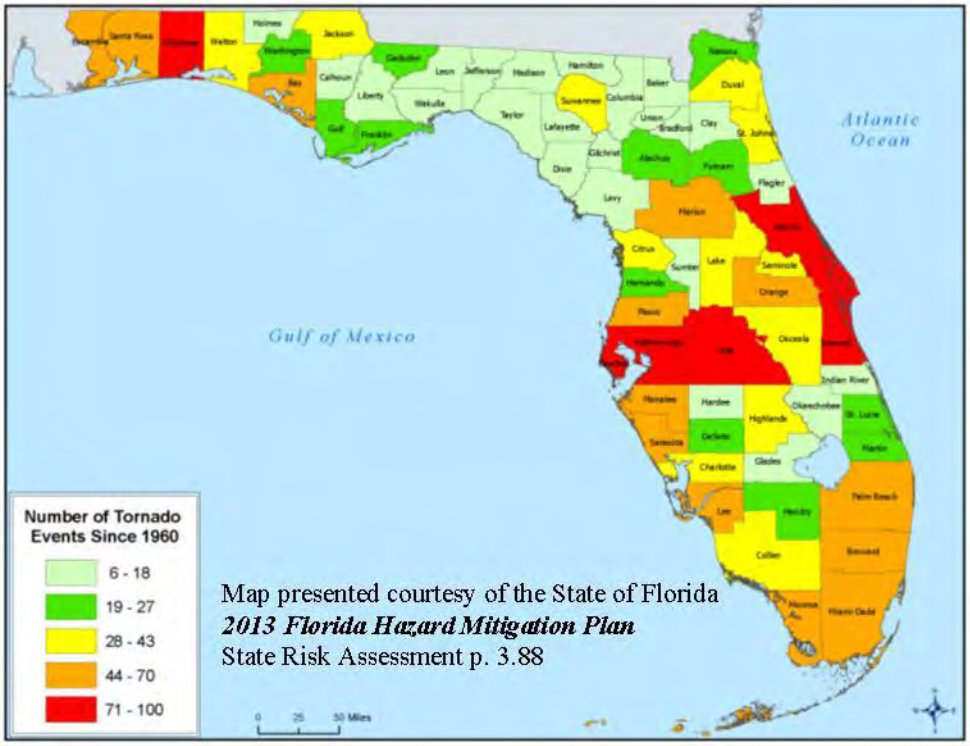
Locations above showing the highest level of damage – unincorporated Pasco County, including Holiday, Land o' Lakes and New Port Richey -- are among those with the highest concentration of population and structures. Predominantly rural Aripeka, Dade City and Zephyrhills (Municipal Airport) have fewer structures and a lower population density.

Vulnerability

Due to the frequency and unpredictable pattern of tornadoes, all of Pasco County is vulnerable to tornado induced damages. The probability of occurrence is high, the damage potential is high due to the concentrations of populated areas, large number of mobile homes and manufactured housing units throughout the County. Since the costs associated with an individual event are not considered high, but the population affected may be high, the level of vulnerability is considered moderate.

Florida has two tornado seasons. The summer tornado season runs from June until September and has the highest frequencies with usual intensities of F0 or F1 on the Fujita Scale. This includes those tornadoes that form from land falling tropical cyclones. *T*he deadly spring season, from February through April, is characterized by more powerful tornadoes because of the presence of the jet stream. When the jet stream digs south into Florida and is accompanied by a strong cold front and a strong squall line of thunderstorms, the jet stream's high level winds of 100 to 200 mph often strengthen a thunderstorm into what meteorologist call a supercell or mesocyclone. These powerful storms can move at speeds of 30 to 50 mph, produce dangerous downburst winds, large hail and the most deadly tornadoes.

Florida Tornado Hazard Ranking



The maps above and below confirm that Pasco County is vulnerable to the tornado hazard. The first map was included in the 2013 State of Florid Division of Emergency Management updated State Hazard Mitigation Plan. Pasco County ranks relative high in the number of events occurring within its borders. The National Oceanic and Atmospheric Association has ranked Florida as number one in the number of tornadoes per square mile. Most of these are weak, referred to as "spawn tornadoes."

However, strong ones do occur. While tornadoes can occur at any time during the day or night, they tend to form during the late afternoon and into the evening. That the whole county is vulnerable to tornadoes can be shown below in a map created by The Tornado History Project (www.tornadohistoryproject.com).

Name	# Mobile homes	Location	Location Total
Connerton Preserve	75	Central	
Land O' Lakes	2,353	Central	
Pasco-Darby	590	Central	3,018
Blanton-Tribly	1,034	East	
Crystal Springs	11,451	East	
Dade City	1,409	East	
Lacoochee-Green	621	East	
Pasadena Hills	4,902	East	
San Antonio-St. Leo	485	East	
Wesley Chapel	5,070	East	
Zephyrhills	9,624	East	34,596
Bayonet Point-	466	West	
Elfers	298	West	
Greenfield-Fivay	1,075	West	
Heritage Pines-	3,470	West	
Holiday (East)	1,103	West	
Holiday (West)-	1,708	West	
Hudson	4,474	West	
Hudson Beach	952	West	
Hudson Beach	1,742	West	
Moon Lake-Hidden	5,151	West	
New Port Richey	2,546	West	
New Port Richey	1,592	West	
Shady Hills	5,590	West	30,167
Central	3,018		
East	34,596	Total	*67,781*
West	30,167		

Residents living in mobile homes are particularly vulnerable to the tornado hazard. The table at left shows the geographic distribution of mobile homes in Pasco County. Note that the eastern and western portions have the highest concentration of mobile homes, while the relatively unpopulated middle section of the county contains only a few by comparison. Residents in these housing structures, regardless of where in the county their home is positioned, are vulnerable to damage or loss of life due to the less solid construction of their homes.

Probability

Based on a historical trend over the past five years, Pasco County can expect to receive 1.4 tornado touchdowns per year. The expected tornado size would be approximately 20 yards wide, with a .1 mile path. Most tornadoes are expected to touchdown for relatively short periods of time in a bounce type pattern. The occurrence of a tornado touchdown on an annual basis is considered high.

Extent

Most tornadoes landing in Pasco County are relatively minor. They generally rank rank as F0 or F1 on the Fujita or Enhanced Fujita scales. While significant events may occurr, most involve minimal damage for clean up of debris, tree limbs, and the like. Fortunately, historical data shows relateively few Pasco County deaths from tornado events.

County residents remember several events occurring over the last decade as being impressive.

On September 22, 1996 in New Port Richey, in the Colonial Hills Subdivision at U.S. Hwy 19 and S.R 54 a tornado occurred and caused over $10,000 in damages. On June 29, 2003, a tornado passed through Dade City and damaged mostly trees and power lines over an area 12 blocks long and one block wide, basically along Coleman Street between 7th Ave and 17th Ave. The tornado wind estimate was 70 mph. Damage to four homes and three cars were a result of trees falling on them. Many trees were pushed over by the tornado but most of these trees had signs of rot and the ground was saturated. The local utility reported 2,700 people without power after the event. Damage was estimated at $40,000 but cleanup costs were estimated at $60,000.

The following year two more tornados occurred. ***On August 14, 2004, a brief tornado was reported near Osceola Drive and Massachusetts Avenue in New Port Richey. No damage was reported.*** Feeder bands associated with the southwest side of what was Hurricane Charley produced several tornadoes the day after Charley moved through the area. Less than one month later, the broadcast media relayed a report of a tornado in Sea Pines Subdivision in Aripeka with several fallen trees, including a 60 foot tall tree that fell across the road. No injuries or other damage was reported.

On May 31, 2005 a small northward moving thunderstorm collided with an eastward moving squall line and produced a brief F1 tornado that crossed the intersection of U.S. Highway 41 and State Road 54 in Land O Lakes. A fast food restaurant lost a plate glass window , a lumber yard saw wood scattered, a strip mall had roof damage, and eighteen homes experienced minor damage when large limbs from oak trees fell on the homes.

In 2006, two tornados occurred. The first was a brief touch down in an open field and caused no damage. The second occurred on December 25. The tornado hit the Tampa Bay Golf and Country Club which is located a few miles west of San Antonio or about 9.5 miles west southwest of Dade City. Radar showed the tornado occurred on the north side of a small bow echo that was moving to the northeast and caused additional damage south of State Road 52. ***The tornado caused $3.5 million in damage, two injuries, 101 damaged homes, 21 of which were considered heavily damaged, and 6 destroyed.*** Most of the damage was rated F0 or F1 on the Fujita tornado scale. However, damage rated as F2 occurred on the 2900 block of Caddyshack Lane. The damage looked like high end F1 damage, but the 1999 home had hurricane straps, a reinforced garage door, and other protective measures making it stronger than the average home.

A housing annex worth $750,000 at the county jail was destroyed by an F1 tornado on December 16, 2007. The 125 inmates living in the annex were evacuated before it was destroyed, resulting in zero injuries. There was also roof damage to a fire station, four vehicles were flipped and there were numerous trees and power poles downed. ***Total damage amounted to $1,853,530.*** A strong cold front combined with the remnants of Tropical Depression Olga to produce hazardous weather in west central Florida. The tornado formed from a long-lived super cell thunderstorm that moved onshore from the Gulf of Mexico.

On April 14, 2009, two tornados struck Pasco County. The first touched down in Pinellas County and moved through the Southwest corner of Pasco as an EF-1 tornado. Roughly 50 homes had light damage and seven homes had moderate or greater damage. The second tornado occurred in Wesley Chapel and was an EF-0. Light damage occurred to six homes. Cost estimates are unavailable as all reported damage was to private property.

Lightning

Definition

NOAA defines lightning as "a gigantic electrostatic discharge between the cloud and the ground, other clouds, or within a cloud." Lightning types include ground flashes, cloud-to-ground lightning and cloud flashes. Lightning is the result of the buildup and discharge of electrical energy. It is this rapid heating of the air that produces the shock wave that results in thunder. A cloud-to-ground lightning strike begins as an invisible channel of electrically-charged air moving from the cloud toward the ground. When one channel nears an object on the ground, a powerful surge of electricity from the ground moves upward to the clouds and produces the visible lightning strike.

Scientists do not understand yet exactly how it works or how it interacts with the upper atmosphere or the Earth's electromagnetic field. Lightning is one of the oldest observed natural phenomena on Earth, seen in volcanic eruptions, intense forest fires, surface nuclear detonations, heavy snowstorms, in hurricanes, and in thunderstorms. NOAA's partner in forecasting, the National Weather Service, reminds people of its danger because "each spark of lightning can reach over five miles in length, soar to temperatures of approximately 50,000 degrees Fahrenheit, and contain 100 million electrical volts."

Historical Occurrence

Central Florida is the "Lightning Capital" of the United States. On average, lightning is responsible for more weather-related deaths in Florida than all other weather hazards combined, and lightening in Florida injures more people than any other state. The previous Pasco County LMS reported that there were 449 lightning related fatalities in Florida between the years 1959 and 2007 and over 1,700 injuries in the same time period. In 2008, Florida ranked number one in the number of lightning related fatalities for the 10th consecutive year with four deaths occurring in 2008. Lightning occurs mostly in the months of May - October. There were 75 NWS-documented Pasco strikes reported between 1994 and 2003. In addition, in the last five years Pasco County has experienced five major lightning strikes that have resulted in human and animal fatalities, bringing the total number of lightning strikes for 1994 through 2008 to 80. These incidents caused personal death/injury, power outages, property damage and ignited wildfires. The economic impact associated with a lightning strike, primarily associated with personal property loss is estimated at $10,000.

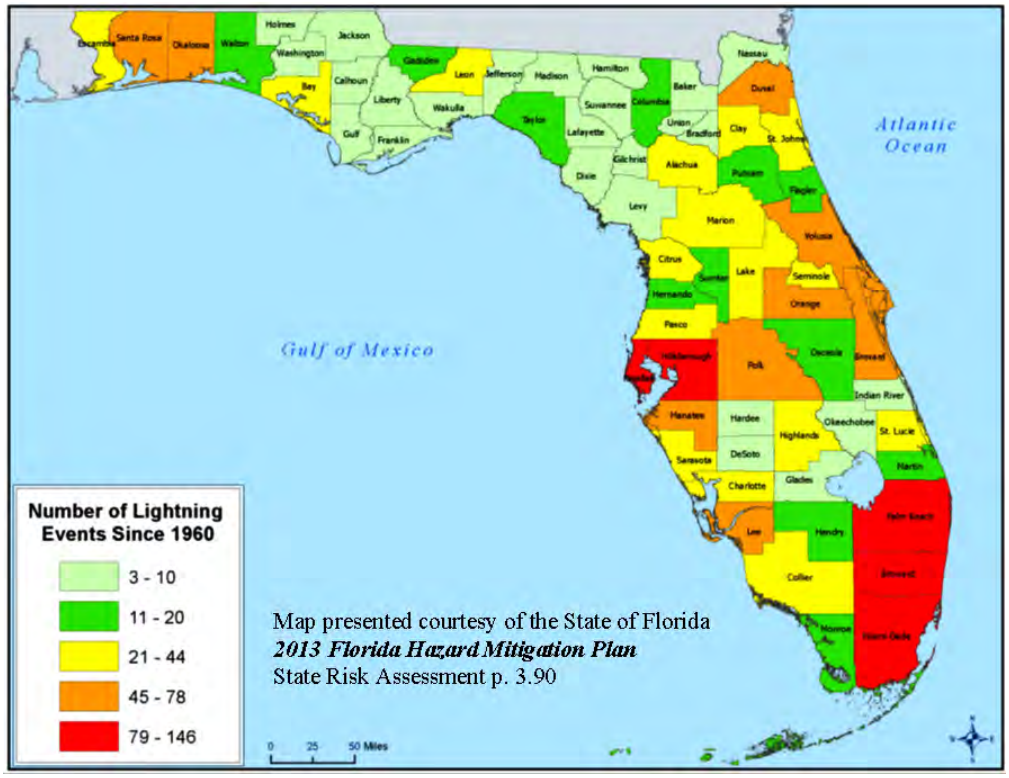
Updated statistics shown in the table below came from a June 2014 Pasco County NCDC report.

Pasco County Lightning Events 1998-2013

Location	Date	Type	Mag	Deaths	Injuries	Property Damage	Crop Damage
LAND O LAKES	06/24/1998	Lightning		0	0	0.00K	0.00K
NEW PORT RICHEY	06/29/1998	Lightning		1	0	0.00K	0.00K
NEW PORT RICHEY	07/06/1998	Lightning		0	0	0.00K	0.00K
DADE CITY	05/21/1999	Lightning		0	0	150.00K	0.00K
WESLEY CHAPEL	06/04/1999	Lightning		0	0	1.00K	0.00K

SAN ANTONIO	07/26/2001	Lightning		1	3	0.00K	0.00K
ZEPHYRHILLS	05/31/2002	Lightning		0	0	0.00K	10.00K
NEW PORT RICHEY	06/19/2003	Lightning		0	0	25.00K	0.00K
ODESSA	06/29/2004	Lightning		0	0	8.00K	0.00K
DARBY	07/06/2004	Lightning		0	1	0.00K	0.00K
HUDSON	05/04/2005	Lightning		0	1	0.00K	0.00K
WESLEY CHAPEL	08/17/2006	Lightning		1	0	0.00K	0.00K
WESLEY CHAPEL	08/24/2006	Lightning		0	4	0.00K	0.00K
ZEPHYR HILLS MUNI AR	08/31/2009	Lightning		0	1	0.00K	0.00K
GULF HARBORS	04/25/2010	Lightning		0	0	12.00K	0.00K
CRYSTAL SPGS	08/01/2010	Lightning		0	1	0.00K	0.00K
LAND O LAKES	12/10/2012	Lightning		0	0	1.00K	0.00K
Totals:				**3**	**11**	**197.00K**	**10.00K**

Florida Number of Lightning Events Since 1960: Pasco County Rank = High



The map above, from the Florida DEM state hazard mitigation plan, shows that, in the "Lightning Capital State," Pasco ranks in the moderate range, high relative to other Florida counties, in the frequency of lightning strikes.

Magnitude

Even weather experts have difficulty explaining some of the scientific terms for lightning and their significance. Magnitude of lightning is one of the elements addressed in a publication titled *Surge Protection: Measured Lightning Stroke Data* (2003 Schneider Electric, http://pes-spdc.org/sites/default/files/presentations/SPDC_2003-05_Florida-Lightning-Stroke-Data_2000.pdf, accessed 08/10/2014). The publication starts by explaining that, since 1990, Progress Energy (formerly Florida Power Company) has been collecting data from the National Lightning Detection Network on the total number and magnitudes of actual "cloud-to-earth" lightning strokes that occurred in their service area. Such data is collected for the purpose of anticipating lightning activity that may affect customers, local transmission, and power distribution systems. On July 15, 2000 between the hours of 0500 and 1900 two different storm fronts passed over the Tampa Bay area from different directions and subsequently collided.

The resulting lightning storms generated 33,863 separate "cloud-to-earth" lightning strokes that were recorded by the National Lightning Detection Network. The sheer number of individual "cloud-to-earth" strokes in such a relatively short period of time is unprecedented. The data collected by the National Lightning Detection Network measured the time, current magnitude of each positive stroke, and the current magnitude of each negative stroke. [Note: In simple terms, positive and negative stroke describe where in the cloud formation the strike is formed.] The study provided the first supportable evidence of realistic magnitudes of lightning events that occur in North America. The data also reveals that less than 2% of the total of either the positive strokes or the negative strokes had a current magnitude greater than 60kA and the vast majority are less than 30 kA, a measure peak current amplitude (of electrical current). Increases in magnitude are reported in 5kA increments, with the #kA being a measure of Arc Fault Currents that indicate the degree of protection needed in a given situation: type of protective clothing to wear, level of protection provided by a surge protector, etc.

This discussion is not easy to understand for someone unfamiliar the study of physics. Here is one layman's effort (the LMS author) to translate how magnitude can be used when applied to the lightning hazard: Even a stroke at a low degree of magnitude carries a high charge if it strikes a person, home, or other object. Fortunately, most of the lightning strikes measured are at the lower end of the power measure, which means that most will not create harm to life or property based on how they enter the atmosphere.

Vulnerability

Most of the Florida population is at risk for lightning strike because healthy residents spend a significant amount of time outdoors enjoying the brilliant sunshine and warm weather that prevails most of the year. The page 74 report also shows that the entire county costs are low, but response costs tend to be high, therefore, the level of vulnerability is moderate. All areas in the county are considered vulnerable to lightning strikes. It also strikes randomly in small, specific geographic areas, making it impossible to predict where it will hit. Unprotected utilities can be damaged, resulting in power outages.

Probability

Statistically, Pasco County has a high probability of experiencing lightning strikes capable of producing wildfire or property damage and cause injury or death. Using historical data, the community expects to one or more lightning incidents annually, with an average cost per incident of

$18,000. NCDC data shows that an injury or death may occur on average once every three years. Better data collection would likely cause these figures to increase because damage from lightning to personal property goes unreported. Property owners frequently opt to absorb the cost of repairs instead of reporting the damages to their insurance carrier.

Extent

The table on page 74 shows relatively little economic and agricultural impact given the many farmers and wide open spaces countywide. While any death or injury is one too many, the relatively few numbers of both (three deaths, 11 injuries) show in a 25-year period in the table on page 74 shows the region has been fortunate overall. A recently lightning strike, reported on June 16, 2014, hit a single family residence. The event took place at 10:00 a.m., so the occupants were not in the home, but two family dogs were killed in the burning house. (Pasco Tribune, *Lightning strikes cited in Tampa area residential fires*, http://tbo.com/pasco-county/two-dogs-die-in-pasco-house-fire-20140716/, accessed 08/10, 2014)

Impact from lightning strikes is most visible and damaging when it results in a wildfire. Beyond the cost of the natural resources, there is the cost of personnel and equipment to fight the fire as well as the possibility of structural losses. Large WUI fires in recent years across the United States and particularly in California indicate the potential for losses of several hundred million dollars in structural damages. Although the frequency of lightning strikes is high, the local impact and cost has been historically low, therefore, the level of vulnerability is estimated to be moderate. Based on this, it is generally accepted that the severity of lightning closely coincides with the severity and/or magnitude of wildfires.

Photo credit: *www.weather.com, accessed 07/11/2014.*

DROUGHT/HEAT WAVE

Definition

A drought is a period of abnormally dry weather which persists long enough to produce serious hydrologic imbalance such as crop damage, water shortage, etc. The severity of the drought depends on the degree of moisture deficiency, the duration and the size of the affected area.

There are four ways to define drought:

1. Meteorological: A measure of the departure of precipitation from normal. Due to climatic differences, what may be considered a drought in one location may not be drought in another.
2. Agricultural: This refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
3. Hydrological: This occurs when surface and subsurface water supplies are below normal.
4. Socioeconomic: This refers to what occurs when physical water shortage begins to affect people.

A heat wave is an extended time interval of abnormally and uncomfortably hot and unusually humid weather. To be defined as a "heat wave," such a period should last at least one day, but conventionally it lasts from several days to several weeks. During the summer season, in warm climates, a heat wave can occur when an area of high pressure containing little or no rain or clouds, heats the air and ground to excess. When the high pressure area remains static, it results in a persistent heat wave. Heat waves have physical, psychological and environmental impact.

Drought is often described as a rating on the Keetch-Byram Drought Index (KBDI), a continuous reference scale for estimating the dryness of the soil and duff layers. The index increases for each day without rain, and the amount of increase depends on the daily high temperature. The index decreases when during and after precipitation. The ranges from 0 (no moisture deficit) to 800. The range of the index is determined by assuming that there is 8 inches of moisture in a saturated soil that is readily available to the vegetation.

Historical Occurrence

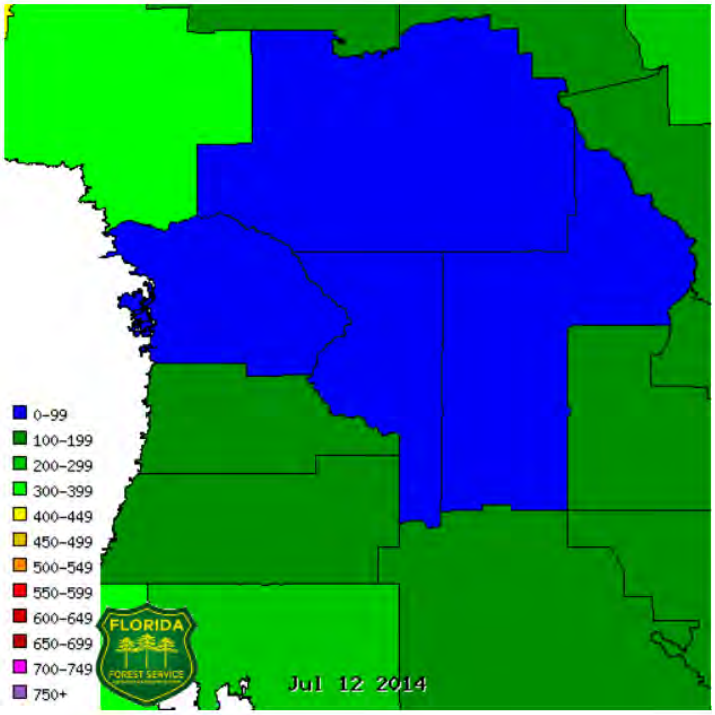
On July 12, 2014, Pasco OEM produced current snapshots of the KBDI summary for the local area. The Florida Forestry Service monitors drought by water drainage basins associated the state's major rivers. Pasco County falls into the Withlacoochee River District, whose counties are shown in the top map on page 78. Pasco is the first dark green county at the bottom left corner of the map, just above the Forestry Service corporate seal. The summary of today's KBDI report for all Florida districts is shown on the table below.

The map and table both show that conditions today are not extreme. While temperatures have been in the 90-degree range traditionally seen during July, the weather has been seasonably wet, thereby reducing the index. Pasco County residents welcome the rain to maintain crops, gardens, roadways, retention ponds, lakes, rivers and other water bodies.

Keetch Byram Drought Index (KBDI)

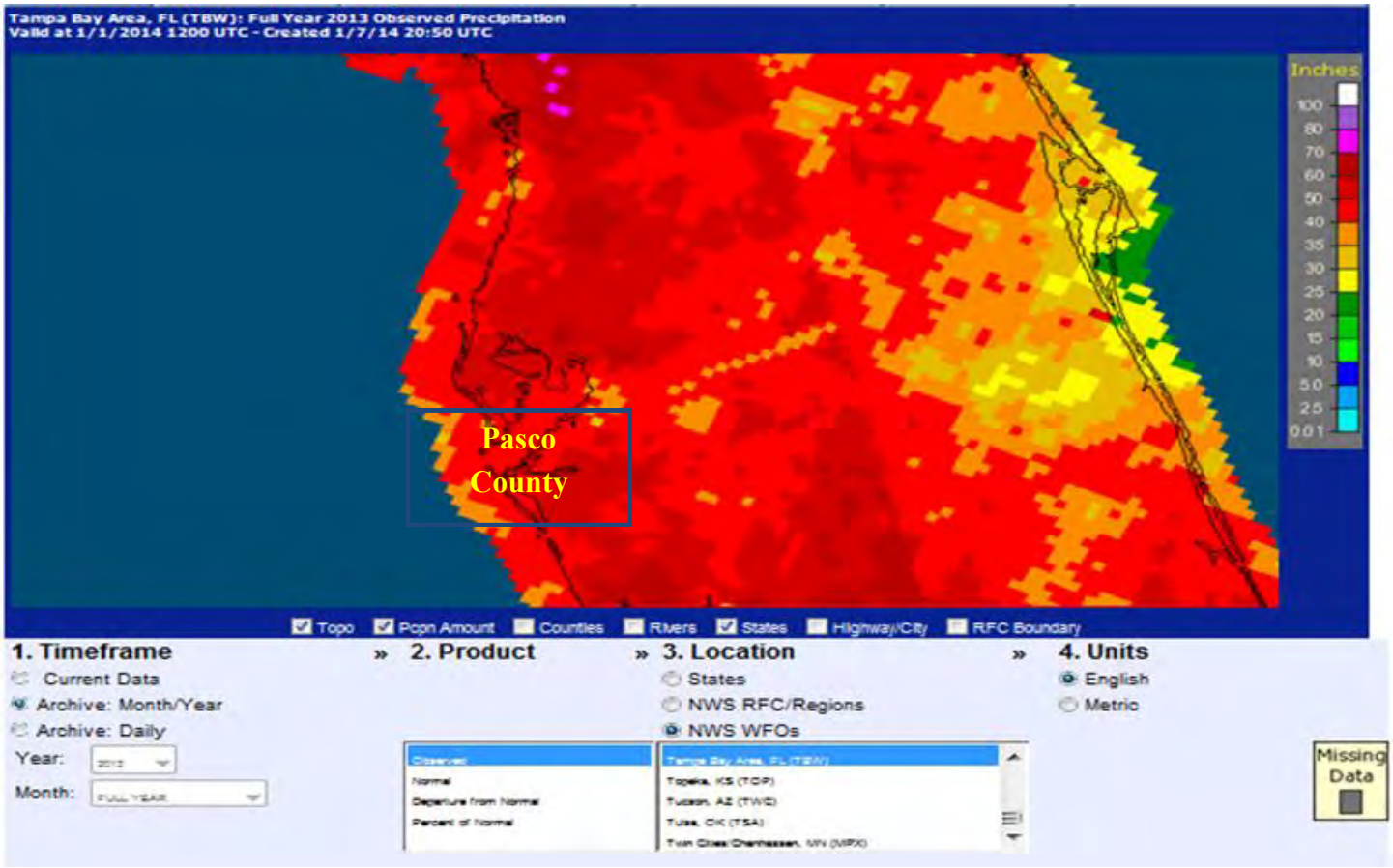
Map: County Averages

Average | Detail | Rainfall | Report | Archive Withlacoochee District



Florida Forest Service KBDI Summary for 7/12/2014

				Percent of Area in KBDI Range							
	Mean	Change	Min/Max	0-100	100-200	200-300	300-400	400-500	500-600	600-700	700-800
Statewide	**287**	-11	1 / 697	24	17	14	10	14	15	6	0
Districts											
Blackwater	**479**	-2	277 / 604	0	0	1	8	50	40	1	0
Chipola	**572**	7	405 / 696	0	0	0	0	11	56	33	0
Tallahassee	**571**	-8	351 / 697	0	0	0	1	16	43	39	0
Perry	**492**	-15	288 / 683	0	0	0	11	38	43	7	0
Suwannee	**439**	-33	43 / 639	0	2	6	17	46	27	1	0
Jacksonville	**350**	-118	1 / 592	4	12	17	23	32	12	0	0
Waccasassa	**161**	-53	1 / 515	47	18	12	13	10	1	0	0
Bunnell	**209**	-42	1 / 522	21	25	36	12	5	1	0	0
Withlacoochee	**113**	-7	1 / 608	59	20	13	3	4	1	0	0
Orlando	**181**	6	1 / 555	31	28	24	11	4	1	0	0
Lakeland	**182**	3	1 / 608	32	26	25	12	5	1	0	0
Myakka River	**279**	-14	1 / 564	12	13	28	29	16	2	0	0
Okeechobee	**151**	11	1 / 477	36	33	22	7	2	0	0	0
Caloosahatche	**118**	3	1 / 507	49	32	13	4	1	0	0	0
Everglades	**166**	20	1 / 631	37	28	20	10	3	2	0	0

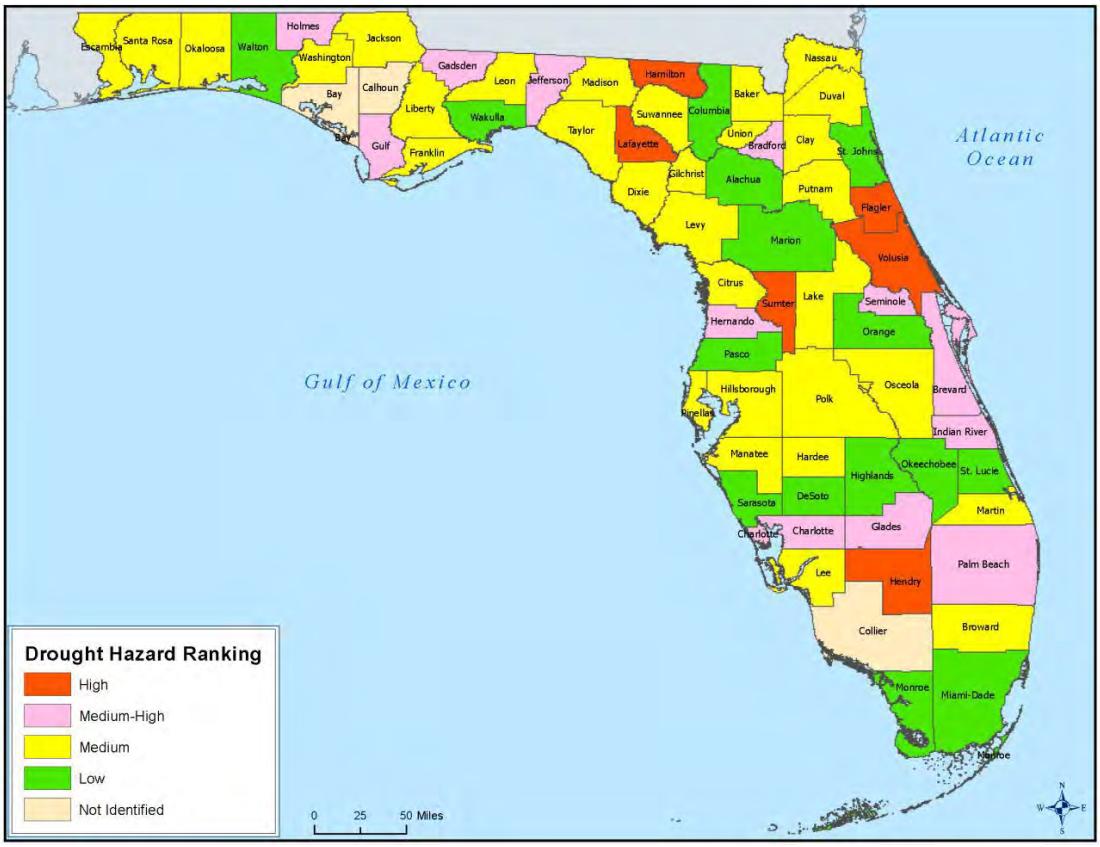


The NWS image above, created on January 7, 2014, illustrates the greater Tampa Bay area level of precipitation for the year 2013. Pasco County is identified by the blue triangle on the left-hand side of the map. While the area's average of 40 inches of rain seems high in comparison to areas of the state experiencing dryer climes, this amount does not go far in serving the county over 365 days, some of which include days with scorched land that is unable to readily absorb the falling water.

According to the Southwest Florida Water Management District website, Pasco County is one of many Florida counties that have been experiencing drought conditions since 2007. In February of 2009, the county was put on alert for severe water shortage conditions. During the previous three years, the rainfall deficit was 27 inches and our water resources continue to be impacted. There was insufficient rainfall during the 2008 summer rainy season and all of our water resources, such as rivers and lakes, have declined rapidly during the dry season. The Tampa Bay area, along with the State of Florida and much of the Southeast, felt the impacts of a severe dry spell in 2001/2002. The below normal rains caused $100 million in crop damages. The State's citrus crop was 6% less than normal because of a two-year drought. Lawns and landscape that could only be watered one day a week for four hours to comply with regional watering restrictions are also affected by drought.

The 2013 State of Florida Hazard Mitigation Plan documents 9 historical drought cycles (typically of the two-year periods) have occurred in Florida since 1900. Most often, the area of impact was regional rather than the state as a whole. From 1891 to 2007, there were 58 recorded instances of drought in Florida. Four major hydrologic droughts have affected Florida. Areas of the state most severely affected by these droughts were the panhandle and south-central peninsula from 1932-1935;

the entire state from 1949-1957 and again from 1980-1982; and the peninsula from 1970-1977. The plan also ranks Pasco as low on the drought hazard ranking.



Given Florida's geographic location and historical weather patterns, the probability of hot temperatures is high across much of the state, with Pasco County included. However, according to the National Weather Service, there has not been a heat wave in Pasco County during the last seven to fifteen years. To clarify this point, while there have been extremely hot temperatures at times, the accepted definition of a "heat wave" event has not been met. Based on historical information provided by the NWS, the probability of a classical heat wave is low.

Vulnerability

There is a significant amount of acreage in Pasco County designated for conservation, public lands and agricultural land use. When this acreage becomes parched during a drought, the area becomes vulnerable to wildfires. The economic impact from these events has not been high, as other reasons have been cited for the decrease in agricultural land uses. Therefore, the vulnerability is considered low due to the number of people impacted by a drought being not overly significant and compared to other events the economic costs are low. Pasco County's agricultural areas are most vulnerable to drought conditions as a result of the economic impact.

Probability

The probability of the occurrence of a drought is high because of the Pasco County's variable water trends over the long haul. Appendix K shows the annual rainfall experienced by each county located in the Southwest Regional Water Management District, colloquially known as Swiftmud, which with the County partners closely. Swiftmud representatives frequently attending Stormwater Management's Flood Task Force meetings, and is involved with updates of FEMA SFHA maps and all other major water-related initiatives. Swiftmud maintains annual rainfall data for each of its counties. Annual totals for the years 1900 through 2013 are included as Appendix K. Pasco County numbers are shaded. The averages are shown in the square at right. During years in which temperatures are high and rainfall low, the region can expect to experience drought conditions.

MIN (imum) Annual Rainfall	31.31
MEAN Annual Rainfall	53.93
MAX(Imum) Annual Rainfall	75.71

The probability of a heat wave, on the other hand, is low, since one has not been measured here during the history in which records have been maintained. Neither drought nor heat wave appear on the list of NCDC-documented events appearing in Appendix E.

Extent

The direct physical effects of drought typically include poor crops and foliage, increased fire danger, less water in the soil, streams and reservoirs, and less water available for livestock and wildlife. These lead to indirect effects such as less farm income, foreclosures, and reduced revenues for vendors and retailers who serve agricultural producers. Current drought conditions have caused some trees to become unstable. Should the County experience a wind or rain event, structures will be in danger from falling trees. The extent of danger from falling trees is unknown. The extent of social effects of extreme drought and heat waves includes brown outs, potential loss of life in the elderly and other at risk populations, and possible water restrictions. In Pasco County many owners of smaller properties use agricultural exemptions to raise cattle, harvest hay, plant citrus groves and cultivate tree farms. However, there has been a recent decline in the total amount of agricultural acreage in the County. This decline can be attributed to the purchase of acreage by public entities as public lands and also the shift of this acreage from agriculture to residential use. The County has experienced a number of prolonged dry periods in the past twenty years. Pasco County experienced prolonged drought conditions between 1998 and 2008 which resulted in many failed wells and ecological impacts to businesses in the spring of 2000.

To date there have been no measurable human or significant economic impacts from droughts in Pasco County. A major long-term hydrological drought that caused the loss of an entire year's citrus crop could cause $3.1 million in damages (389,000 boxes of fruit at $8.00 per box wholesale) and millions more to lawns/landscaping. A more likely event would result in a 5-10% reduction in crop yield and $150,000 to $300,000 in losses.

The more population growth there is in Pasco County the greater demand on the water supply. Increased development in the western half of the county and in the entire region may soon cause hydrological drought to become a hazard of much greater significance.

The effects of a prolonged heat wave on the human population include physical reactions: hyperthermia, heat edema, heat rash, heat cramps and heat syncope (dehydration). In addition, there are psychological and sociological effects resulting from stress that manifest in degraded performance and overall increase in violent crime. Often, heat waves lead to a greater consumption of power. The spike in demand typically results in power outages which increase the problem. When heat waves are coupled with drought, there is also a higher degree of risk for wildfire (dry vegetation on lands that do not have irrigation systems). Finally, heat may result in physical damage by causing roads to buckle, water pipes to burst, and power transformers to explode.

In a worst case scenario, Pasco County would be subjected to a prolonged heat wave, where temperatures consistently exceed the average range for several days or weeks, during a seasonal drought. The expected response would be high power consumption rates resulting in sporadic brown outs or complete black outs. The increasingly higher temperatures within structures would lead to physical responses and ultimately death. In addition, brush and wildfire would consume thousands of acres of vegetation with little water and resources available for response.

Winter Storms/Freezes

Definition

Severe winter weather that includes extreme cold, snowfall, ice storms, winter storms, and/or strong winds, affects every state in the continental United States. Areas where such weather is uncommon, such as Florida, are typically disrupted more severely by severe winter weather than regions that experience this weather more frequently. This is due to the fact that state, county and local governments do not keep sanders, blowers and other equipment needed to plow highways, or keep a large quantity of salt to maintain the roads in the event of freezing rain. This is simply not practical in a part of the country where such equipment might be used every two or three years. When winter hazards occur, the storms may spawn other hazards such as flooding, tornadoes, and extreme winds that may hamper recovery efforts.

Historical Occurrence

DR-#	Date	Event
1359	2/5/2001	Severe Freeze
851	1/15/1990	Severe Freeze
732	3/18/1985	Severe Freeze
698	3/29/1984	Freezing Temperatures
304	3/15/1971	Freeze
97	3/23/1960	Severe Weather

The county has experienced moderate to severe freezes in the past. The occurrences have increased dramatically with an average of one significant freeze per year. The cold weather shelters open when the temperature falls below 36 degrees. Between 1994 and 2008, the shelters opened for 60 weather incidents. Unlike a drought, a freeze does not continue for an extended period of time, and precautions are taken by the residential and agricultural community to minimize the impacts. Both winter storms and freezes impact business conducted by farmers. The chart above is taken from Appendix E, the list of all Florida FEMA declarations. While declarations for freezing weather may occur frequently in The Sunshine State, the media widely disseminates at least one or two stories each year about farmers preparing their crops for a night of freezing temperatures.

The last winter weather FEMA declaration that included Pasco County was on February5, 2001. FEMA declaration number 1359 provided unemployment compensation (Disaster Unemployment Assistance) benefits to individuals who lost jobs or businesses in designated counties as a direct result of freezing weather that struck much of the State over the period of December 1 through January 25, 2001. Based on the FEMA declaration for this hazard, Florida on average has experienced one major event with significant economic impact every 6 to 7 years.

Vulnerability

The citrus industry is the most vulnerable to freezes. Only 1,045 acres of citrus remain to produce 389,000 boxes of fruit each year. For growers, the impact can vary greatly. A major freeze that caused the loss of an entire year's crop (389,000 boxes at $8 per box wholesale) would result in over $3.1 million in losses. It is highly unlikely that this worst-case scenario could occur. In recent years, citrus has been affected very little by freezes. New hybrids and growing techniques have limited the impact of freezes significantly. A more likely event would impact 5-10% of crop production and cause $150,000-$300,000 in losses. On the other hand, the sale of grove/farm land has become very profitable. Some growers even offer financing to create a replacement, long-term income source.

In December of 1894, the temperature fell into the teens and frost and ice covered plants and trees for three days. A second freeze hit growers six weeks later. During the winter of 1926-27, many trees were killed by frost. The next winter was a repeat and all citrus trees were destroyed. Another freeze in 1934 wiped out more than 2,000 acres of citrus and caused many growers to go into the poultry business. A 1962 hard freeze with a low temperature of 8 degrees all but put the citrus industry out of business. Income fell from $3.5 million to $229,000. Two freezes in 1983 and another in 1985 brought economic havoc on Pasco County. In 1983, eight thousand acres were lost and the tax rolls lost over $7 million. The 1985 freeze caused 6,471 acres to be lost and the remainder severely damaged. In the years 2000 to 2003, eleven freezes occurred each year and from 2004 through 2008 a total of 17 incidents of freezing weather occurred.

Magnitude

This limits the extent of damage, keeping it at the low- to very low-level. The magnitude of winter storms is generally low, with but temperatures in the 20s lasting for 6 to 8 hours at any time in the months between December and March. A hard freeze, with temperatures of a more crippling magnitude, occurs six to 10 times per year on average.

Probability

History indicates that it is extremely likely that several short-term multiple freezes will occur each year in Pasco County, including one or more hard freezes that could damage crops. The probability of the occurrence of a freeze (below 36 degrees) is high, given historical weather patterns.

Extent

While freezing temperatures are expected annually, of residents and agricultural communities generally take precautions to limit loss of life and crop or property damage. History indicates that the entire county can experience moderate to severe freezes. The extent of damage is greatest in the eastern half of the county where farms/groves are located. In the last ten years, 65 severe cold/freeze warnings have been issued for Pasco County. In all, freezes and other cold weather events have caused approximately $30.5 million in damages to crops in Central Florida. The economic impact from these events has not been high because less Pasco County land is used for agricultural purposes as parcels are sold in tracts for new development. The vulnerability is considered low.

The number of people impacted by a freeze is not overly significant and, compared to other events, the economic costs are low. Pasco County's agricultural areas are most vulnerable to winter storms and freezes as a result of the economic impact. Pasco County officials, nonetheless, participate in a program with local churches to provide cold weather shelters for those least able to handle high heating bills during the winter months. The snapshot below, taken from the Pasco County web site (www.pascocountyfl.net), shows the effort on the part of the Office of Emergency Management to communicate to residents when and where cold weather shelters will open.

PASCO COUNTY fl

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Cold Weather Shelter Fact Sheet

Cold Weather Shelter Map

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VOLUNTEER IN PASCO

Home > Government > Departments E - M > Emergency Management > Cold Weather > Cold Weather Shelter Fact Sheet

A A A

Cold Weather Shelter Fact Sheet

Overview

- The Cold Weather Shelter Program for Pasco County is a community effort that includes area churches; non-profit agencies like the United Way, the Salvation Army and the American Red Cross; the Homeless Coalition; social-service organizations; the Pasco County Office of Emergency Management; the Pasco County Sheriff's Office; and Pasco County Public Transportation.
- Cold weather shelters are sustained and operated by non-profit and religious organizations.
- Cold weather shelters open if there is a risk of temperatures dropping below 36° F, with or without wind chill, for a period of four hours or more.
- Depending on available funds and donations – food, drinks and blankets will be provided at cold weather shelters.
- Depending on the areas of impact- not all cold weather shelters open.
- Normally, cold weather shelters open by 6:00 pm.
- Not all cold weather shelters take families, but all families in need will be provided shelter.

County Shelters

There are six cold weather shelters in Pasco County; five are located on the west side of the county and one is located in Zephyrhills.

Chancey Road Christian Church
34921 Chancey Rd.
Zephyrhills, FL
Ph: (813) 810-8670

Community Congregational Church
6533 Circle Dr
New Port Richey, FL
Ph: (727) 597-0428

The Holy Ground Homeless Shelter
8835 Denton Ave.
Hudson, FL
Ph: (727) 863-9123

QUICK LINKS VIEW ALL

- Disaster Planning Guide (English)
- Disaster Planning Guide (Spanish)
- Evacuation Map & Shelter Listing (English)
- Evacuation Map and Shelter Listing (Spanish)
- Special Needs Information Packet - with registration form

Photo credit: www.pascoemergencymanagement.com, Cold Weather Shelter Fact Sheet

Technological Hazard Analysis: ***Moderate probability hazard***

Hazardous Materials Incidents

Definition

The Institute of Hazardous Materials Management (IHMM) defines a hazardous material as *any item or agent (biological, chemical, physical) which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors*. IHMM defines hazardous materials professionals as persons who are r*esponsible for and properly qualified to manage such materials.* Such professions manage and/or advising other managers on materials handling at any point in their product life-cycle: during process planning; new product development; manufacturing; distribution; end product usage; disposal; cleanup; and remediation (http://www.ihmm.org/about-ihmm/what-are-hazardous-materials, accessed 07/11/2014)). Such materials are identified and regulated in the U.S. by laws and regulations administered by the U.S. Environmental Protection Agency (EPA), the U.S. Occupational Safety and Health Administration (OSHA), the U.S. Department of Transportation (DOT), and the U.S. Nuclear Regulatory Commission (NRC). Each has its own definition of a "hazardous material."

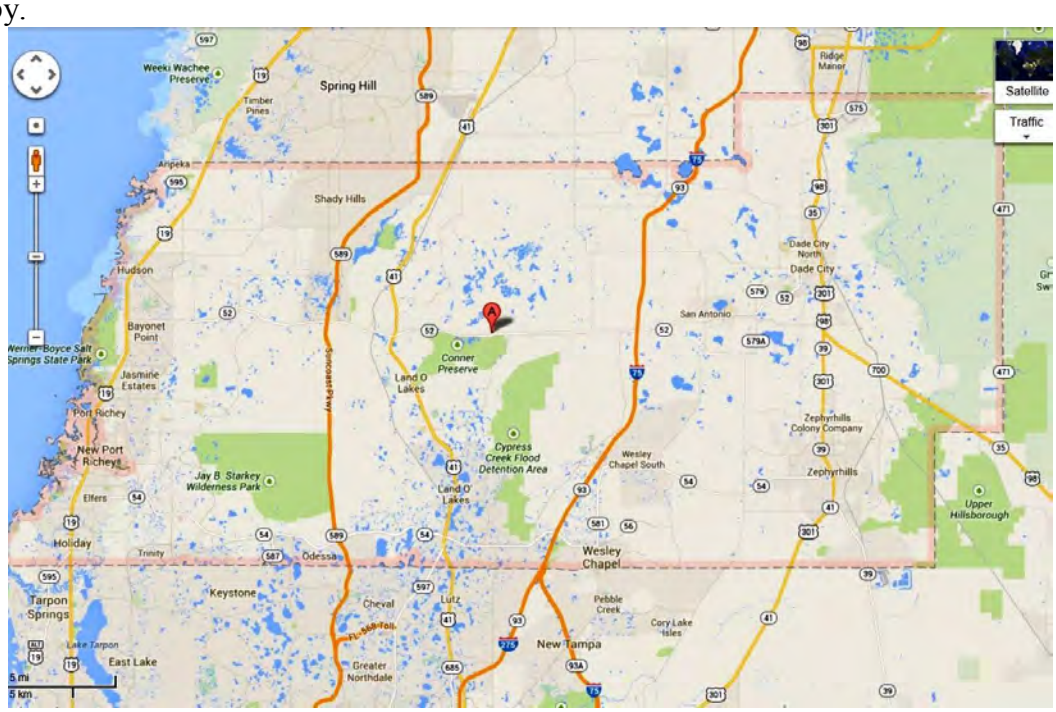
In facilities where the material is handled at a fixed site, hazards are pre-identified, and the facility is required by law to prepare a risk management plan and provide a copy of this plan to the local emergency planning commission (LEPC) and local fire departments. While leaks and other accidents are possible, most hazardous incidents occur during transportation of materials from one place to another.

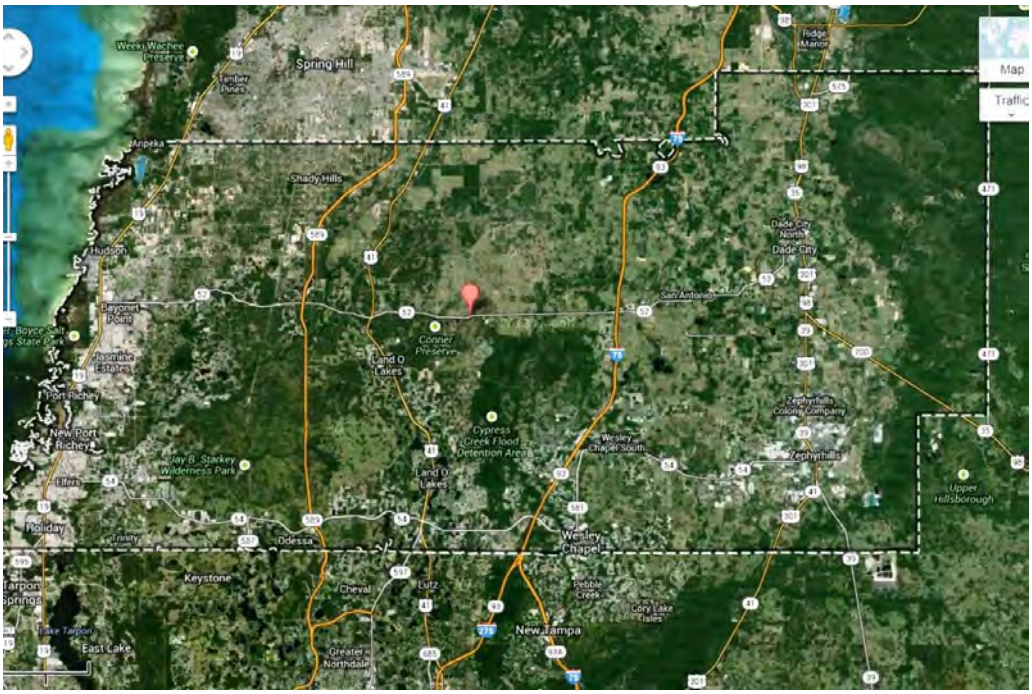
Historical Occurrence

As of July 2014, 80 facilities in Pasco County were listed in the OEM CAMEO (Computer-Aided Management of Emergency Operations) program, a software system used to plan for and respond to chemical emergencies. These facilities reported quantities of extremely hazardous substances under Title III of the 1983 Superfund Amendments and Reauthorization Act (SARA). The annual Hazards Analysis required under Emergency Planning and Community Right-to-Know Act (EPCRA). Sara Title III identifies all types of fixed facilities that are vulnerable to hazardous materials incidents. Appendix G includes documentation of the County's HazMat inspection program.

The volume of truck traffic moving through county in populated areas increases the vulnerability to transportation accidents involving hazardous materials. In addition, two railroad lines pass through the County transporting unknown amounts of hazardous materials. The roads are featured on the top map of page 87; their route through populated are shown on the second map, which offers a satellite view of the county. The most frequent incidents occur along the county's two east-west routes, S.R. 52 and S.R. 54, and the seven north-south routes: U.S. Hwy 41, U.S. Hwy 301, U.S. Hwy 98, U.S. Hwy 19, the Suncoast Expressway, Little Road, and Interstate 75. Two railroad lines also pass through the county transporting hazardous materials. Most incidents involve petroleum-based products. The Pasco OEM Incident Database counts an average of 95 hazardous material spills or

releases in any given year. Chlorine is the most abundant and extremely hazardous substance stored nearby.





Vulnerability

Most releases to which EOM or the Fire Rescue Department respond are manageable, affecting only the building of origin and a relatively small number of people. Economic costs are usually low. Vulnerability to the release or spill of a hazardous material is moderate, and depends upon the amount and type of material spilled or released, and the location of the incident. OEM staff and the

Hazardous Incident Team (HIT) are trained and capable of minimizing the effects of spills and/or releases of most hazardous materials. HIT is an interdisciplinary group comprised of OEM and Fire Rescue staff, and employees of private facilities trained as hazardous materials professionals.

Probability

Spills or releases of hazardous materials during transport are common, occurring roughly every four days (365days divided by 95 roadway spills per year = 3.87). The probability of a hazardous materials transportation incident is high. The event will most likely occur during a vehicle accident along one of Pasco County's major transportation routes carrying unknown quantities of hazardous materials. Fortunately, long periods of time lapse between train derailments. As of the 2009 LMS update, the last train derailment occurred 1995, a gap of 14 years. The most recently recorded such incident occurred in 2009 – no doubt just after the LMS was completed – six years ago.

Extent

Smaller incidents include five-gallon mishaps that can be contained by the staff working at the location where the accident occurred. Many of the reported incidents are of this type. Large incidents include a train derailment or overturned truck and require additional personnel to handle the material. In addition to the human and environmental hazards, this plan previously discussed the limited number of roadways on which haulers can travel, so traffic is likely to be tied up for a short or long distance, depending on the alternate roadways available to personal (non-industrial) vehicles.

Today's hazmat workers enjoy safer, lighter and more comfortable protective gear than was available during the earliest days of disaster response.

Photo credit: *Pasco County OEM web site*
www.pascoemergencymanagement.com

The table at right is featured on the following seven pages, each depicting a hazard analysis summary for the seven jurisdictions included in this LMS: Unincorporated Pasco County and its six municipalities. The tables include the twelve hazards to which residents are considered to be most at risk. These tables provide a basis for conversation between and among the seven communities and they – individually and collectively – determine how best to mitigate against one or all hazards.

The goal of this summary is to address each of the required LMS elements for each hazard in each location.

The chart at right shows how the risk level of low, medium and high were calculated.

Probability of occurrence is based on historical occurrences and predicted likelihood:

High	= Multiple occurrences and/or predictions of likelihood
Moderate	= Single occurrence and/or predictions of likelihood
Low	= No occurrences and/or predictions of likelihood

Economic impacts

High	if > 30% of exposure is lost
Moderate	if 15-30 of exposure is lost
Low	if 15% or less of exposure is lost

Significant number of people/structures affected/at risk

Yes	= greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts

Low	=1
Moderate	=2
High	=3

Significant # of people and structures are impacted

Yes	= 1

Final value is established based on cumulative scores

High	=6-8
Moderate	=3-5
Low	=1-2

UNINCORPORATED PASCO COUNTY					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Moderate-High	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Moderate	Low/Moderate	Yes	No	Moderate

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CITY OF DADE CITY					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Low	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	High	High	Yes	No	High

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CITY OF NEW PORT RICHEY					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Moderate - High	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High		No	Moderate
Sinkholes	High	High	Yes	Yes	High
Wildfires	High	Moderate-High	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Low-Moderate	Low	Yes	No	Low

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CITY OF PORT RICHEY					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Moderate - High	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Low	Low	Yes	No	Low

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CITY OF SAN ANTONIO					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Low - Moderate	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Low	Low	Yes	No	Low

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

TOWN OF ST. LEO					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Low - Moderate	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Low/Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Low	Low	Yes	No	Low

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CITY OF ZEPHYRHILLS					
Type of Hazard	**Probability of Occurrence**	**Economic Impacts**	**Significant # People Impacted**	**Significant # of Structures Impacted**	**Level of Vulnerability**
Hurricane/Coastal Storms	Moderate	Low - Moderate	Yes	No	Moderate
Floods	Moderate/High	Moderate/High	Yes	Yes	High
Coastal/River Erosion	Moderate	Moderate/High	No	No	Moderate
Sinkholes	High	Low/Moderate	Yes	Yes	High
Wildfires	High	Moderate	Yes	Yes	High
Severe Storm	High	High	Yes	Yes	High
Tornado	High	High	Yes	Yes	High
Lightning Strikes	High	Low	Yes	No	Moderate
Drought	High	Moderate	Yes	No	High
Heat Wave	Low	Low	Yes	No	Low
Winter Storm Freezes	Low	Low/Moderate	Yes	No	Low
Hazardous Materials	Moderate	Low	Yes	No	Moderate

Probability of occurrence is based on historical occurrences and predicted likelihood where high=multiple occurrences and/or predictions of likelihood; moderate=single occurrence and/or predictions of likelihood; low=no occurrences and/or predictions of likelihood

Economic impacts = High if > 30% of exposure is lost; moderate if 15-30 of exposure is lost; low if 15% or less of exposure is lost

Significant number of people/structures affected/at risk = Yes if greater than 25% are impacted

Level of Vulnerability is calculated by assigning a value to probability and economic impacts where low =1, moderate =2, high = 3 and where Yes = 1 for Significant # of people and structures are impacted. Final value is established as high if cumulative score =6-8; moderate if cumulative shore =3-5; low if cumulative score =1-2

CONCLUSIONS and RECOMMENDATIONS

Different areas of the county are susceptible to different disasters. Natural disasters, primarily tropical storms, hurricanes, tornadoes and wildfires pose the greatest threat to residents. Each community county is at risk for loss of life or property damage as a result of one or more natural or technological hazards. The LMS Working Group will ensure that cooperative planning, preparation, and implementation of the mitigation strategy lessen the vulnerability, probability, and extent of an unexpected event.

Hurricanes and Coastal/Severe Storms*:* These pose a threat to western Pasco County in particular. The probability, vulnerability, extent and potential losses total the highest of all natural hazards assessed. The hazard continues to receive significant attention for preparedness, response and recovery, and mitigation.

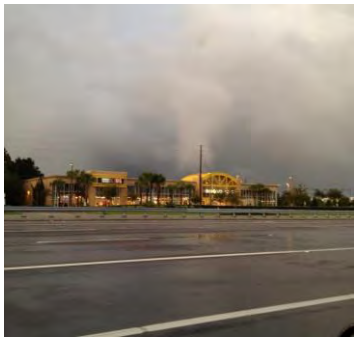
Flooding*:* Flooding is the most likely natural hazard to cause damage locally and regionally. Cindy Jolly, P.E., CFM, LEED (Green Associate), a county Stormwater Management Project Manager, partners with the Pasco OEM in the LMS process as the LMS co-chair. The EOM Mitigation and Recovery Coordinator also serves on the Stormwater Flood Task Force.

At right: *Corner of Whitehouse and 10th Streets in Dade City during a period of heavy rain.* ***Photo credit:*** *City of Dade City.*

Coastal/Riverine Erosion: The community's neighboring Gulf of Mexico, paired with extensive watersheds that fan out across the county, create a moderate susceptibility to erosion. Specific projects can be completed to restore eroded sections of waterways. Coastal and riverine erosion is given consideration by the LMS working group.

Sinkholes*:* The major threat of sinkholes is the human and economic impact. Although there are currently few mitigation measures that government can undertake, the hazard lends itself to community education programs that enable residents to handle occurrences with minimal stress and cost.

Wildfires*:* The threat of wildfires is moderate, but their impact ranges from minor damage to loss of housing, loss of life, and damage to forested areas. Pasco County prioritized wildfire mitigation in 2011, when it developed its Wildfire Mitigation Plan.



Tornadoes: Severe weather is as routine to Florida residents as the sun is expected shine in the region's average of 67% of days annually (http://www.currentresults.com/Weather/US/average-annual-state-sunshine.php, accessed 07/10/2014). High on the list of local mitigation strategies is educating people about finding a secure corner of a building as protection during this hazard.

At left: *A tornado touches down in Wesley Chapel*
Photo credit: *BayNews 9, Brighthouse Network, August 27, 2012*

Lightning*:* Florida is another expected part of living in Florida. The impact of lightning is primarily associated with the safety of people and their property. Education about personal efforts to protect both are helpful in a world where lightning is seen as a beautiful display, not a natural hazard.

Drought/Heat Wave*:* Drought and heat wave primarily affect the water supply, on which human and animal life depend. Water restrictions and other conservation measures have been implemented and encouraged in recent years. These, along with other environmental conservation methods (such as recycling) have been welcomed and supported by the community.

Winter Storms/Freezes: Winter storms and freezes have little impact on Pasco County, except for the potential minor economic impact to citrus crops. Like drought/heat wave, there is little that can be done to reduce future effects.

Freeze warning in effect for most of the Bay area, wind-chill in 20s overnight

After weeks of unseasonably warm temperatures, a blast of cold winter temperatures is gripping the Bay area with freeze warnings in effect for several counties.

III. MITIGATION STRATEGY

Local Hazard Mitigation Goals and Objectives

The LMS Committee approved the following goals and objectives.

Goal 1: Increase Public Awareness Regarding Mitigation

Objective 1.1	Provide education and information to the public about potential hazards and property protection measures.
Objective 1.2	Provide education and information to the business community to promote mitigation efforts.
Objective 1.3	Utilize print media, television, radio and computer technology to educate the public on mitigation.
Objective 1.4	Annually provide outreach specifically to properties immediately adjacent to the repetitive loss properties as part of the Community Rating System outreach and repetitive loss property owner outreach programs.
Objective 1.5	Provide general public outreach at County events, including Hurricane expos and general presentations to community groups.

Goal 2: Promote a Disaster Resilient Community

Objective 2.1	Ensure that critical services are protected.
Objective 2.2	Provide sufficient shelter space in public facilities by retrofitting.
Objective 2.3	Prioritize and retrofit existing critical facilities and infrastructure.
Objective 2.4	Encourage participation in the National Flood Insurance and Flood Mitigation Assistance Programs.
Objective 2.5	Continue enforcement of codes for new development and redevelopment to ensure compliance with all applicable federal, state and local regulations.
Objective 2.6	Prioritize mitigation projects whose benefits are broad (community vs. individual).
Objective 2.7	Insure that mitigation projects produce long-term, cost effective benefits.
Objective 2.8	Provide support to the Digital Flood Insurance Rate Map Modernization project.

Goal 3: Partner with the Division of Forestry to develop a Wildfire mitigation program

Objective 3.1	Convene a committee to prepare a Community Wildfire Protection Plan.
Objective 3.2	Provide education and information to the public about wildfire safety and mitigation.
Objective 3.3	Identify potential wildfire projects that benefit as many residents as possible by mitigating impact to vulnerability areas and structures.

Mitigation Actions

This section will identify and analyze a comprehensive range of specific mitigation actions and projects for each hazard. It will describe the selection process used to identify the mitigation projects and programs.

Mitigation Against Hurricanes and Coastal Storms

Implementation of mitigation efforts will be accomplished through:

- Public education outreach programs, led primarily by Emergency Management, that focus on wind retrofits. Wind protection focuses on reducing the damage from wind by strengthening floors, foundations, and wall/floor attachments of existing structures. Some common techniques that help prevent internal structural damage include the use of storm shutters and shatterproof glass or windows that are rated for the design speed of the site. Improving the way roofs are attached to the walls (i.e. using gable and bracing on frame gables, nail patterns, roof sheathing, hurricane straps, etc.) can keep roofs from lifting up in hurricane force winds. Public education outreach programs regarding wind mitigation is a continuous process.
- Enforcement of the county building code by the County and City permitting department.
- Identification and implementation of retrofit projects throughout the county. The focus will be on both public and private structures vulnerable to wind damage and the responsibility for project identification funding and execution will rest with the property owner.

Some hazards are difficult to mitigate, including lightning, sinkholes, freezes, drought and, to some extent, extreme hot and cold temperatures. However, public education and outreach can assist the residents on what to be aware of and how to be prepared for these events. Emergency Management is typically the lead agency for disaster-related public education efforts in Pasco County.

Flood Mitigation

In order to minimize vulnerability and future losses to buildings, infrastructure and critical facilities, due to floods, stringent building regulations are currently strictly enforced. The County's Floodplain Manager, is charged with enforcing the municipal codes and ordinances which focus on flood damage prevention and protection. Two critical items to highlight from the code is the ability to use the "best available data" and the substantial improvement rule. Currently, Pasco County, in a partnership with FEMA and the Southwest Florida Water Management District, is preparing new Digital Flood Rate Insurance Map (D-FIRM). With the completion of the study phase of 22 watersheds, preliminary maps were prepared ahead of the LIDAR data being ready. Although incomplete, the maps are considered more accurate than the 1984 predecessor and are therefore "best available data".

As noted earlier in this plan, mitigation efforts related to the County's repetitive loss properties are discussed in detail in the Floodplain Management Plan (FMP). The FMP contains a complete listing of each property, a map of each location, a listing of adjacent properties (repetitive loss areas), and documented previous attempts at mitigation.

To mitigate damages to existing structures several independent public outreach programs will be implemented in order to educate the public on mitigation options. The first is targeted specifically to

properties immediately adjacent to the repetitive loss properties. This outreach will become part of the county's general Community Rating System outreach and will be performed annually in combination with the repetitive loss property owner outreach program. The GIS mapping office, with assistance from the Emergency Management staff, developed a specific address/target list of properties based on the repetitive loss properties list. General public outreach will be conducted at county events, including any hurricane expos and general presentations to community groups. Finally, an outreach is planned specifically to target businesses and industry and will focus on mitigation (of existing structures) or prevention (when developing new structures).

In addition, the Public Works Department has identified and is working on several drainage retention areas (DRA) improvements to help mitigate flood damages. Timeframes for completion of flood mitigation projects will vary drastically. This is particularly true for privately owned residential mitigation projects, where local funding may not be available.

Coastal and Riverine Erosion

As discussed in an earlier section of this plan, the effects of coastal erosion are limited to a small geographic location. The vulnerability of coastal erosion resulting from tropical storms and hurricanes is high and therefore the likelihood of coastal erosion is moderate.

Sinkholes

Sinkholes can occur almost anywhere in Florida. They cause structural damage to any building nearby. What can simply start as cracks in the foundation and walls, can be early indicators of a possible sinkhole, which make a building dangerous. Pasco County continues to incorporate sinkhole awareness information about how sinkholes form, what the warning signs are and what to do if a sinkhole develops into the public outreach policy.

Wildfire Mitigation

Wildfire mitigation will be implemented through the Community Wildfire Protection Plan (CWPP) that has been incorporated as an attachment to the Local Mitigation Strategy (see Appendix B). This plan identifies wildfire occurrence rates and cause trends and identifies the medium to high risk communities within Pasco County. This information is used to develop and prioritize hazardous fuel mitigation plans based on communities at risk and then helps to implement public wildfire prevention education programs based on human caused factors. The goal of this plan is to provide enhanced wild land fire protection to the Pasco County communities through hazards fuel reduction and treatment, community public awareness and wildfire prevention programs, and improved wildfire suppression capabilities. Development of the CWPP is the result of a partnership between the State Division of Forestry and Pasco County Fire Rescue with support from Emergency Management and the Local Mitigation Strategy Working Group.

Severe Storms and Tornadoes

Actions to mitigate damages from severe storms and tornadoes have been primarily focused on educational and situational awareness campaigns as well as wind retrofit projects in the government

sector. In addition, strict enforcement of the building code will help to mitigate damages in the future housing stock from severe storms.

Lightning

Injuries and fatalities during a thunderstorm often result from people underestimating risks and not seeking appropriate shelter quickly enough in response to an approaching storm. Educational outreach addressing the dangers of lightning is an aspect of mitigation. Weather radios should be monitored for alerts or warnings, and organizations should install warning systems to alert people to the impending threat of lightning.

Drought/Heat Wave

Pasco County, as well as much of Florida, has experienced drought during the past two years. Local public education efforts by the county Utilities Department concerning water conservation have met with some success and were supported by the stringent watering schedules imposed by the Southwest Florida Water Management District. While there is little we can do today to create rain, there is much we can do to preserve existing resources and protect the aquifer.

Winter Storm/Freezes

Freezes and other cold weather events generally occur in Pasco County between the months of November and February each year. Public education outreach will provide information to homeowners and agricultural land owners to help them plan ahead and prepare for cold weather in order to protect themselves, sensitive crops and livestock.

Hazardous Materials

Mitigation of hazardous materials incidents includes techniques to reduce losses to emergency personnel, citizens, structures and the environment. These techniques include extensive training to personnel as well as notification and education of the public. The county participates on the regional Local Emergency Planning Committee (LEPC) which works together with other local governments, the private sector, and citizens to identify mitigation measures, projects and insure the public's right to know under SARA Title III. There are no timeframes associated with this mitigation effort as it is constant and ongoing.

PROCESS FOR PRIORITIZING PROJECTS

The Hazard Mitigation Project/Program Prioritization Worksheet was utilized by each jurisdiction and agency in the development of the list of mitigation initiatives. The prioritization worksheet requires the identification of projects and programs that appear to have technical merit, will be cost effective, and will protect the health, safety and welfare of Pasco County citizens. Each project/program on the list of mitigation initiatives was described, categorized by type and ranked individually.

The individual or group presenting a new project submitted data to enable the completion of the benefit cost analysis for new projects form to emphasize a review of benefits and costs for each new project being submitted. The forms included were Flood Mitigation Project Application, Hurricane Wind Mitigation Project Application, Benefits Costs Analysis, and STAPLEE. These forms were a qualitative analysis of the benefits and costs associated with each project.

All projects were prioritized by the working group using the STAPLEE system. Each criterion of the STAPLEE was assigned a value of positive one (+1), zero, or negative one (-1). If the action resulted in a benefit for that criterion, it was assigned a value of positive one. Conversely, if the action resulted in a cost for that criterion, it was assigned a value of negative one. Zero was assigned if the criterion did not apply to that action. Scores for each criterion were summed to give a final ranking based on scores.

The preliminary list of projects was presented to the members during the last meeting for prioritization. They were asked to review each projects' ranking according to the STAPLEE method and analyze the results and validate each as reasonable and logical. An open discussion followed to address any issues or concerns with the ranking results. Where there was a "tie", two or more projects with equal ranking, the members of the working group were asked to decide which element had the most value in the county. Where possible, they were asked to vote on projects in an effort to break a tie.

At the conclusion, members were asked to concur and approve the final prioritization for mitigation projects and programs. The product of this discussion is the Project List that is included in Appendix A of this plan. The reader is advised that not all projects are ranked. There are various reasons for this, not the least of which is the submission of an incomplete application. Where additional information is still required, the project is not automatically dismissed, but every effort is made to provide technical assistance to the applicant in order that an application is ultimately completed and that it offers the project an opportunity to come to fruition.

Hazard Mitigation Project/Program Prioritization Worksheet

The new project submission worksheet will be utilized for identifying new projects. First, the project or program will be described and categorized by type. The initial submission will determine the extent to which the project will enhance the sustainability of the county/city/community.

Applicant Information:
Name:
Agency:
Address:
Telephone:

Project/Program Information:

Project/Program Name:
Project/Program Description:

Project/Program Category (Select One):

Project Category		Program Category	
	Capital Projects (CIP)		Stormwater Management
	Critical Facilities		Community Involvement
	Flood Proofing		Feasibility Studies
	Infrastructure		Management Plan
	Property Acquisition		Development/Modification
	Restoration of Natural Features		Public Education
	Retrofitting of Structures		Public/Private Partnerships
	Stormwater Management		Regulatory Initiatives

Project Type:

Please identify the type of action proposed. Check all that apply.

☐ Prevention: Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.

☐ Property Protection: Actions that involve the modification of existing buildings or infrastructure to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, flood proofing, storm shutters, and shatter-resistant glass.

☐ Public Education and Awareness: Actions to inform and educate citizens, elected officials, and property owners about potential risks from hazards and potential ways to mitigate them.

Such actions include outreach projects, health immunization and prophylaxis, real estate disclosure, hazard information centers, and school-age and adult education program.

☐ Natural Resource Protection: Actions that, in addition to minimizing hazard losses also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

☐ Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include stormwater controls (e.g. culverts, floodwalls, seawalls, retaining walls and safe rooms.

☐ Other: Explain.

Timeliness:

The expected timeframe for completion and implementation of a project or program (upon receipt of funding).

☐ Less than one year to complete or implement.

☐ More than one year to complete or implement.

Project Cost:
$_____ (estimated)

Local Mitigation Strategy Working Group
Pasco County, Florida
Flood Mitigation Project Application

Date Submitted:	
Organization:	Submitted by:
Description of project:	
Location:	Estimated Project Cost*:$ Project's Annual Maintenance Cost:$
Circle Building Type: 1 story w/basement split level w/basement 2 story with basement 1 or 2 story w/o basement split level w/o basement Mobile home other	
Year built:	Code built to: (example: ASCE 97-8)
Total floor area (SF):	SF Occupied:
If not owner occupied, monthly rent:$	
List special building contents and estimated value: (e.g. specialized equipment)	
Select mitigation measure: a) Elevation (ft):	What is the First Floor Elevation (FFE): How many feet is the FFE being raised:
b) Flood Barriers:	At what flood elevation will the barrier be overtopped:
c) Acquisition/Relocation	
Value of Public/Non-Profit Services:$ Annual Operating Budget:$ Enter rent amount if not included in budget:	
In 100 year floodplain? Yes No Don't Know	
Availability of matching funds (25%) Yes No Don't Know	
Community name and population served or benefited:	
Longevity of benefit (how many years will the structure be in use?):	
Priority of requestor (only one project for each priority):	
Additional information or justification:	

*Attach project estimates/other cost documentation.

Local Mitigation Strategy Working Group
Pasco County, Florida
Hurricane Wind Mitigation Project Application

Date Submitted:	
Organization:	Submitted by:
Description of project:	
Location:	Estimated Project Cost:* Project's Annual Maint Cost:
Circle Building Type: Non-Engineered, Wood Manufactured Building Fully Engineered	Non-Engineered, Masonry Lightly Engineered Other
Miles Inland:	Number of Stories Above Grade:
Year built: Code build to:	(Example: ASCE 97-8)
Total Floor Area (SF):	SF Occupied:
If not owner occupied, monthly rent:	
List Special Building Contents and Estimated Value: (e.g. specialized equipment) Value of Public/Non-Profit Services:	Annual Operating Budget: Enter rent amount if not included in budget:
In 100-year flood plain?(circle one) Yes No Don't Know	
Availability of matching funds (25%)(circle one) Yes No Don't Know	
Community name and population served or benefited:	
Longevity of benefit (how many years will the structure be in use?):	
Priority of requestor (only one project for each priority):	
Additional Information or Justification:	

*Attach project estimates/other cost documentation

STAPLEE Feasibility Review Worksheet

Owner:	
Hazard:	
Project:	

STAPLEE Criteria	Question	Answer	Potential negative effects or obstacles	Opportunities to mitigate damage, loss of life, other obstacles
Social	Is the mitigation action socially acceptable to the community?			
Social	Will the action adversely affect any one segment of the population?			
Social	What effects will the action have on the social, historic, and cultural environment of the community?			
Technical	Is the proposed action technically feasible and does it provide the appropriate level of protection?			
Technical	Is the project a long-term solution to the problem?			
Technical	Will the project solve the problem?			
Administrative	Can the community (property owner) provide maintenance of project?			
Administrative	Does the community have the capability (staff, expertise, time, funding) to implement the action?			
Political	Is the mitigation action politically acceptable?			
Political	Will the general public support or oppose this project?			

STAPLEE Criteria	Question	Answer	Potential negative effects or obstacles	Opportunities to mitigate damage, loss of life, other obstacles
Legal	Will the action comply with State and Federal laws and regulations?			
Legal	Will the action comply with Local laws and regulations?			
Economic	Does the cost of action seem reasonable for the size of the problem and the likely benefits?			
Economic	What burden will be placed on the local economy to implement and maintain the action?			
Economic	Is the benefit of the action favorable?			
Environmental	Will the proposed action have an effect on land/water?			
Environmental	Will the proposed action have an effect on the Natural Environment?			
Environmental	Is the proposed action consistent with the community environmental goals?			
Environmental	Is the proposed action consistent with Federal Environmental Laws?			

Implementation of Mitigation Actions

Public and private-sector coordination is vital for the long-term success of hazard mitigation. Increased educational awareness of the need for and importance of hazard mitigation can help to encourage home and business owners to retrofit their structures for improved protection. Hurricane-related hazard mitigation education is frequently provided by Emergency Management through outreach programs such as the Hurricane Expo and presentations to homeowner or business groups prior to the annual hurricane season. These efforts are designed to encourage home and business owners to make preparations in advance of each hurricane season and will continue.

Mitigation Projects/Programs

The list of Hazard Mitigation Projects/Programs identifies projects/programs that can be funded through the Hazard Mitigation Grant Program, as well as those that can utilize alternative funding sources. The list developed includes the overall score of the projects/programs based upon the Project/Program Prioritization Worksheet, project location, project/program category, overview of funding sources, project/program description, estimated costs, estimated benefits (if calculated), and an implementation date for those projects included in FY Capital Improvement Programs.

Residential mitigation projects are not included in the LMS project list as they are fully documented and prioritized within the Floodplain Management Plan (FMP). Since the highest level of vulnerability for the County is associated with flooding events, the list within the FMP accurately reflects the concerns of the community.

In addition to the Elevation and Acquisition Projects, Retrofitting of Critical Facilities and Modification projects/programs are included in the Hazard Mitigation Projects/Programs List. The worksheet was utilized to score these types of projects/programs on this list. However, a cost-effectiveness analysis was not required, since funding sources other than the Hazard Mitigation Grant Program will be identified.

The availability of funding and the immediate priorities of the local government and municipalities will ultimately drive the selection of mitigation projects/programs for grant application submittal. The funding source, allocation, and priorities established by the grant program would determine if and when the mitigation projects/programs will be funded outside the regular local government budgetary process. The description of funding sources is based upon information currently available and does not preclude the consideration of other funding sources that are not identified here.

Identification and Analysis of Mitigation Actions: NFIP Compliance

Pasco County and its municipalities participate in the National Flood Insurance Program and as described below, maintain their rating under the Community Rating System through various programs. As stated earlier, a full description of this process is documented in the County's Floodplain Management Plan.

Approximately 35% of the land within Pasco County is controlled by governmental entities. This public land allows for beautiful wooded hammocks and open vistas and is an important component to

the recharging of the underground Floridian Aquifer that provides water for much of West Central Florida. Public lands also allow space for flood waters to accumulate and dissipate, thereby reducing the possibility of flooding to nearby residences. Maintaining these natural areas contributes to the high water quality and adequate water supply that we enjoy in Pasco County.

In 2004, heavy rains from back-to-back hurricanes caused flooding in previously undocumented areas of the County. Isolated flooding was also seen in historically flood prone areas of the County during the drier seasons of 2005 and 2006. Periodic flooding, both from storm surge and from inland pooling of water, can occur in all sections of Pasco County. Many areas of the County contain environmentally sensitive lands and wetlands. Dumping in, polluting, or otherwise compromising these areas can place our water supply and natural areas at greater risk from flooding, which will certainly impact our developed areas.

The Pasco County Building Code and the National Flood Insurance Program regulations require that a structure must meet the same construction codes as a new building if the cost of reconstruction, rehabilitation, repairs, additions, or other improvements is equal to or more than 50% of the existing structure's market value. This includes all floors of the structure. Buildings that are substantially damaged must also be brought up to the same codes and standards.

Due to the amount of development constructed within the floodplain, as well as an increase of stormwater runoff as a result of the overall increase of development, floodplain management has become an important component in protecting the well-being of the County's residents and property. To help decrease the vulnerability of flood damage for thousands of properties located within the coastal and floodplain areas, the County actively participates in the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program's (NFIP) Community Rating System (CRS).

In 1968, the US Congress created the National Flood Insurance Program (NFIP) to provide affordable flood insurance to people living in high risk flood areas, also known as Special Flood Hazard Areas. The NFIP is a self-sustaining program administered by a branch of FEMA. The program makes flood insurance available in communities that adopt and enforce floodplain management ordinances and regulations to reduce future flood damage (NFIP Communities).

Communities that participate in the NFIP adopt and enforce floodplain management programs in order to reduce future flood damage. In exchange, the NFIP provides federally backed flood insurance for property owners and renters in the participating communities. In addition to providing flood insurance and reducing flood damage through floodplain management regulations, the NFIP identifies and maps the nation's floodplains.

The NFIP has been successful in requiring new buildings to be protected from damage by a 100-year flood. However, flood damage still results from more frequent, less intense, flooding episodes and from flooding in unmapped areas. Under the Community Rating System (CRS), there is an incentive for communities to do more than just regulate construction of new buildings to minimum national standards. The CRS adjusts flood insurance premiums to reflect community activities that reduce flood damage to existing buildings, manage development in areas not mapped by the NFIP, protect new buildings beyond the minimum NFIP protection level, help insurance agents obtain flood data and help residents obtain flood insurance.

The objective of the CRS is to reward communities that are doing more than meeting the minimum NFIP requirements to help their citizens prevent or reduce flood loses. The CRS also provides an incentive for communities to initiate new flood protection activities. The goal of the CRS is to encourage, by the use of flood insurance premium adjustments, community and State activities beyond those required by the National Flood Insurance Program to:

- Reduce flood losses, e.g.,
- Protect public health and safety,
- Reduce damage to buildings and contents,
- Prevent increases in flood damage from new construction,
- Reduce the risk of erosion damage,
- Protect natural and beneficial floodplain functions,
- Facilitate accurate insurance rating, and
- Promote the awareness of flood insurance.

Presently, all jurisdictions are active participants in the NFIP. According to FEMA, policy statistics are as follows:

Pasco County, FL NFIP Participation Data Available through 04/15/2014		
Community	**Policies in Force**	**Coverage**
Pasco County (unincorporated)	27,492	5,910,423,500.00
Dade City	64	14,951,700.00
New Port Richey	1,713	289,303,100.00
Port Richey	884	173,961,600.00
San Antonio	1	210,000.00
St. Leo	0	-
Zephyrhills	173	35,198,900.00
Total	**30,327**	**$ 6,424,048,800.00**
Source: Southeast Office, NFIP iService, 07/10/2014		

Pasco County entered the NFIP on in 1977 and the last community assistance visit was conducted on 12-01-2011. The County currently has a Class 6 rating under the Community Rating System (CRS). To reiterate data shared earlier, there were 30,327 flood insurance policies in force countywide as of 04/14/2014. NFIP identified 496 repetitive loss properties in Pasco County that are discussed in detail in Appendix D: Annual Report of Repetitive Loss Properties and Development of Repetitive Loss Areas (Updated January 31, 2014). This report, and its inclusion in the LMS, are required for the community to maintain its CRS status.

As a Class 6 community, Pasco County's CRS participation allows NFIP policyholders to receive a 20% discount on their flood insurance premium. According to the County's most recent recertification documentation, received in January 2014, the County performs activities related to the items for which it receives credit as follows:

Elevation Certificates	Higher Regulatory Standards
Map Information Service	Repetitive Loss Area Outreach Project
Outreach Projects	Floodplain Management Planning
Flood Protection Information	Drainage System Maintenance
Flood Protection Assistance	

To summarize, the county and its municipalities will continue their commitment to NFIP by continuing to:

- Enforce the Floodplain Management Ordinance which regulates new development and substantial improvements in the special flood hazard areas.
- Maintain elevation certificates on file for all new construction in the SFHAs or for substantial improvements to properties in the SFHA.
- Use best available (flood map) data for issuing construction permits.
- Maintain public records and make them available for review.
- Maintain records pertaining to LOMAs, and LOMRs, etc.
- Provide information related to Flood Hazards, Flood Maps, etc., to the public upon request.
- Continue community outreach efforts for compliance with the Community Rating System program.
- Continue to promote Flood Insurance to property owners.
- Continue to update the public and enable their participation in the Flood Remapping Project.
- Maintain flood hazard publications at the main branch of the Library.
- Where feasible, continue to identify/acquire land in the SFHA open space/preservation.
- Promote hazard flood mitigation to the public.
- Continue drainage maintenance and drainage system improvement projects.
- Continue Floodplain Management activities and target a Class 5 rating.
- Enforce the adopted Floodplain Management Plan.

Funding Sources

A description of currently identified funding sources is provided below. The description includes an overview of the resource, eligibility criteria, type of assistance available, and a point of contact.

In addition to the funding sources for the mitigation projects/programs, there are a few programs available to citizens and homeowners to strengthen their homes and businesses. These programs include the Fannie Mae Project Impact Disaster Prevention Loan Program, Florida Alliance for Safe Homes (FLASH), and National Flood Insurance Program (NFIP).

The Fannie Mae Project Impact Disaster Prevention Loan Program has joined with the Florida Department of Community Affairs and the Federal Emergency Management Agency (FEMA) to make consumer installment loans available to Florida homeowners throughout the state. These unsecured loans, at competitive interest rates, will help homeowners construct residential safe rooms and storm shelters. All single-family homeowners (including mobile homes) in Florida are eligible for these loans. Homeowners may borrow up to $20,000 and have up to ten years to repay the loan.

Benefits to the consumer include a quick approval process; competitive interest rate; assurance work is performed by certified contractors; and an increase in the value of the home.

FLASH is a partnership of the insurance industry, state and federal government as well as national not-for-profit groups. The program is targeted at educating consumers about disaster mitigation. This a multimedia campaign aimed at helping Floridians make their families, homes, and communities better able to withstand hurricanes and other severe windstorms. The initiative includes a toll free information line (1-877-221-SAFE), web site (www.flsafehomes.org), and television public service announcements concerning how to prepare for the next hurricane season.

The NFIP provides flood insurance coverage for structures at risk in special flood hazard areas. The FDCA administers the NFIP in the state and provides technical assistance to local governments, residents and various building-trade groups on proper floodplain building and construction techniques. Insurance under the program is available only for loss due to flood. If floods damage a home or business, the NFIP may require the owner to meet certain building requirements to reduce flood damage. To help meet the costs associated with repairing or rebuilding, the NFIP grants policyholders up to $15,000 to bring their home or business into compliance.

Funding Sources Index

Assistance to Firefighters Grant
Buffer Zone Protection Program
Capitalization Grants for Clean Water State Revolving Funds
Coastal Services Center Cooperative Agreements
Community Assistance Program-State (CAP-SSEE)
Community Development Block Grant
Conservation and Recreation Lands
Emergency Management Preparedness and Assistance Trust Fund/Municipal Competitive Grant Program
Environmental Education Grant
Federal Highway Administration, Planning & Environment, Intermodal and Statewide Programs
Flood Mitigation Assistance Program
Florida Communities Trust (FCT)
Hazard Mitigation Grant Program
Hurricane Program
Nonpoint Source Implementation Grants
Outdoor Recreation-Acquisition; Development and Planning (Land and Water Conservation Fund Grants)
Pollution Prevention Grants Program
Pre-Disaster Mitigation (PDM) Program
Public Assistance (PA)
Repetitive Flood Claims Program
Residential Construction Mitigation Program
Severe Repetitive Loss Program
Special Economic Development and Adjustment Assistance Program-Sudden and Severe Economic Dislocation (SSED) and Long Term Economic Deterioration (LTED)
Transportation Equity Act for the 21st Century, Surface Transportation Program

Water and Waste Disposal Loans and Grants
Water Pollution Control
Watershed Protection and Flood Prevention

Funding Sources Detailed

Assistance to Firefighters Grant

Overview	Provide financial assistance to fire departments/non-affiliated EMS organizations to enhance their fire and related hazards capabilities and response needs. To support organizations lacking tools/resources necessary to effectively protect public health and safety and their response personnel with respect to fire and other hazards.
Eligibility	Fire departments, non-affiliated EMS organizations, public or PNP that have a formal arrangement to provide fire suppression or EMS, operating in the 50 States, District of Columbia, and US territory, to a population within a fixed geographical area on a first-due basis, but is not affiliated with a hospital and does not serve a geographical area where EMS is adequately provided by a fire department.
Assistance Provided	This program has no statutory formula. However, federal cost shares are based on populations as follows: over 50,000, a 20% share, 20,000-50,000, a 10% share and under 20,000, a 5% share. Also, a maintenance effort is applied to ensure that federal funds are used to supplement, not supplant existing programs.
Contacts	Department of Homeland Security, Preparedness Directorate 245 Murray Lane, Bldg 410, Washington, DC 20528

Buffer Zone Protection Program

Overview	The Buffer Zone Protection Program (BZPP) supports the DHS's focus on infrastructure protection. It is intended to strengthen the critical infrastructure against risks associated with terrorist attacks by: 1. Identifying significant assets at the terrorist targeted site(s). 2. Identifying specific threats and vulnerabilities associated with the site(s) and its assets. 3. Developing a buffer zone extending outward from the facility in which preventive measures can be employed. 4. Identifying applicable LE jurisdictions and other Federal, State and local agencies having a role in the prevention of, protection against, and response to terrorist threats or attacks specific to the CI/KR site(s) and points of contact within these organizations. 5. Evaluating the capabilities of the jurisdictions with respect to terrorism prevention and response. 6. Identifying specific planning, equipment, training, and exercise requirements that better enable jurisdictions to mitigate threats and vulnerabilities of the site(s) and its buffer zone.
Eligibility	Through the BZPP, DHS continues to focus resources to reduce the risk associated with the highest priority CI/KR assets across targeted sectors, including: • Highest consequence chemical, nuclear, liquefied natural gas facilities • Critical water/wastewater systems and higher consequence dams • Transportation system critical nodes, select food and agriculture facilities • Critical telecommunications, banking, finance, public health and healthcare facilities
Assistance Provided	No cash or in-kind cost share for required for BZPP funds, but may change.
Contacts	Department of Homeland Security, Grant Programs Directorate Control Desk, 4th Floor 500 C Street SW, Washington, DC 20472

Capitalization Grants for Clean Water State Revolving Funds

Overview	EPA awards grants to States to capitalize their Clean Water State Revolving Funds (SRF). The States make loans for high priority water quality activities. As loan recipients make payments back into the fund, money is available for new loans to be issued to other recipients. Previously used to build wastewater treatment facilities, loans are now used increasingly for other water quality management activities, including: 1. agricultural, rural and urban runoff control; 2. Estuary improvement; 3. Wet weather flow control, including stormwater and sewer overflows; 4. Alternative wastewater treatment technologies; and 5. Non-traditional projects such as landfills and riparian buffers.
Eligibility	Grant funds available to States, Puerto Rico, Territories, District of Columbia and Indian Tribes can receive project grants from either EPA or Indian Health Service. States lend money to municipalities, communities, citizens' groups; nonprofit organizations; and private citizens implementing NPS and estuary management activities (provided for in State plans developed under CES Sections 319 and 320).
Assistance Provided	Loans provided by States to eligible recipients, 20% State match is required.

Contacts	U.S. Environmental Protection Agency, Office of Wastewater Management SRF Branch, Municipal Support Division (4204) 401 M Street SW, Washington, D.C. 20460

Coastal Services Center Cooperative Agreements

Overview	The Coastal Services Center supports projects aimed at developing creative science-based solutions to coastal management issues that will allow maintenance or improvement of natural resources while also allowing for economic growth. The Center will support activities in the following program areas: Landscape Characterization and Restoration; the Coastal Change Analysis Program; Coastal Remote Sensing; Integration and Development; the administration of the Coastal Management Fellowship program; training and meeting facilitation; and Special Projects.
Eligibility	State and local governments, public nonprofit organizations, other public institutions/organizations.
Assistance Provided	Project Grants (Cooperative Agreements).
Contacts	Department of Commerce, National Oceanic and Atmospheric Administration National Ocean Service, Coastal Services Center 2234 South Hobson Avenue Charleston, SC 29405

Community Assistance Program-State (CAP-SSEE)

Overview	The CAP-SSEE is intended to identify, prevent and resolve floodplain management issues before they require enforcement action. FEMA annually informs each State of its eligibility to participate in the SSEE under notification separate from the solicitation package with the Cooperative Agreement Performance Partnership Agreement (PPA) Package. The SSEE is administered through the Mitigation Division of each FEMA Regional Office. The CAP-SSEE is a product-oriented program related to the NFIP flood loss reduction objectives.
Eligibility	States and Indian Tribes.
Assistance Provided	Individual grants are awarded based on requests. States are required to provide a 25% match.
Contacts	FEMA, Mitigation Directorate 500 C Street SW, Washington, DC 20472

Conservation and Recreation Lands

Overview	The Community Development Block Grants (CDBG) provide for long-term needs, such as acquisition, rehabilitation, or reconstruction of damaged properties and facilities and redevelopment of disaster-affected areas. Funds may also be used for emergency response activities, such as debris clearance and demolition, extraordinary increases in the level of necessary public services. Eligible projects include the following: • Voluntary acquisition, or if appropriate, elevation of storm damaged structures; • Relocation payments for displaced people and businesses; • Rehabilitation or reconstruction of residential and commercial buildings; • Assistance to help people buy homes, including down payment assistance and interest rate subsidies; and • Improvements to public sewer and water facilities.
Eligibility	State governments that have elected to administer CDBG funds for non-entitlement communities. States with designated major disaster areas may receive statutory and regulatory waivers of program requirements regarding the use of regular CDBG funds which recipients designate to address the damage.
Assistance Provided	Formula grants to States for non-entitlement communities. Additional grants are not available unless emergency supplemental CDBG funds are appropriated.
Contacts	Department of Housing and Urban Development Community Planning and Development 451 7th Street SW, Washington, DC 20410

Emergency Management Preparedness and Assistance Trust Fund/Municipal Competitive Grant Program

Overview	The EMPA provides competitive grants to state, regional, local governments, and PNP organizations to implement projects that will further state and local emergency management objectives. The Municipal Competitive Grant Program provides competitive grants to municipalities that are legally constituted, have an authorized, established, and maintained emergency management program, and have signed the Statewide Mutual Aid Agreement (SMAA). For both programs, applications are accepted in the following categories: • Projects promoting public education on preparedness and recovery issues. • Projects enhancing coordination of relief efforts of statewide private sector organizations, including public-private business partnership efforts. • Projects to improve training and operations capabilities of agencies assigned lead or support responsibilities in the State CEMP. • Other projects that will further state and local emergency management objectives which have been designed by the State of Florida as priorities in the applicable Notice of Fund Availability.
Eligibility	State, regional agencies, local governments, and PNPs may submit multiple proposals to implement projects that will further state and local emergency management objectives; no individual proposal may exceed $300,000. Each Municipal EM program may apply for one competitive grant not to exceed $50,000 in requested grant funds.
Assistance Provided	Project grants.
Contacts	Emergency Management Preparedness and Assistance Trust Fund Program Division of Emergency Management 2555 Shumard Oak Blvd, Tallahassee, FL 32399

Environmental Education Grant

Overview	This grant provides financial support for projects that design, demonstrate or disseminate environmental education projects, methods or techniques. Projects must focus on one of the following: 1.) improving environmental education teaching skills; 2.) education teachers, students or the public about human health problems; 3.) building State, local, Tribal government capacity to develop environmental education programs; 4.) educating communities through community-based organizations; or 5.) educating public through print, broadcast or other media.
Eligibility	Local, Tribal or State education agencies, colleges and universities, non-profit organizations, State environmental agencies, and non-commercial education broadcasting agencies.
Assistance Provided	Project grants (up to $25,000 regionally; $25,000 to $250,000 nationally) Non-Federal government match of 25% required.
Contacts	U.S. Environmental Protection Agency Office of Environmental Education 401 M Street SW, Washington, DC 20460

Federal Highway Administration, Planning & Environment, Intermodal and Statewide Programs

Overview	The intent of the Federal Highway Administration (FHA) Intermodal and Statewide Programs is the expeditious development and management of high quality feasibility studies with FHA funds. Within the context of Title 23 U.S.C. or in 23 CFR guidelines, the meaning of feasibility has the following parts: • The degree to which a given alternative mode, management strategy, design or location is economically justified. • The degree to which such an alternative is considered preferable from an environmental or social perspective. • The degree to which eventual construction and operation of such an alternative can be financed and managed.
Eligibility	Public or private, profit or non-profit entities or individuals, Local government agencies, Universities, colleges, technical schools, institutes.
Assistance Provided	Project grants (cooperative agreements). Matching funds may be required.
Contacts	U.S. Department of Transportation, Federal Highway Administration, ISTEA 400 7th Street SW, Washington, DC 20590

Flood Mitigation Assistance Program

Overview	The Flood Mitigation Assistance (FMA) Program helps States and communities identify and implement measures to reduce or eliminate the long-term risk of flood damage to homes and other structures insurable under the National Flood Insurance Program (NFIP). Projects may include: 1.) elevation, relocation or demolition of insured structures; acquisition of insured structures and property; 2.) dry flood proofing of insured structures; 3.) minor, localized structural projects that are not fundable by State or other Federal programs (e.g. erosion-control and drainage improvements), and 4.) beach nourishment activities such as planting of dune grass.
Eligibility	State agencies, participating NFIP communities, or qualified local organizations. Communities that have been suspended from the NFIP are not eligible.
Assistance Provided	Planning grants to assist communities with the development of Flood Mitigation Plans (assessment of flood risk and identification of actions needed to reduce risk). Project grants for the implementation of measures to reduce flood losses.
Contacts	FEMA Mitigation Directorate 500 C Street SW, Washington, DC 20472

Florida Communities Trust (FCT)

Overview	This grant program facilitates the purchase of lands for conservation and/or recreation purposes by local governments. This land acquisition program helps to implement conservation, recreation, open space, and coastal elements of local comprehensive plans. The Board of Florida Communities Trust has latitude to consider innovative financing arrangements, loans, and land swaps. However, most of the Trust's funding is for land acquisition. Land acquisition projects in which matching funds are available will receive more favorable consideration, although a portion of available funds may be awarded on outright grants.
Eligibility	States and Tribes.
Assistance Provided	Individual grants are awarded based on requests.
Contacts	Florida Communities Trust 2555 Shumard Oaks Blvd, Tallahassee, FL 32399

Hazard Mitigation Grant Program

Overview	Program assists States and communities implementation of long-term hazard mitigation measures following a major disaster declaration. The program's objectives are to prevent or reduce the loss of life and property from natural hazards, to implement State or Local Mitigation Strategies, to enable mitigation measures to be implemented during recovery from a disaster, and to provide funding for previously identified mitigation measures benefitting the disaster area. Eligible projects include: elevation, relocation, acquisition or demolition of structures that will reduce future losses and retrofitting of critical facilities. Examples of eligible projects include: Structure hazard control or protection such as storm water control facilities; retrofitting of critical facilities such as flood proofing or installation of hurricane shutters; property acquisition, relocation and elevation to protect structures from future damage; small scale drainage improvements to existing drainage facilities; and other small scale flood protection measures to critical facilities.
Eligibility	State, local governments, certain private non-profit organizations or institutions, and Indian tribes or authorized Tribal organizations and Alaskan Native villages or organizations. Project must be in a declared disaster area (by the President).
Assistance Provided	Project grant (match of funds or in-kind services required). FEMA can fund up to 75% of total eligible costs (50% if disaster was declared prior to 6/10/1993).
Contacts	FEMA Mitigation Directorate 500 C Street SW, Washington, DC 20472

National Hurricane Program

Overview	This program provides state and local assistance; property protection; hazard identification and evacuation studies; post storm analysis; training and exercises; and public awareness and education campaigns, and materials to support State and local activities. The intent is to

	significantly reduce the loss of life, property, economic disruption and disaster assistance costs resulting from hurricanes.
Eligibility	Several states, including Florida
Assistance Provided	Individual grants are awarded based on requests, States are required to provide a 25% match.
Contacts	FEMA Mitigation Directorate 500 C Street SW, Washington, DC 20472

Nonpoint Source Implementation Grants

Overview	The 319 program provides formula grants to the States to implement Nonpoint source projects and programs in accordance with Section 319 of the Clean Water Act. Examples of previously funded projects include best management practices (BMPs) installation for animal waste, design and implementation of BMP systems for stream, lake and estuary watersheds; basin-wide landowner education program; and lake projects previously funded under the CWA Section 314 Clean Lakes Program.
Eligibility	States and Indian Tribes.
Assistance Provided	Formula grants are awarded to a lead agency in each State. States/local organizations are required to provide 40% of total project or program cost.
Contacts	U.S. Environmental Protection Agency Office of Wetlands, Oceans and Watersheds Assessment and Watershed Protection Division, Nonpoint Source Control Branch 401 M Street SW, Washington, DC 20460

Outdoor Recreation Acquisition, Development and Planning

Overview	This grant program provides financial assistance to the States and their political subdivisions for the preparation of Statewide Comprehensive Outdoor Recreation Plans (SCORPs) and acquisition and development of outdoor recreation areas and facilities for the general public, to meet current and future needs. Acquisition and development grants may be used for a wide range of outdoor recreation projects, such as picnic areas, inner city parks, campgrounds, tennis courts, boat launching ramps, bike trails, outdoor swimming pools, and support facilities such as roads, water supply, etc. Facilities must be open to the general public and not limited to special groups. Development of basic, rather than elaborate facilities is favored. Fund monies are not available for the operation and maintenance of these facilities.
Eligibility	States and Indian Tribes.
Assistance Provided	Individual grants are awarded based on requests.
Contacts	Department of the Interior Recreation Grants National Park Service

Pollution Prevention Grants Program

Overview	This grant program provides project grants to States to implement pollution prevention projects. The grant program is focused on institutionalizing multimedia pollution (air, water & land) prevention as an environmental management priority, establishing prevention goals, providing direct technical assistance to businesses, conducting outreach, and collecting and analyzing data.
Eligibility	States and Indian Tribes.
Assistance Provided	Individual grants are awarded based on requests. States are required to provide at least 50% of total project costs.
Contacts	U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Pollution Prevention Division 401 M Street SW Washington, DC 20460

Pre-Disaster Mitigation (PDM) Program

Overview	The purpose of the Pre-Disaster Mitigation (PDM) Program is to assist communities to implement hazard mitigation programs designed to reduce overall risk to the population and

	structures before the next disaster occurs. Mitigation projects that primarily focus on natural hazards are eligible, but communities may also apply for mitigation of hazards caused by non-natural forces.
Eligibility	State agencies; Federally recognized Indian Tribal governments, and local governments. Private non-profit organizations are not eligible to apply; except through a local government application for proposed activities on their behalf. All applicants must be participants in the NFIP if they have been identified through the NFIP as having a Special Flood Hazard Area. In addition, the community must be in good standing with the NFIP and participating in their respective county's Local Mitigation Strategy (LMS).
Assistance Provided	Grants provided to assist communities to implement hazard mitigation programs to reduce overall risk to the population and structures before the next disaster occurs. 25% State match is required.
Contacts	Division of Emergency Management Bureau of Recovery and Mitigation 2555 Shumard Oak Boulevard, Tallahassee, FL 32399

Public Assistance (PA) Grant Program

Overview	This grant program provides supplemental assistance to States, local governments, and certain private non-profit organizations to alleviate suffering and hardship resulting from major disasters or emergencies declared by the President. Grants can be used to clear debris; apply emergency protective measures to preserve life and property in response to the declared event; and repair or replace damaged structures, such as buildings, utilities, roads and bridges, water-control facilities and recreational facilities.
Eligibility	States, Indian Tribes, and local governments. Also, eligible are PNPs that operate educational, utility, emergency or medical facilities, provide custodial care or essential services of a governmental nature to the public.
Assistance Provided	Individual grants are awarded based on requests. States are required to provide a 25% match.
Contacts	FEMA Infrastructure Support Division Response and Recovery Directorate 500 C Street SW, Washington, DC 20472

Repetitive Flood Claims Program

Overview	The Repetitive Flood Claims (RFC) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act (NFIA) of 1968.
Eligibility	State agencies, Local and Tribal Governments that participate in the NFIP communities and are in good standing.
Assistance Provided	Project grants for the implementation of measures to reduce flood losses.
Contacts	FEMA Mitigation Directorate 500 C Street SW, Washington, DC 20472

Residential Construction Mitigation Program (RCMP)

Overview	The Residential Construction Mitigation Program (RCMP) receives $7 million annually from the Florida Hurricane Catastrophe Trust Fund.
Eligibility	State, regional agencies, local governments and private non-profits/for project organizations.
Assistance Provided	Competitive grants to implement projects furthering RCMP's statutory objectives.
Contacts	Florida Division of Emergency Management 2555 Shumard Oak Boulevard, Tallahassee, FL 32399

Severe Repetitive Loss Program

Overview	The Severe Repetitive Loss (SRL) grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to

	severe repetitive loss (SRL) structures insured under the National Flood Insurance Program (NFIP).
Eligibility	State agencies, local and tribal governments that participate in the NFIP communities and are in good standing.
Assistance Provided	Project grants for the implementation of measures to reduce flood losses.
Contacts	FEMA Mitigation Directorate 500 C Street SW, Washington, DC 20472

Special Economic Development and Adjustment Assistance Program: Sudden and Severe Economic Dislocation (SSED) and Long Term Economic Deterioration (LTED)

Overview	The EAPG assists State and local areas in the development and/or implementation of strategies designed to address structural economic adjustment problems resulting from sudden and severe economic dislocation such as plant closings, military base closures and defense contract cutbacks, and natural disasters (SSED), or from long-term economic deterioration in the area's economy (LTED). Grants may be made to develop and Economic Adjustment Strategy or to implement such strategies. Grants may be made for the construction of public facilities, business development and financing (including revolving loan funds), technical assistance, training or any other activity that addresses the economic adjustment problem.
Eligibility	States, cities, counties or other political subdivisions, consortia of such political subdivisions, public or PNPs representing redevelopment areas designated under the Public Works and Economic Development Act of 1965, Economic Development Districts established under Title IV of the Act, Indian Tribes. Geographic areas, which meet either LTED and/or SSED eligibility criteria. LTED eligibility determined by: 1.) Very high unemployment; 2.) low per capita income; and 3.) chronic distress. For SSED eligibility, the economic dislocation must exceed certain job loss thresholds for the area.
Assistance Provided	Project grants.
Contacts	Department of Commerce Economic Adjustment Division Economic Development Administration Room H7327, Herbert C. Hoover Building, Washington, DC 20230

Transportation Equity Act for the 21st Century, Surface Transportation Program

Overview	Surface Transportation Program (STP) funds may be used by State and local governments for any roads (including the National Highway System) that are not functionally classified as local or rural minor collectors. Each State sets aside 10% of STP funds for transportation enhancements, which can include water related projects, such as wetland mitigation and implementation of control technologies to prevent polluted highway runoff from reaching surface water bodies. Other transportation enhancements include landscaping and other scenic beautification, pedestrian and bicycle trails, archaeological planning and research, preservation of abandoned railway corridors, historic preservation, sidewalk modifications to comply with ADA, natural habitat or wetland mitigation efforts, Intelligent Transportation System (ITS) capital improvements and environmental/pollution abatement projects.
Eligibility	Public or private, profit or non-profit entities or individuals, local government agencies, Universities, colleges, technical schools or institutes.
Assistance Provided	Project grants (cooperative agreements), matching funds may be required.
Contacts	U.S. Department of Transportation Federal Highway Administration 400 7th Street SW, Washington, DC 20590

Water and Waste Disposal Loans and Grants

Overview	This program provides water and waste disposal facilities and services to low income rural communities whose residents face significant health risks. Funds may be used for 100% construction costs to construct, enlarge, extend, or otherwise improve a community water or sewer system; extend service lines and connect individual residences to a system. The program allows applicants to make grants directly to individuals to extend service lines, connect

	resident's plumbing to system, pay reasonable charges and fees for connecting to system, installation of plumbing and related fixtures, and construction in dwelling of a bathroom.
Eligibility	Local governments, Indian Tribes and non-profit associations.
Assistance Provided	Individual grants are awarded based on requests.
Contacts	U.S. Department of Agriculture Rural Utilities Service, Water Programs 1400 Independence Avenue SW, Washington, DC 20250

Water Pollution Control Program Grants

Overview	This program assists in the establishment and maintenance of adequate measures for prevention and control of surface and ground water pollution. The program provides broad support for the prevention and abatement of surface and ground water pollution from point and non-point sources including water quality planning, monitoring, water quality standards, assessments, permitting, pollution control studies, planning, surveillance and enforcement; advice and assistance to local agencies; training; and public information. Funds cannot be used for construction, operation, or maintenance of waste treatment plants, nor can they be used for costs financed by other Federal grants.
Eligibility	States, Indian Tribes and interstate agencies for establishing and maintaining adequate measures for prevention and control of surface and ground water pollution.
Assistance Provided	Individual grants are awarded based on requests.
Contacts	U.S. Environmental Protection Agency Office of Pollution Prevention and Toxics Pollution Prevention Division 401 M Street SW, Washington, DC 20460

Watershed Protection and Flood Prevention Operations Program

Overview	This program works through local government sponsors and helps participants solve natural resource and related economic problems on a watershed basis. Projects include watershed protection, flood prevention, erosion and sediment control, water supply, water quality, fish and wildlife habitat enhancement, wetlands creation and restoration, and public recreation in watersheds of 250,000 or fewer acres. Technical and financial assistance is available for installation of works of improvement to protect, develop, and utilize the land and water resources in small watersheds.
Eligibility	State agency, county, municipality, township, soil and water conservation district, flood prevention or flood control district, Indian Tribe or Tribal organization, or PNP with authority to execute operate watershed improvement works.
Assistance Provided	Cost-sharing (funds cover 100% of flood prevention construction costs; 50% of construction costs related to agricultural water management, recreation and fish and wildlife; and none of the costs for other municipal and industrial water management). Technical assistance and counseling.
Contact	Local or State Natural Resources Conservation Service Department of Agriculture Natural Resources Conservation Service P.O. Box 2890, Washington, DC 20013

Plan Maintenance Process

This plan will be monitored, evaluated and updated as needed to meet the changing needs of the community. To do so, the Local Mitigation Strategy Working Group will convene to review and revise as necessary under the following circumstances: a.) annually in the month of January, or b.) when actual events substantially alter or negate parts of the strategy, or c.) at the request of a member of the Hazard Mitigation Working Group; or d.) at the request of a municipality or the local government. All meeting will be preceded by one or all of the following forms of invitation to the working group members, municipalities, private and public non-profits, businesses, general public

and any other interested parties: email, press release, advertisement in the local newspaper, posting on the County's official website.

In addition, Emergency Management will annually solicit input from all working group members in order to prepare a progress report that accurately reflects the status of the committee and its projects. The progress report will be presented to the Board of County Commissioners at a regularly scheduled board meeting and will be posted on the Emergency Management website. At a minimum, the following items will be reviewed to assess the status of the plan:

RELEVANCE/APPLICABILITY: DOES THE PLAN CONTINUE TO BE RELEVANT TO THE COMMUNITY'S GOALS?
USEFULNESS/BENEFITS/VALUE: DOES THE PLAN CONTINUE TO BE USEFUL, PROVIDE BENEFITS TO THE COMMUNITY AND CONTINUE TO HAVE VALUE TO THE RESIDENTS OF PASCO COUNTY?
PROGRESS: IS PROGRESS BEING MADE TOWARDS COMPLETION OF PLAN GOALS AND MITIGATION PROJECTS?
PARTICIPATION: IS THERE SUFFICIENT COMMUNITY INVOLVEMENT IN THE LMS PROCESS OR DOES OUTREACH NEED TO BE CONDUCTED?

The schedule for the annual update will be as follows:

June	Solicit input for update. Review plan, criteria and input received, prepare draft.
July	Public meeting to provide update in mitigation activities and modify report as appropriate.
August	Finalize report, submit for review to LMS Committee and public.
September	Post progress report on website; submit to the Board of County Commissioners.

Every 5 years, the committee will complete an intensive review and update to the Local Mitigation Strategy. The schedule for the next 5 year update will be as follows:

Time from Due Date	Action
T-18 months	First public meeting and formation of committee, begin data collection and research for the risk analysis.
T-12 months to 7 months	Public meetings, task assignments, plan updates, complete draft.
T-6 months	Final public meeting, plan approval by LMS committee, submit plan to State of Florida for review.
T-6 months to 3 months	Make revisions if necessary.
T-3 months	Submit to FEMA for review.
Target due date	Receive FEMA approval.
T+2 months	Board of County Commissioners and Municipalities for adoption process.

The plan will be reviewed by Emergency Management in partnership with the following: the County's Zoning, Planning, Engineering, the Cities of New Port Richey, Port Richey, Zephyrhills, Dade City, San Antonio, St. Leo, the Hazard Mitigation Working Group, and the general public. This process will require members to provide detailed information concerning their projects, ordinances, progress and programs. Emergency Management will compile the information which will be presented to the entire Hazard Mitigation Working Group and the public at various meetings for comment and approval. The review will be accomplished by public notices and on-going mitigation plan committee meetings.

Public participation will be essential to producing a quality program for the County and the municipalities to implement. It is anticipated that notices will be placed in newspapers, public meeting places, libraries and County websites to encourage participation in the process. It is also the intent of the members to personally encourage participation through public speaking engagements.

Upon final approval of the plan by the State of Florida and FEMA, the Local Mitigation Strategy will be presented to the Pasco County Board of County Commissioners, the municipalities of New Port Richey, Port Richey, Zephyrhills, Dade City, San Antonio and St. Leo and the Local Mitigation Strategy Committee for adoption and/or incorporation into existing plans as appropriate. The plan will also be made available to the public on the County's website.

Incorporation into Existing Planning Mechanisms

The County's Local Mitigation Strategy is incorporated into existing planning mechanisms as follows:

The Central Permitting section of the Building department enforces the Building Code Ordinance. The code has specific criteria related to both wind and flood mitigation. At the point of permitting, enforcement of the Code supports the mitigation strategy.

The Stormwater Management department manages the Floodplain Management Plan. The FMP is a broad planning document that focuses specifically on a mitigation strategy related to repetitive loss properties and flood mitigation in general throughout the entire County.

The Planning Department has a mechanism in place to identify the potential impact to shelters related to any new developments within the evacuation zones. A process is in place whereby developers must either address evacuation concerns or work with Emergency Management officials to develop mitigation plans or contribute financially to mitigation efforts.

Information from the 2014 LMS, specifically which is contained within the Risk Assessment section, will be compared against the existing Comprehensive Emergency Management Plan (CEMP). If that information is determined to be appropriate, then it will be added to the CEMP at the next update which is scheduled for 2015.

Each of these plans, processes, procedures and ordinances are therefore incorporated by reference to this Local Mitigation Strategy. Each is available for review at the Pasco County Office of Emergency Management.

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IV. APPENDICES

Appendix A: Documenting Hazard Mitigation Planning Process

Appendix B: Special Needs Disaster Preparedness Packet

Appendix C: Mitigation Strategy – List of Mitigation Projects

Appendix D: Annual Report of Repetitive Loss Properties and Development of Repetitive Loss Areas (Updated January 31, 2014)

Appendix E: State of Florida Weather Incidents: 1953-2011 *Major Disaster Declarations*

Appendix F: NCDC Weather Data 1974-2014 (first 500 events)

Appendix G: Documentation of HazMat Inspection Program

Appendix H: Hazard Impact and Estimated Losses

Appendix I: Tampa Bay Times Article about "Sinkhole Alley"

Appendix J: Monthly Tornado Average by State and Region

Appendix K: Rising Storm Surge Risk

Appendix L: LMS Working Group and Municipal Resolutions

Appendix M: Community Wildfire Protection Plan (CWPP)

Appendix N: 2014 Flood Information Study

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Appendix A
Documenting the Planning Process
By Year: 2010-2014

2010

NOTICE OF PUBLIC MEETING
PASCO COUNTY HAZARD MITIGATION COMMITTEE

Public Notice is hereby given that the Pasco County Hazard Mitigation Committee will hold a public annual meeting on ***Thursday, January 21, 2010*** at the Pasco County Emergency Operations Center, 8744 Government Drive, New Port Richey, FL, 34654 at 1:30 p.m., to discuss any needed updates to the multi-jurisdictional Local Mitigation Strategy for Pasco County.

Pasco County, in coordination with the municipalities, developed a Local Mitigation Strategy in 1998 as part of the State of Florida's "Breaking the Cycle" initiative. A 2003 Local Mitigation Strategy Update to the plan was issued to bring the Local Mitigation Strategy into compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000. The Local Mitigation Strategy is a plan developed with input from the community, business and industry and local government to promote hazard mitigation and to manage post-disaster recovery. The plan must be reviewed annually and updated as necessary to address the federal guidance promulgated as a result of the Disaster Mitigation Act of 2000. The purpose of this meeting is to discuss any overall updates to the plan that are needed and to specifically update the project list which has been developed by the Hazard Mitigation Planning Committee.

Information concerning the Local Mitigation Strategy will be on file and available for examination in the Office of Emergency Management, Emergency Operations Center, 8744 Government Drive, New Port Richey. If there are any questions or comments regarding this meeting, please contact the Office of Emergency Management at (727) 847-8137. Written comments can be mailed to: Office of Emergency Management, 7530 Little Road, New Port Richey, FL 34654-5598.

If you are a person with a disability who needs any accommodation in order to participate in this meeting, you are entitled, at no cost to you, to the provision of certain assistance. Within two working days of your receipt of this notice, please contact the Consumer Affairs Section, West Pasco Government Center, 7530 Little Road, New Port Richey, FL 34654; (727) 847-8110 (V) in New Port Richey; (352) 521-4274, Ext. 8110 (V) in Dade City; via (800) 955-8771 if you are hearing impaired.

PASCO COUNTY, FLORIDA

Office of Emergency Management Dade City (352) 521-5137
Emergency Communications Center Land O'Lakes (813) 996-7341
7530 Little Road **New Port Richey** **(727) 847-8137**
Port Richey, FL 34654 Facsimile (727) 847-8004

New

Local Mitigation Strategy
Hazard Mitigation Committee
January 21, 2010, 1:30 p.m.

Agenda

Welcome and Introductions - Jim Martin

Verify Public Notices Announcing Meeting – Jim Martin

Approval of Minutes from February 25, 2009 Meeting – Jim Martin

Project List Approval – Kalah Mueller

NPR & PR Repetitive Loss Area Map Inclusion – Jim Martin

Changes to Hazard Vulnerability Analysis – Kalah Mueller

Other Business – Jim Martin

Adjourn

The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., January 20, 2011 in the Emergency Operations Center.

Hazard Mitigation Committee Meeting
January 21, 2010 * 1:30 p.m. * Meeting Minutes

Present

Members
Shirley Dresch, City of Port Richey
Todd Vandeburg, City of Zephyrhills
Jim Martin, Pasco County
Lennie M. Naeyaert, proxy for Ray Velboom, Dade City
Barbara Sessa, City of San Antonio
Gerry Engle, City of New Port Richey

Participants and Public
Kalah Mueller, Pasco County Emergency Management
John Boucher, District School Board of Pasco County
Ron Daniel, Environmental Lands Acquisition & Management Program
Michael Garrett, Pasco County Stormwater Management Division
Mike Gordon, Pasco County Fire Rescue
Jack Mariano, Pasco County Board of County Commissioners
Bill Preslock, Baycare, Inc.
Lee Millard, Pasco County Zoning/Code Compliance
Tim Powers, Pasco County Sheriff's Office
Vance Arnell, State Attorney's Office
Terry Falke, Pasco County Facilities
James Walters, Dade City Police Department
Dean Livermor, Pinellas County Public Defender's Office
Donna Rose, City of Port Richey
Jim Johnson, HPH Hospice
Michael Sherman, Dade City Planning Department
John Walsh, Pasco County Economic Development Council

Chairman, Jim Martin, opened the Annual Hazard Mitigation Committee meeting by welcoming the attendees. Mr. Martin asked attendees to introduce themselves. The first order of business addressed by Jim Martin was showing attendees the Proofs of Public Meeting Announcements. Attendees were informed of the Public Notice posting of the meeting in the St. Petersburg Times, Tampa Tribune, and postings on the doors of the main County Building at 7530 Little Road, complying with Public Notice policies and regulations.

Next, Mr. Martin reviewed the minutes from the February 25, 2009 meeting. The minutes had previously been sent to members and participants via email. No one requested changes. The Chairman requested a motion to approve the minutes. A member motioned to approve and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

The floor was then turned over to Kalah Mueller, Pasco County Emergency Management, who discussed the 2010 Project List. Several new projects were submitted, ranked, and added to the project list. The Project List was sent to members and participants via email. One additional project was added to the list after the project list was sent via email. As a result, Ms. Mueller reviewed the additional project. Shirley Dresch, City of Port Richey, asked whether one of Port Richey's projects had been updated on the list. Emergency Management received the update after the project list was emailed and made a note to update the Project List before it is submitted to the State for review. Kalah Mueller asked if there was any further discussion regarding the revised

Project List. As there were none, the Chairman requested a motion to approve the Project List with Port Richey's change. A member motioned to approve and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

The Repetitive Loss Area Maps for New Port Richey and Port Richey were the next agenda items that were addressed. The Maps were sent to members and participants via email. Kalah Mueller showed the attendees the maps and asked the attendees if they had any questions or comments regarding including New Port Richey and Port Richey's RLA Maps. As there were none, the Chairman requested a motion to approve the inclusion of the Maps. A member motioned to approve and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

Kalah Mueller showed the attendees the Hazard Vulnerability Analysis (HVA) and informed them that there was one small change to the Hazard Vulnerability Analysis. The HVA was sent to members and participants via email. Ms. Mueller asked the group for questions or comments on the revised HVA. As there were none, the Chairman requested a motion to approve the revised HVA. A member motioned to approve and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

Jim Martin opened the floor to questions before moving on to discuss the new SLOSH model and possible revisions to the County's Evacuation Zones. Vance Arnell asked whether we had noticed if funding levels for mitigation grants had increased, decreased, or stayed the same. Kalah Mueller discussed several grants and their funding levels with the attendees.

Jim Martin was joined by Paul Latham, Pasco County Emergency Management, to show the attendees the most recent Sea, Lake, and Overland Surge from Hurricanes (SLOSH) model and the County's Draft Evacuation Zones. The Evacuation Zones are being revised due to new data received from a recently completed Light Detection and Ranging (LIDAR), which is a remote sensing system used to collect topographic data, and the new SLOSH model runs. Although the fine tuning of the Evacuation Zones is still underway, we fully expect to see some minor adjustments in Evacuation Zones A, B, and C, along with the expansion of Zones D and E further inland. The overall impact on shelters was discussed as was the increase in the number of residents that will potentially be required to evacuate. A question was asked concerning how the Evacuation Zone changes will impact homeowner insurance rates. Jim Martin indicated that the revised Evacuation Zones will not impact homeowner insurance rates.

The attendees were then advised that the next meeting of the LMS Hazard Mitigation Committee, which is the required annual meeting, will be held on January 20, 2011, and will be held at 1:30 p.m. at the Emergency Operations Center, 8744 Government Drive, New Port Richey, FL 34654.

The meeting adjourned at 2:35 p.m.

PASCO COUNTY, FLORIDA

Office of Emergency Management Dade City (352) 521-5137
Emergency Communications Center Land O'Lakes (813) 996-7341
7530 Little Road **New Port Richey** **(727) 847-8137**
New Port Richey, FL 34654 Facsimile (727) 847-8004

DATE: 12/28/2007	
TO: Jessica Attard	FAX NUMBER 869-6281
COMPANY: St. Pete Times	PHONE NUMBER: 869-6266

FROM: Kalah Mueller	FAX NUMBER: 727-847-8004
Pasco County Office Of Emergency Management	PHONE NUMBER: 727-847-8137

Hi Jessica,
Attached Public Notice to be placed in **Wednesday January 6, 2010** run of the paper in the Pasco Section
2 col wide, 1 3/4, 6" long, 18 pt Heading, Legal Section.
2 proofs of publications sent to me by **Monday January 11, 2010**.
Payment by VISA Card #4715260001514726 Expiration Date 8/12
I also need you to send me a payment receipt or invoice when the VISA is charged. Thanks

If you have any questions or require further information, please call me at 727-847-8137.

PASCO COUNTY, FLORIDA

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Emergency Communications Center
7530 Little Road
New Port Richey, FL 34654

Dade City (352) 521-5137
Land O'Lakes (813) 996-7341
New Port Richey (727) 847-8137
Facsimile (727) 847-8004

DATE: 12/22/09	
TO: Samantha Castillo	FAX NUMBER 815-1025
COMPANY: Tampa Tribune	PHONE NUMBER: 815-1058

FROM: Kalah Mueller	FAX NUMBER: 727-847-8004
Pasco County Office Of Emergency Management	PHONE NUMBER: 727-847-8137

Hi Samantha,
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2011

NOTICE OF PUBLIC MEETING
PASCO COUNTY HAZARD MITIGATION COMMITTEE

Public Notice is hereby given that the Pasco County Hazard Mitigation Committee will hold a public annual meeting on Thursday, January 20, 2011 at the Pasco County Emergency Operations Center, 8744 Government Drive, New Port Richey, FL, 34654 at 1:30 p.m., to discuss any needed updates to the multi-jurisdictional Local Mitigation Strategy for Pasco County.

Pasco County, in coordination with the municipalities, developed a Local Mitigation Strategy in 1998 as part of the State of Florida's "Breaking the Cycle" initiative. A 2003 Local Mitigation Strategy Update to the plan was issued to bring the Local Mitigation Strategy into compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000. The Local Mitigation Strategy is a plan developed with input from the community, business and industry and local government to promote hazard mitigation and to manage post-disaster recovery. The plan must be reviewed annually and updated as necessary to address the federal guidance promulgated as a result of the Disaster Mitigation Act of 2000. The purpose of this meeting is to discuss any overall updates to the plan that are needed and to specifically update the project list which has been developed by the Hazard Mitigation Planning Committee.

Information concerning the Local Mitigation Strategy will be on file and available for examination in the Office of Emergency Management, Emergency Operations Center, 8744 Government Drive, New Port Richey. If there are any questions or comments regarding this meeting, please contact the Office of Emergency Management at (727) 847-8137. Written comments can be mailed to: Office of Emergency Management, 7530 Little Road, New Port Richey, FL 34654-5598.

If you are a person with a disability who needs any accommodation in order to participate in this meeting, you are entitled, at no cost to you, to the provision of certain assistance. Within two working days of your receipt of this notice, please contact the Consumer Affairs Section, West Pasco Government Center, 7530 Little Road, New Port Richey, FL 34654; (727) 847-8110 (V) in New Port Richey; (352) 521-4274, Ext. 8110 (V) in Dade City; via (800) 955-8771 if you are hearing impaired.

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Local Mitigation Strategy
Hazard Mitigation Committee
January 20, 2011, 1:30 p.m.

Agenda

Welcome and Introductions - Jim Martin

Verify Public Notices Announcing Meeting – Jim Martin

Approval of Minutes from January 21, 2010 Meeting – Jim Martin

Project List Approval – Kalah Mueller

Changes to Hazard Vulnerability Analysis – Kalah Mueller

Other Business – Jim Martin

Adjourn

The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., January 19, 2012 in the Emergency Operations Center.

Hazard Mitigation Committee Meeting
January 20, 2011
1:30 p.m.
Meeting Minutes

Present

Members:
Michael German, City of New Port Richey
Cindy Jolly, Pasco County
Beverly Jones, City of Zephyrhills
Jim Martin, Pasco County
Joan Miller, Town of Saint Leo
Donna Rose, City of Port Richey
Barbara Sessa, City of San Antonio
James Walters, City of Dade City

Participants and Public:
Juanita Bernal, Pasco County Stormwater Management Division
Tommy Brown, Tampa Bay Water
Ken Burdzinski, PHCC
Maya Burke, Southwest Florida Water Management
Andrew Fossa, Pasco County Fire Rescue
Michael Garrett, Pasco County Public Works
Dean Livermore, Public Defender's Office
Jack Mariano, Pasco County Board of County Commissioners
Andrea Mason, Pasco County Health Dept.
Lee Millard, Pasco County Zoning/Code Compliance
Kalah Mueller, Pasco County Emergency Management
Lennie M. Naeyaert, City of Dade City
Bill Preslock, Baycare, Inc.
Patty Richter, City of San Antonio

The Chairman, Jim Martin, opened the Annual Hazard Mitigation Committee meeting by welcoming the attendees. Mr. Martin asked attendees to introduce themselves. He then showed the attendees the Proofs of Public Meeting Announcements. Attendees were informed of the Public Notice postings of the meeting in the St. Petersburg Times and Tampa Tribune, complying with Public Notice policies and regulations.

Mr. Martin then reviewed the minutes from the January 21, 2010 meeting which had previously been sent to members and participants via email. There were no requested changes. A motion to approve the minutes was requested, and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

The group was asked if anyone had questions or comments about the Project List. Maya Burke, Southwest Florida Water Management District (SWFWMD), pointed out that SWFWMD was not listed as a funding source for some projects on the Project List. Maya will send an email confirmation/reminder, and the list will be updated. A member motioned to accept the new project list, and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

Kalah Mueller informed the attendees that a few minor changes were made to the Hazard Vulnerability Analysis (HVA) in accordance with the Comprehensive Emergency Management Plan (CEMP) so that the LMS matches the CEMP. Kalah added that more changes will probably be made in order to strengthen the HVA as we go through the update process. When the group was asked if anyone had questions or concerns regarding the HVA, Cindy Jolly mentioned the number of reported events might be inaccurate as a result of methods for investigating sinkholes. This will be explored for the next update. A member motioned to accept the new HVA, and the motion was seconded. There were no objections. The motion was pronounced carried and approved by the Chairman.

Mr. Martin and Kalah Mueller also discussed the Sea Lake and Overland Surges from Hurricanes (SLOSH) model and evacuation zone changes, both of which had a significant impact on the number of residents that may be required to evacuate during a hurricane event. No additional changes to the SLOSH model or Evacuation Zones are forecasted during 2011. The critical facility list was briefly discussed with the primary focus on the update of the list, which is underway. Mr. Martin also talked about the hurricane shelter list for 2011. He indicated that the shelter capacity will show a slight increase, but the overall number of shelters will decrease as some of the older shelters are removed from the list. There was also some discussion concerning the recently completed 2010 census and the impact that it will have on the five year update of the LMS that will begin in 2013. The Community Wildfire Protection Plan (CWPP) was highlighted as a very positive mitigation effort. The CWPP is expected to be completed prior to the next annual meeting and will be included in the CEMP/LMS. The County's debris management contracts, the Post-Disaster Redevelopment Plan, La Nina, and the Deepwater Horizon incident were also covered along with their impact on Hazard Mitigation.

The attendees were then advised that the next meeting of the LMS Hazard Mitigation Committee, which is the required annual meeting, will be held on January 19, 2012 at 1:30 p.m. in the Emergency Operations Center, 8744 Government Drive, New Port Richey, FL 34654.

The meeting adjourned at 2:25 p.m.

PASCO COUNTY, FLORIDA

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7530 Little Road **New Port Richey** **(727) 847-8137**
New Port Richey, FL 34654 Facsimile (727) 847-8004

Local Mitigation Strategy
Hazard Mitigation Committee
January 20, 2011, 1:30 p.m.

Agenda

Welcome and Introductions - Jim Martin

Verify Public Notices Announcing Meeting – Jim Martin

Approval of Minutes from January 21, 2010 Meeting – Jim Martin

Project List Approval – Kalah Mueller

Changes to Hazard Vulnerability Analysis – Kalah Mueller

Other Business – Jim Martin

Adjourn

The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., January 19, 2012 in the Emergency Operations Center.

PASCO COUNTY, FLORIDA

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Emergency Communications Center
7530 Little Road
Port Richey, FL 34654

Dade City (352) 521-5137
Land O'Lakes (813) 996-7341
New Port Richey (727) 847-8137
Facsimile (727) 847-8004

New

DATE: 12/13/2010	
TO: Samantha Castillo	FAX NUMBER 815-1025
COMPANY: Tampa Tribune	PHONE NUMBER: 815-1058

FROM: Kalah Mueller	FAX NUMBER: 727-847-8004
Pasco County Office Of Emergency Management	PHONE NUMBER: 727-847-8137

Hi Samantha,
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New Port Richey (727) 847-8137
Facsimile (727) 847-8004

DATE: 12/13/2010	
TO:	FAX NUMBER 869-6281
COMPANY: St. Pete Times	PHONE NUMBER: 869-6266

FROM: Kalah Mueller	FAX NUMBER: 727-847-8004
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2012

NOTICE OF PUBLIC MEETING
PASCO COUNTY HAZARD MITIGATION COMMITTEE

Public Notice is hereby given that the Pasco County Hazard Mitigation Committee will hold a public annual meeting on Monday, January 23, 2012 at the Pasco County Emergency Operations Center, 8744 Government Drive, Building A, New Port Richey, FL, 34654 at 1:30 p.m., to discuss any needed updates to the multi-jurisdictional Local Mitigation Strategy for Pasco County.

Pasco County, in coordination with the municipalities, developed a Local Mitigation Strategy in 1998 as part of the State of Florida's "Breaking the Cycle" initiative. A 2009 Local Mitigation Strategy Update to the plan was issued to bring the Local Mitigation Strategy into compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000. The Local Mitigation Strategy is a plan developed with input from the community, business and industry and local government to promote hazard mitigation and to manage post-disaster recovery. The plan must be reviewed annually and updated as necessary to address the federal guidance promulgated as a result of the Disaster Mitigation Act of 2000. The purpose of this meeting is to discuss any overall updates to the plan that are needed and to specifically update the project list which has been developed by the Hazard Mitigation Planning Committee.

Information concerning the Local Mitigation Strategy will be on file and available for examination in the Office of Emergency Management, Emergency Operations Center, 8744 Government Drive, New Port Richey. If there are any questions or comments regarding this meeting, please contact the Office of Emergency Management at (727) 847-8137. Written comments can be mailed to: Office of Emergency Management, 8744 Government Drive, Building A, New Port Richey, FL, 34654-5598.

Pursuant to the provisions of the Americans with Disabilities Act of 1990, any person requiring special accommodation to participate in this meeting should contact the Pasco County Office of Emergency Management at (727) 847-8137, no later than (5) five working days before the scheduled meeting date. If you are hearing or speech impaired, please call our TDD line at (727) 847-8949.

PASCO COUNTY, FLORIDA

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Emergency Communications Center Land O'Lakes (813) 996-7341
7530 Little Road **New Port Richey** **(727) 847-8137**
New Port Richey, FL 34654 Facsimile (727) 847-8004

Local Mitigation Strategy
Hazard Mitigation Committee
January 23, 2012, 1:30 p.m.

Agenda

Welcome and Introductions – Annette Doying

Verify Public Notices Announcing Meeting – Annette Doying

Approval of Minutes from January 19, 2011 Meeting – Annette Doying

Success and Progress in implementing the Local Mitigation Strategy – Annette Doying

Local Mitigation Strategy Goals and Objectives – Annette Doying

Project List Approval – Mike Bishop

Changes to Hazard Vulnerability Analysis – Mike Bishop

Community Rating System (CRS) Outreach Strategy Plan Review – Cindy Jolly

Other Business – Annette Doying

Adjourn

The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., January 21, 2013 in the Emergency Operations Center.

Hazard Mitigation Committee Meeting
January 23, 2012 * 1:30 p.m.* Meeting Minutes

Present

Members:
Michael German, City of New Port Richey
Cindy Jolly, Pasco County
Todd Vandeberg, City of Zephyrhills
Annette Doying, Pasco County
Joan Miller, Town of Saint Leo
Donna Rose, City of Port Richey
Barbara Sessa, City of San Antonio
Michael Sherman, City of Dade City

Participants and Public:
Rick Alley, City of San Antonio
Mark Clement, Clerk of the Courts
Dirk Palmer, Morton Plant Mease Healthcare
Dean Livermore, Public Defender's Office
Terence Falke, Pasco County Facilities Management
Jim Hircock, Pasco County Utilities
Lt. Troy Fergueson, Pasco County Sheriff's Office
Kim Thorne, Pasco County Community Development
Mike Garrett, Pasco County Public Works
Gordon Onderdonk, Dade City Public Works
Bill Preslock, Baycare Facility Operations
Ria Maris, Pasco County Emergency Management
Chris Owen, Tampa Bay Water Quality Assurance
Joe Menard, Bayonet Point Medical Center Plant Operations
Michael Bishop, Pasco County Emergency Management

Annette Doying, Emergency Management's Acting Director, opened the Annual Hazard Mitigation Committee meeting by welcoming the attendees and introducing herself, explaining that she is the acting director merely pending confirmation before The Board of County Commissioners the following day, January 24, 2012. She then introduced the meeting leader, Mike Bishop, Emergency Management Coordinator, who is responsible for planning issues focusing on mitigation. Next, Ms. Doying asked attendees to introduce themselves, as there seemed to be new participants. She then showed the attendees the Proofs of Public Meeting Announcements. Attendees were informed of the Public Notice postings of the meeting in the Tampa Bay Times, the Tampa Tribune, and on the front page of the Pasco County Office of Emergency Management website, all complying with Public Notice policies and regulations.

The minutes from the January 20, 2011 meeting were reviewed and discussed. During said meeting, Southwest Florida Water Management District (SWFWMD) specified that they were not listed as a funding source for some projects on the Project List, and Maya Burke from SWFWMD alleged that she would send an email confirmation/reminder and that the list would be updated; acceptance of the new project list was motioned and seconded; and there were no objections. Joan Miller made a motion to accept the minutes, Cindy Jolly seconded the motion, there were no objections, and the motion was pronounced carried and approved.
A request to accept the new project list was motioned, seconded and approved. The committee was shown that there was a modification to last year's project list, primarily focusing on Port Richey's projects being added, which will be noted in the updated project list for 2012.

The critical facilities list was discussed and is undergoing some changes. The critical facility inventory is still current, but will see significant changes in 2012 as OEM will be applying new classification standards to determine the priority and makeup of the critical facilities list.

The draft Community Wildfire Protection Plan (CWPP), managed by Fire Service, is now being circulated for review and will have implications to the Local Mitigation Strategy in the coming year. Therefore, we will need to integrate recommendations for reducing wildfire vulnerability into the LMS. It was expressed that the CWPP was as a result of the Florida Division of Forestry gifting us with a grant, since we are the 10th most vulnerable community for wildfires in the state of Florida.

Debris management contracts were discussed. Last year, the Office of Emergency Management was confident that we had a strong comprehensive capability to manage debris, because the County and all of its municipalities had contracts with the same contractors. We are now being told that some of the municipalities have let their contracts lapse, so they may not be protected and prepared to manage debris. The municipality reps were asked to validate their confidence in handling debris management.

The Post Disaster Redevelopment Planning process is well underway and thriving. Led by the County's Growth Management Planning Department, it was mentioned that those who would like to engage in the process are encouraged to do so. A grant is supporting the development of the Post Disaster Redevelopment Plan (PDRP) which is due in June.

Mr. Bishop then talked about the agenda and process for the LMS and the work that needs to be done on it. He asked for support and feedback from the group, asking how we can improve the LMS as it pertains to their individual location. The group was reminded that if we all of a sudden find that we need funding for something that is not on the list, then an emergency session of the committee can be convened so any new projects can be added to list.

Mr. Bishop then recommended that the committee set up time for a workshop to review the goals and objectives of the LMS. Mr. Bishop will send the current list of goals and objectives to committee members for review and to determine if changes are necessary. Suggestions will be consolidated and then we will re-convene March 5, 2012 to discuss any proposed changes to the goals and objectives. We will work to get revision completed by April 23rd.

HVA – no significant changes have been made to the HVA. Changes may be needed to the threat/vulnerability aspect of the table.

Cindy Jolly briefed the group on the National Flood Insurance Program (NFIP) and the Community Rating System (CRS) and explained how adjustments in the flood insurance premiums are provided. Suggestions on any new outreach activities are welcomed.
Joan Miller made a motion for the group to support all projects being considered and to give the Office of Emergency Management permission to incorporate them into the project list. Mike German seconded the motion, and the motion was pronounced carried and approved.

The meeting adjourned at 3:10 p.m. The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., January 21, 2013 in the Emergency Operations Center.

PASCO COUNTY, FLORIDA

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7530 Little Road **New Port Richey** **(727) 847-8137**
New Port Richey, FL 34654 Facsimile (727) 847-8004

DATE 1/3/2013	
TO: Jessica Attard	FAX NUMBER 869-6281
COMPANY: Tampa Bay Times	PHONE NUMBER: 869-6266

FROM: Michael Bishop	FAX NUMBER: 727-847-8004
Pasco County Office Of Emergency Management	PHONE NUMBER: 727-847-8137

I have attached a Public Notice to be placed in the **Wednesday January 9, 2013** run of the **Pasco Section** of the paper.

Specs for the notice should be as follows:
2 col wide, 1 3/4, 6" long, 18 pt Heading, Legal Section

In addition, please send two (2) proofs of publications AND a payment receipt and invoice to my attention by **Wednesday, January 16, 2013**.

Michael Bishop
Office of Emergency Management
8744 Government Drive, Building A
New Port Richey, FL 34654

Payment by VISA Card # 4715 2600 0793 0819 Expiration Date 11/2014

If you have any questions, please feel free to contact me.

Thank you.

If you have any questions or require further information, please call me at 727-847-8137

PASCO COUNTY, FLORIDA

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Emergency Communications Center Land O'Lakes (813) 996-7341
7530 Little Road **New Port Richey** **(727) 847-8137**
New Port Richey, FL 34654 Facsimile (727) 847-8004

DATE: 1/3/2013	
TO: Samantha Castillo	FAX NUMBER 815-1025
COMPANY: Tampa Tribune	PHONE NUMBER: 815-1058

FROM: Michael Bishop	FAX NUMBER: 727-847-8004
Pasco County Office Of Emergency Management	PHONE NUMBER: 727-847-8137

Hi Samantha,

I have attached a Public Notice to be placed in the **Wednesday January 9, 2013** run of the **Pasco Section** of the paper.

Specs for the notice should be as follows:
2 col wide, 1 3/4, 6" long, 18 pt Heading, Legal Section

In addition, please send two(2) proofs of publications AND a payment receipt and invoice to my attention by **Wednesday, January 16, 2013**.

Michael Bishop
Office of Emergency Management
8744 Government Drive, Building A
New Port Richey, FL 34654

Payment by VISA Card # 4715 2600 0793 0819 Expiration Date 11/2014

Please ensure that payment is made via the above referenced credit card and **NOT** invoiced through the billing account we have with your organization.

If you have any questions, please feel free to contact me.

Thank you.

If you have any questions or require further information, please call me at 727-847-8137.

2014

PASCO COUNTY HAZARD MITIGATION COMMITTEE

MEETING NOTICE

FW: Local Mitigation Strategy (LMS) Annual Update Meeting - January 28, 2014, 2:00pm

Lori L. Bushway on behalf of Michael Bishop

Required: Barbara Spaulding; 'Barbara Sessa'; 'Donna Rose'; Michael Garrett; 'Tom O'Neill'; 'Joan Miller'; 'Mike Sherman'; Terry Falke; Cindy Jolly; Ria Maris; 'Gordon Leslie'; 'Todd Vandeberg'; 'Troy Fergueson'; 'Joseph Menard'; 'Rick Allex'; 'Gordon Onderdonk'; 'Dirk Palmer'; James L. Hircock; 'Mark Clement'; Annette M. Doying; 'Bill Preslock'; 'Mike German'

When: Tuesday, January 28, 2014 2:00 PM-3:30 PM

Location: Pasco County EOC

Tuesday, January 28

1 pm

2 00 FW: Local Mitigation Strategy (LMS) Annual Update Meeting - January 28, 2014, 2:00pm
Pasco County EOC
Michael Bishop

3 00

-----Original Appointment-----
From: Michael Bishop
Sent: Tuesday, January 14, 2014 2:44 PM
To: Michael Bishop; 'Barbara Sessa'; 'Donna Rose'; Michael Garrett; 'Tom O'Neill'; 'Joan Miller'; 'Mike Sherman'; Terry Falke; Cindy Jolly; Ria Maris; 'Gordon Leslie'; 'Todd Vandeberg'; 'Troy Fergueson'; 'Joseph Menard'; 'Rick Allex'; 'Gordon Onderdonk'; 'Dirk Palmer'; James L. Hircock; 'Mark Clement'; Annette M. Doying; 'Bill Preslock'; 'Mike German'
Cc: 'Preslock, William'; 'City Clerk'
Subject: Copy: Local Mitigation Strategy (LMS) Annual Update Meeting - January 28, 2014, 2:00pm
When: Tuesday, January 28, 2014 2:00 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Pasco County EOC

LMS Working Group Members,

Happy New Year! I am sending out this meeting invite to let you know about the upcoming Pasco County Local Mitigation Strategy (LMS) Annual Update Meeting. The meeting will be Tuesday, January 28, 2014 at 2:00 pm here at the Emergency Operations Center.

I've attached some documents for your review prior to the meeting: The 2013 annual meeting packet, the current Pasco County LMS project list and the LMS project worksheet. If you happen to notice any errors or omissions, please let me know and I will be sure to make the appropriate corrections prior to the meeting. I will also send out a meeting agenda a week before the meeting.

If you are interested in submitting a new project before our annual meeting, please fill out the new project worksheet and email it back to me by January 24, 2014 so we can add it to the project list and discuss it at the meeting.

As always, if you have any questions, please feel free to contact me. If you know of any other interested parties who would like to participate in the Local Mitigation Strategy Working Group, please extend this invitation and we will be happy to have their participation.

Thank you and have a great day,

PASCO COUNTY, FLORIDA

"Bringing Opportunities Home"

Dade City (352) 521-5137 **Office of Emergency Management** Land O'Lakes
(813) 996-2411 Emergency Operations Center
New Port Richey **(727) 847-8137** 8744 Government Dr, Bldg A Facsimile
(727) 847-8004 New Port Richey, FL 34654-5598

Local Mitigation Strategy
Hazard Mitigation Committee
January 28, 2014, 2:00 p.m.

Agenda

Welcome and Introductions – Mike Bishop

Verify Public Notices Announcing Meeting – Mike Bishop

Approval of Minutes from January 18, 2013 Meeting – Mike Bishop

Developments in the Local Mitigation Strategy – Mike Bishop
- -Hazard Mitigation Grant Program Application Status
- -Flood Mitigation Assistance (FMA) Status
- -2014 LMS Rewrite Update

Pasco County Optional Rehousing Assistance Policy – Mike Bishop

Community Rating System (CRS) Public Outreach Plan Review – Cindy Jolly
- -Flood Map Modernization
- -National Flood Insurance Program Reform Act of 2012

Other Business – Mike Bishop

Hazard Mitigation Committee Chairperson Comments – Annette Doying

Adjourn

LMS Annual Update Meeting
January 28, 2014 - 2:00 p.m.
Meeting Minutes

Present

Members:
Annette Doying, Pasco County Emergency Management
Cindy Jolly, Pasco County Stormwater Management
Todd Vandeberg, City of Zephyrhills
Michael German, City of New Port Richey
Donna Rose, City of Port Richey
Rick Alley, City of San Antonio
Joan Miller, City of St. Leo
Michael Bishop, Pasco County Emergency Management

Participants and Public:
Mark Clement, 6th District Court
Joann Jaquish, City of Port Richey
Ria Maris, Pasco County Emergency Management
Tait Sanborn, Pasco County Sheriff's Office
Jim Hircock, Pasco County Utilities
Emily Rood, University of South Florida

The Meeting Leader, Michael Bishop opened the LMS Annual Update meeting by welcoming the attendees and introducing himself, and explaining the purpose of the annual update. He then showed the Proofs of Public Meeting Announcements. Attendees were informed of the Public Notice postings of the meeting in the Tampa Bay Times and on the front page of the Pasco County Office of Emergency Management website, all complying with the Public Notice policies and regulations.

Mr. Bishop stated that the LMS is undergoing a major rewrite currently with a draft due to our State reviewer in March or April 2014. Once the draft LMS is completed, the all committee members will have an opportunity to comment and provide feedback. The revised LMS will then be submitted to the Pasco County Board of County Commissioners for adoption by August 2014.

Mr. Bishop then provided an update on the Hazard Mitigation Grant Program applications submitted from the flooding that occurred during Tropical Storm Debby. Of the 23 applications submitted for acquisition/demolition projects, 16 projects made it through the State DEM review and were forwarded to FEMA for approval. Two projects were removed from the list, one was funded with Hurricane Frances funds and the second home was sold by the homeowner and the project was cancelled. 5 projects did not receive a favorable Benefit/Cost Analysis score. OEM is currently waiting to hear from FEMA and the State as to the status of the applications.

Mr. Bishop then discussed the Flood Mitigation Assistance (FMA) program and described the County's process for soliciting homeowners in severe repetitive loss and repetitive loss areas to participate in the program along with the advantages and disadvantages of the program. The group was asked to help get the word out to the community to help increase participation in the program.

Mr. Bishop then updated the group on the recently adopted Optional Relocation Assistance Policy (ORAP) for Pasco County. The policy, would allow for participants in mitigation projects to be reimbursed for various expenses involved with relocating during a project. The expenses that would be partially reimbursed would include rental assistance for up to four months, temporary storage usage, moving expenses and utility disconnection/reconnection. While the policy has been adopted, OEM has yet to secure budget funding for the program and will seek out funds on a case by case basis, as needed.

Cindy Jolly discussed with the group the Community Rating System (CRS) and the Public Outreach Plan. Ms. Jolly explained the way that the points are awarded to the communities that participate in the CRS and how those points benefit flood insurance policy holders. Now that the new CRS manual has been published, the communities within Pasco County that do not yet belong to the CRS are encouraged to join. In addition, the State of Florida Department of Emergency Management announced that they will be reviewing the CRS program and analyzing what they can do on a statewide basis to assist with credit obtainment under the program.

The Public Outreach Plan was reviewed by the group. Current and future outreach programs were discussed. There was an observation made that the Annual Hurricane Expo does not seem to be as productive as it once was. Other suggestions for outreach similar to the Annual Hurricane Expo such as partnering with the Sheriff's Office during Safety Expos and partnering at events held with in the cities would provide avenues to conduct outreach. The "Hurricane Expo" as labeled tends to limit the interest. The group as a whole suggested not having a "Hurricane Expo" and instead suggested being a participant in other agencies outreach events. Other avenues to explore are billboard rentals, bench signs and social media such as twitter.

Ms. Jolly then gave an update on the Flood Map Modernization and the impact of the Biggert-Waters Act on Pasco County.

The meeting adjourned at 3:45 p.m.

The next meeting of the Hazard Mitigation Committee will be at 1:30 p.m., April 17, 2014 at a location to be determined.

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Appendix B

Special Needs Disaster Preparedness Packet

Download your packet and application at http://www.pascocountyfl.net/index.aspx?nid=365

PASCO COUNTY, FLORIDA

"Bringing Opportunities Home"

Dade City	(352) 521-5137	**Office of Emergency Management**
Land O'Lakes	(813) 996-2411	Emergency Operations Center
New Port Richey	**(727) 847-8137**	8744 Government Drive, Building A
Facsimile	(727) 847-8004	New Port Richey, FL 34654-5598

Dear Resident:

You are currently registered (or in the process of registering) with the Pasco County Special Needs Program. Florida Statute requires your local Emergency Management agency to gather updated information concerning your needs during an evacuation. Please fill out the enclosed form **completely** and return it to our office by mail or fax within 30 days. All information contained within our files needs to be accurate and will be kept confidential. Pasco County complies with the laws of HIPAA (Health Insurance Portability and Accountability Act of 1996).

Sheltering will be provided only for the duration of the emergency. **You will need to make plans before the evacuation in case you cannot return home.** If your medical care exceeds the capabilities of a shelter, you **may** be placed in **an alternate facility** to meet your needs. Prescription medications and hospital beds are **NOT** available at the shelter. Please bring a two-week supply and a current list of all your medications with you when you evacuate. Your oxygen provider must continue to supply your needs. Any costs associated with hospital or other medical facility care or medical transportation is your responsibility.

Please call our office immediately if there are any changes in your medical condition(s), your address, your phone number(s), or your emergency contacts. As stated above, **it is extremely important that your information is accurate and up to date** in order to better serve you.

Should you have any questions or require any additional information, please call our office at: (727) 847-8137.

Sincerely,

James D. Johnston

James D. Johnston
Coordinator III

JDJ/llb

Enclosures

"Pasco County—Florida's premier county for balanced economic growth, environmental sustainability, and first-class services."

Pasco County Office of Emergency Management
8744 Government Drive - Building A - New Port Richey, FL 34654
T: (727) 847-8137 F: (727) 847-8004
www.pascoemergencymanagement.com

Special Needs Shelter Fact Sheet

Pre-Planning:

- Have your supply kit ready to go.
- Have one or more phone numbers of individuals who can check on your home after the evacuation.
- Have contacts/phone numbers for all of your medical providers.
- Identify ONE caregiver to accompany you to the shelter.
- Make a plan for your pets.

Your Shelter Supply Kit:

You should plan to take the following essential items with you to a Special Needs Shelter:

- Medications & all Diabetic supplies
- Special dietary needs (special diets cannot be accommodated in a shelter)
- Medical supplies, oxygen masks & E-tank to facilitate transportation to and from the shelter
- Wound care supplies
- Blankets/pillows, air mattress
- Towel/washcloth
- Change of clothing
- Wheelchair/walker
- Personal hygiene items

DO **NOT** Bring:

- Concentrators
- Illegal or illicit drugs
- Weapons

Monitor & Act:

When a disaster occurs, **listen to local news sources** for information and instructions. If you are pre-registered at a Special Needs Shelter and need to evacuate, you will be called. Be ready to go!

Evacuation:

- Monitor local news sources for information.
- Get ready to be evacuated. Pack your essential supplies and medications.
- You will be called when you are to be transported.
- Secure your home.
- Remember to bring any special dietary needs, as special diets CANNOT be accommodated in the shelter.
- Bring food to sustain yourselves until feeding times are established.

Shelter:

- Bring only ONE caregiver to the shelter with you. Caregiver please bring a chair.
- Check in at arrival desk.
- Make sure you check out prior to leaving the shelter.

"Bringing Opportunities Home"

PASCO COUNTY
EVACUATION REGISTRATION REQUEST FORM

Registration for: ☐ Special Needs Shelter ☐ Transportation Only ☐ Both

Last Name:		First Name:	MI:
Gender: ☐Male ☐Female	Date of Birth:	Telephone #:	
		Alternate Telephone #:	
Street #:	Street:	Unit/Lot#:	City:	Zip:
Do you live in a Mobile Home? ☐Yes ☐No	Subdivision/Park Name:	Are you a full-time resident? ☐Yes ☐ No	
Caregiver's Name:	Caregiver's Phone #:	Does your caregiver live with you? ☐Yes ☐ No ☐ N/A	
Emergency Contact Name:		Emergency Contact Phone #:	
Emergency Contact Address (Please include City, State, and Zip Code:		Emergency Contact Alternate Phone #	
Do you own any Pets? ☐Yes ☐No	If yes, have you made shelter arrangements for them? ☐Yes ☐No	Do you have a Service (Hearing or Seeing Eye) Animal? ☐Yes ☐No	

HEALTHCARE PROVIDER INFORMATION

Home Health Care Agency Name:	Phone #:
Primary Physician's Name:	Phone #:

WHAT ARE YOUR MEDICAL CONDITIONS?

Are you bedridden? ☐Yes ☐No	Do you use a wheelchair? ☐Yes ☐No Do you use a walker? ☐Yes ☐No	Do you require oxygen or use a nebulizer? ☐ No ☐ Yes ____ Hours/Day _____ Litre Flow ☐ Nebulizer

(Please check ALL that apply)

____ Alzheimer's Disease or Dementia	____ Dialysis	____ Neurological Condition
____ Mobility Issue	____ Diabetes/Hyperglycemia	____ Over 300 lbs.
____ Contagious Disease	____ Feeding Tube	____ Hearing Impairment
____ Communication Difficulty	____ Ileostomy/Colostomy	____ Visually Impaired

PLEASE TELL US ABOUT YOUR TRANSPORTATION NEEDS *(Please only check ONE)*

____ I will provide my own transportation to a public shelter (T-5)
____ I need transportation to a public shelter (T-4)
____ I am wheelchair bound and will require transportation via a wheelchair bus/van to a public shelter (T-2)
____ I may need to be transported to an alternate facility (T-1)

ACKNOWLEDGEMENT - *Please Read Carefully*

The information contained herein is true and correct to the best of my knowledge. I have read the letter and the Special Needs Shelter Fact Sheet accompanying this request, and I understand the limitations on the services and level of care available. I understand that this registration is voluntary and hereby request registration in the Pasco County Special Needs Program.

*** Please turn page over to continue*

Form Updated 01/2013

PASCO COUNTY
EVACUATION REGISTRATION REQUEST FORM

ACKNOWLEDGEMENT (Continued) - *Please Read Carefully*

I understand, based on the information I have provided, that I may or may not be assigned to a special needs unit based on the criteria stated in the information provided. I understand that I am responsible for providing any prescription medications, oxygen supplies, medical equipment, and special dietary items that I may require during the emergency. If my physician determines that I need a higher level of care than can be provided in a Special Needs Unit, it is suggested that I make alternate arrangements for my care for an evacuation. I also understand that I will be responsible for any charges and costs associated with hospital or other medical facility care or medical transportation.

I understand that assistance will be provided only for the duration of the emergency, and that alternative arrangements should be made in advance in case I am not able to return to my home. I grant permission to medical providers and transportation agencies and others as necessary to provide care and disclose any information necessary to respond to my needs. I hereby grant permission for the release of this information to emergency response agencies and pre-authorize these agencies to enter my residence for the purpose of emergency search and rescue.

SIGNATURE: _____ DATE: _____

REPRESENTATIVE (If you are unable to sign): _____

RELATIONSHIP TO THE APPLICANT: _____

Return form to:
PASCO COUNTY Office of Emergency Management
8744 Government Drive, Bldg. A, New Port Richey, FL 34654
or Fax to: (727) 847-8004.
For more information call: (727) 847-8137

**********FOR OFFICIAL USE ONLY**********

_____ _____ _____
EVAC TRANS SHELTER

NOTES:

Form Updated 01/2013

PASCO COUNTY SPECIAL NEEDS SHELTERS
(IF YOU ARE DRIVING YOURSELF)

IMPORTANT

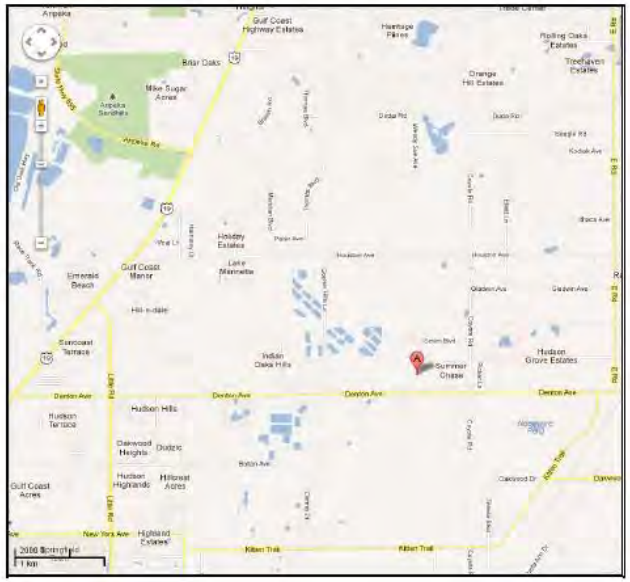
PLEASE CHECK TO MAKE SURE THAT THE SHELTER IS OPEN BEFORE YOU LEAVE HOME.

WEST PASCO

The Mike Fasano Regional Hurricane Shelter
11611 Denton Avenue
Hudson, FL 34667

Traveling SR 54 or SR 52 to Little Road: Proceed north to Denton Avenue and turn right. Continue approximately 2.5 miles to the shelter (on left side, yellow building).

From North of Denton Avenue: Take Little Road south to Denton Avenue. Turn left and continue approximately 2.5 miles to the shelter (on left side, yellow building).



PASCO COUNTY SPECIAL NEEDS SHELTERS
(IF YOU ARE DRIVING YOURSELF)

IMPORTANT

PLEASE CHECK TO MAKE SURE THAT THE SHELTER IS OPEN BEFORE YOU LEAVE HOME.

EAST PASCO

Wiregrass High School
2909 Mansfield Blvd
Wesley Chapel, FL

From the West: Take SR 56 over the I75 overpass to Bruce B. Downs Blvd., turn right onto Bruce B . Downs to County Line Road, turn left onto County Line Road to Mansfield Blvd, turn left and follow Mansfield Blvd to the school. Upon entering the school grounds, go to the farthest building to unload.

From the East: take SR 54 to Meadow Point Blvd, turn left onto Meadow Point Blvd, go to Beardsley Drive, turn right onto Beardsley Drive, proceed to Mansfield Blvd, turn right and follow Mansfield Blvd to the school. Upon entering the school grounds, go to the farthest building to unload.

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Appendix C

Mitigation Strategy
List of Mitigation Projects
Project Updates

	Type	Score	Project or Program Name	Project/ Program Description	City or County Offices	Hazard(s) Mitigated	Project/ Program Category	Funding Source(s)	Goal	Objective	Timeline	Update	Status
1	H O	34	Fargo Drive Acquisition	Purchase Fargo Drive property because it is located in an enclosed basin and was damaged beyond repair during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
2	H P	34	Morningstar Lane Acquisition	Purchase Morningstar Lane property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
3	H Q	34	11442 Minnieola Drive Acquisition	Purchase 11442 Minnieola Drive property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
4	H R	34	Ironbark Drive Acquisition	Purchase Ironbark Drive property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
5	H S	33	Tomahawk Street Acquisition	Purchase Tomahawk Street property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
6	H T	33	Michigan Avenue Acquisition	Purchase Michigan Avenue property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
7	H U	33	Lee Street Acquisition	Purchase Lee Street property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM

8	H V	**33**	Alcea Street Acquisition	Purchase Alcea Street (4809 + 4815) and 5747 Friedly Avenue properties severely damaged during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
9	H W	**33**	Grayoak Lane Acquisition	Purchase Grayoak Lane property severely damaged during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
10	H X	**33**	Passaic Drive Acquisition	Purchase Passaic Drive property severely damaged during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
11	H Y	**33**	Mirage Avenue Acquisition	Purchase Mirage Avenue property severely damaged during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
12	H Z	**33**	Ella Lane Acquisition	Purchase Ella Lane property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
13	IA	**31**	11434 Minnieola Drive Acquisition	Purchase 11434 Minnieola Drive property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
14	IB	**31**	Otis Allen Road Acquisition	Purchase Otis Allen Road property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
15	IC	**31**	Elfers Parkway Acquisition	Purchase Elfers Parkway property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM

16	ID	**31**	Harbor Drive Acquisition	Purchase Harbor Drive property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
17	IE	**31**	Augustine Drive Acquisition	Purchase Augustine Drive property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
18	IF	**31**	Quail Hollow Boulevard Acquisition	Purchase Quail Hollow Boulevard property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
19	IG	**31**	Winsor Drive Acquisition	Purchase Winsor Drive properties (38804 & 38906) because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jun-14	FEMA approval communicated to State DOEM
20	IH	**31**	Thunderhead Street Acquisition	Purchase Thunderhead Street property because of severe damage suffered during TS Debby	Pasco County OEM	Floods	Property Acquisition	HMGP	01 Protect the public health, safety and welfare	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jan-14	Project suspended, home has been sold.
21	II	**30**	Lake Terrace Subdivision Project Area (RLA 6)	Elevate 1 RL property built prior to County joining NFIP	Pasco County OEM & Stormwater Management	Floods	Retrofitting of Structures	HMGP	05 Reduce the cost of disaster response and recovery	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jan-14	Encourage property owners to elevate in this area will continue as funding is made available.
22	IJ	**30**	Aurora Drive Project Area (RLA 11), Phase I	Acquire 2 repetitive loss properties in an area built prior to current stormwater regulations and prior to the county joining NFIP	Stormwater Management	Floods	Property Acquisition	HMGP	05 Reduce the cost of disaster response and recovery	05.2 Property acquisition/retrofit repetitive loss properties	> 12 mos.	Jan-14	Encourage property owners to elevate in this area will continue as funding is made available.
23	IK	**30**	Aurora Drive Project Area (RLA 11), Phase II	Const expanded retention pond to improve the storage capacity for up to a 10-year storm event	Stormwater Management	Floods	Stormwater Management	HMGP, Stormwater utility fee	08 Stormwater Improvement	Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	Jan-14	Acquire properties, design and permit construction

24	IL	**30**	Bonita Project Area (RLA 14)	Acquire 2 repetitive loss properties in an area built prior to current stormwater regulations and prior to the county joining NFIP	Pasco County OEM & Stormwater Manageme nt	Floods	Property Acquisition	HMGP	05 Reduce the cost of disaster response and recovery	Advocate retro-fitting for repetitive loss properties	> 12 mos.	Jan-14	Encourage property owners to elevate in this area will continue as funding is made available.
25	I M	**30**	Floramar Project Area (RLA 15)	Elevate 1 older RL property built prior to County joining NFIP	Pasco County OEM & Stormwater Manageme nt	Floods	Retrofitting of Structures	HMGP	05 Reduce the cost of disaster response and recovery	Advocate retro-fitting for repetitive loss properties	> 12 mos.	Jan-14	Encourage property owners to elevate in this area will continue as funding is made available.
26	IN	**30**	Update FIRMs	Add St. Leo and San Antonio to NFIP and encourage FEMA to develop FIMs	Stormwater Manageme nt and Cities	Floods	Public Education	SWFWMD, COOP Funding	01 Protect the health, safety and welfare of the public	1.2 Ensure new development/red evelopment complies with applicable federal, state and local building regulations	Est. 10/14	Jan-14	DFIRMS in final compliance period.
27	IO	**30**	Holiday Hills Project Area (RLA 16), Phase 2	Elevate 5 RLs, built prior to the county joining NFIP	Stormwater Manageme nt	Floods	Flood Proofing	HMGP	05 Reduce the cost of disaster response and recovery	Advocate retro-fitting for repetitive loss properties	> 12 mos.	Jan-14	Encourage property owners to elevate in this area will continue as funding is made available.
28	IP	**30**	Duck Slough Watershed BMP Implementatio n (west of Little Road)	Implementation of BMPs identified in the Duck Slough watershed plan for the area west of Little Road	Stormwater Manageme nt	Floods	Capital Projects, Infrastructure, Restoration of Natural Features, Retrofitting of Structures, Stormwater Management	Stormwater utility fund, SWFWMD, COOP Funding and State appropriatio ns	08 Stormwater Improvement	8.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	Jan-14	BMP 1A & 5A ready for construction; BMP 6 being designed and permit application prepared
29	IQ	**30**	Port Richey Watershed BMP Implementatio n	Implementation of BMPs identified in the Stormwater Management Master Plan - SWFWMD	Stormwater Manageme nt	Floods	Capital Projects, Infrastructure, Stormwater Management	SWFWMD, COOP Funding & Stormwater Utility Fee	08 Stormwater Improvement	8.1 Maintain and improve existing drainage systems to manage stormwater runoff	> 12 mos.	Jan-14	Review of BMPs underway.
30	IR	**30**	Zephyrhills Downtown Fire Station Wet Floodproofing	Renovate downtown Fire Station to include interior/exterior wet floodproofing	City of Zephyrhills	Floods	Flood Proofing	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.

31	IS	**30**	Zephyrhills Downtown Fire Station Dry Floodproofing	Renovation of downtown Fire Station to include interior/exterior dry floodproofing	City of Zephyrhills	Floods	Flood Proofing	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.
32	IT	**30**	Zephyrhills Downtown Fire Station Hardening	Structural reinforcements to harden downtown Fire Station to meet current Florida Building Codes	City of Zephyrhills	Winds	Critical Facilities	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.
33	IU	**30**	Zephyrhills 20th Street Stormwater Management Project Acquisition	Purchase foreclosed property to construct stormwater management project/retention pond. Reduce flooding of two primary collector streets (20th St & 5th Ave) with improved emergency ingress/egress and flood protection	City of Zephyrhills	Floods	Property Acquisition	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.
34	IV	**30**	Zephyrhills 20th Street (4th Ave) Stormwater Management Project	Construct retention pond/piping in prioritized area with flooding to protect residences and improve emergency ingress/egress	City of Zephyrhills	Floods	Stormwater Management	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.
35	I W	**30**	Zephyrhills 20th Street (7th Ave) Stormwater Management Project	Construct retention pond/piping in prioritized area with flooding to protect residences and improve emergency ingress/egress	City of Zephyrhills	Floods	Stormwater Management	HMGP			> 12 mos.	Jan-14	OEM putting together application for submission to the state.

36	H F	**11**	Residential Safe Rooms	Encourage residents to construct/retrofit safe rooms in their homes using FEMA criteria.	Countywide	Hurricanes/ Tropical Storms, Tornados, Nuclear Power Plant Incident	Retrofitting of Structures	EM Preparedness and Assistance Trust Fund; HMGP; FMA	01 Protect the health, safety and welfare of the public	01.1 Inform and educate the public about potential hazards and property protection measures	> 12 mos.	14-Jan	Project costs and benefits will vary by residence. This is a continuing effort to encourage homeowners to construct safe rooms.
37	BI	**28**	10th Street and Willingham Avenue Stormwater Project	Increase retention area and redesign stormwater system.	Dade City	Floods	Stormwater Improvement Project	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Awaiting release of new FIRMs determine how to best redesign project stormwater system. This project will be reviewed during spring 2008 and is possible item for FY 2008-2009 budget. FIRMs should be released in 2013.
38	G F	**22**	Beauchamp Retention Ponds Stormwater Project	Along with the engineering study for the City Storm Water Management Plan (#055;E-17), conduct engineering study with SWFWMD to increase the depth of the ponds and effects of pumping to other basins to improve the #059 Dade Oaks II Project,	Dade City	Floods	Stormwater Improvement Project	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Awaiting release of new FIRMs before attempting to determine redesigned stormwater system for this project. Project will be evaluated after view of new FIRMs. FIRMs should be released in 2013.

39	G G	**22**	Howard Avenue Stormwater Project	Resize culverts draining to the lift station, upgrade lift station and upgrade outfall.	Dade City	Floods	Stormwater Improvement Project	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project was divided into two phases. Phase I was completed by the City and included installation of a 24" RCP along Howard Ave and the construction of a retention pond. Phase II will include the upgrade of the stormwater pump station. No change.
40	C N	**25**	Dade City Stormwater Management Plan	Engineering study to identify cost-effective stormwater improvements necessary to correct existing problems and policy guidelines to mitigate for potential flooding.	Dade City and Stormwater Management	Floods	Management Plan Development and Modification	EM Preparedness and Assistance Trust Fund	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Work underway to develop 5-year capital improvement plan. No change.
41	C P	**25**	Dade Oaks Project, Phase II, 10th Street and Whitehouse Avenue Intersection Stormwater Project	Drainage improvements and additional retention to restore natural flows and contain flood waters in the Dade Oaks Public Housing Project. Cost unavailable. Completion dependent on County project.	Dade City and Stormwater Management	Floods	Stormwater Improvement Project	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is not active at this time. Awaiting release of new FIRM Maps before attempting to determine redesigned stormwater system for this project. FIRMs should be released in 2013.

42	G B	**23**	Emergency Generator	Install emergency generator at Centennial Elementary School to supply backup power to the water well and waste plant during shelter operations	District School Board of Pasco County	Hurricanes/ Tropical Storms	Critical Facilities	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	< 12 mos.	14-Jan	The generator for the well and lift station at Centennial Elementary is scheduled to be funded next fiscal year, 2011-2012. This is subject to change depending on the available funding.
43	C Y	**25**	Dunn Retrofit	Modified elevation of SLR property to eliminate the flood problem	New Port Richey	Floods	Retrofitting of Structure	Repetitive Flood Claims Mitigation Grant	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	< 12 mos.	14-Jan	Completed.
44	G M	**21**	Elevate the Putnam Dwelling	Modified elevation of Putnam Home at 5422 Bellview Ave., New Port Richey	New Port Richey	Floods	Elevation of home to eliminate flooding	FMA	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Construction complete and CO issued 1/29/2010.
45	H G	**10**	Morton Plant North Bay Hospital External Hardening	Examination of potential hardening to include windows and protection of front entrance from flood damage	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG; FMA; HMGP;	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.
46	H H	**10**	Morton Plant North Bay Hospital Mitchell Rehabilitation Hospital External Hardening	External hardening of windows, roof and walls.	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG, FMA, HMGP, PDM	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.
47	HI	**10**	Morton Plant North Bay Cath Lab External Hardening	External hardening of windows, roof and walls.	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG, FMA, HMGP, PDM	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.

48	HJ	**10**	Morton Plant North Bay Campus Wide Electrical Panel Elevation - External Hardening	External hardening of all electrical panels on the medical campus	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG, FMA, HMGP, PDM	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.
49	H K	**10**	Morton Plant North Bay Ambulatory Surgery Center External Hardening	External hardening of all electrical panels on the medical campus	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG, FMA, HMGP, PDM	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.
50	H L	**10**	New Port Richey Retro Fit of Municipal Complex	Add window protection to City Hall to ensure continuation of critical municipal functions.	New Port Richey	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	CDBG, FMA, HMGP, PDM	01 Protect public health, safety and welfare	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New project.
51	EJ	**25**	Main Street Drainage Project	Construct road and drainage improvements.	New Port Richey and Pasco County Project Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Roadway constructed between Congress and Rowen.

52	B M	**28**	Kitten Trail Drainage Improvements Project	Elevate approximately 1,000 ft. of road to keep it out of the 100 year flood plain.	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	09 Reduce property damage caused by flooding	09.1 Identify and correct local flooding conditions	> 12 mos.	14-Jan	Completed.
53	CI	**25**	Cypress Creek-South Lake Watershed Management Plan Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Structural Project	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Implementation of BMP's to concentrate on non-structural projects. Stormwater Management Master Plan completed Jan 2012.

54	C Q	**25**	Double Hammock Creek Watershed Management Plan Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Structural Project	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is on hold until watershed study is completed. Stormwater Management Master Plan began in 2012. To be completed at the end of 2014.
55	C X	**25**	Duck Lake Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Stormwater Management	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	BMP's 1. Wilson Road - bid review being conducted. 2. Update to watershed study to be completed at the end of 2014.

56	DC	**25**	East Pasco Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Stormwater Management	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Final Stormwater Management Master Plan completed. BMPs delivered. First group of BMPs to be designed and permitted. Property acquisition and easement ongoing. Construction schedule not determined.
57	DU	**25**	Hammock Creek Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is on hold until updated watershed management plan is completed (est. 12/15).

58	EI	**25**	Lower Coastal Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is on hold until watershed study is completed. Stormwater Management Master Plan to begin in 2011 and to be completed at the end of 2014.
59	EP	**25**	New River Watershed Management Plan BMP Improvement	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is on hold until watershed study is completed. Stormwater Management Master Plan underway, to be completed by end of 2014.

60	F D	**25**	Trout Creek Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementation Grants; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	BMP: Birdsong Blvd drainage improvements under construction.
61	F E	**25**	Upper Hillsborough Watershed Management Plan BMP Implementation	Implementation of BMPs identified in the Stormwater Management Master Plan-SWMMP.	Pasco County	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; CDBG; EM Preparedness and Assistance Trust Fund; Nonpoint Source Implementation Grant; Watershed Protection & Flood; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project is on hold until watershed study is completed. Stormwater Management Master Plan currently being developed. Scheduled to be completed by the end of 2014.

62	G X	**18**	Pasco County Educational Outreach Program	Institute or continue public education programs that promote risk reduction, the purchase of flood and wind insurance, evacuation procedures and shelter availability, disaster preparedness and education for citizens and businesses, and the safe storage an	Pasco County	All Hazards	Public Education Project	EM Preparednes s and Assistance Trust Fund (EMPATF)	01 Protect the health, safety and welfare of the public	01.1 Inform and educate the public about potential hazards and property protection measures	> 12 mos.	14-Jan	Application to be submitted for EMPATF Grant. Received weather radios from DEM at no cost to County; a distribution plan is being developed.
63	A Q	**31**	Tommytown-Neighborhood Target Area	Investment of physical development in low-income areas. Construct paved streets, water and sewer facilities, stormwater improvements, street lights and other amenities.	Pasco County Community Developme nt	Floods	Revitalization Project	CDBG; FMA; HMGP; Nonpoint Source Implementa tion Grants; Special Economic Developme nt & Adjustment Assistance Program; Watershed Protection & Flood Prevention	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Pasco County has received a $13 million loan for this project. Design completed. Final lots needed for drainage are acquired. Construction began April 2007 in area south of Lock St. Bid for area north of Lock Street went out in Spring 2008. Southern part of Lock Street completed in 2008. Construction is 80% complete. The project is complete.
64	GI	**21**	Aripeka Project Area (RLA 12)	Elevation of 8 Repetitive Loss Properties, built prior to the County joining the National Flood Insurance Program.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.

65	GJ	**21**	Baillies Bluff Project Area (RLA 13)	Elevation of 4 Repetitive Loss Properties in an area of older homes built between 1967 and 1977 prior to the County joining the National Flood Insurance Program.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structures	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
66	G K	**21**	Bass Lake Warrell Project Drainage Area Phase I (RLA 2)	Elevation of 7 Repetitive Loss Properties in an area of properties developed prior to the County joining the National Flood Insurance Program.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	To date, 2 repetitive loss properties have been mitigated. Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations
67	G O	**21**	Hudson Project Area (RLA 1)	Elevation of 291 Repetitive Loss Properties, in an area characterized by older homes built on canals in the 1960's and the 1970's.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	To date, 15 repetitive loss properties have been mitigated. Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
68	G P	**21**	Pithlachascote e Project Area (RLA 3)	Elevation of 2 Repetitive Loss Properties in an area characterized by the unmapped division of property along the Pithlachascotee River.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
69	G Q	**21**	West Port Project Area Phase I (RLA 9)	Elevation of 12 repetitive Loss Properties, in an area of residential homes built in the 1970's.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	CDBG; FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.

70	G R	**21**	Withlacoochee Project Area (RLA 7)	Elevation of two Repetitive Loss Properties, in an area of large lots with homes built prior to the County joining the National Flood Insurance Program.	Pasco County OEM & Stormwater Mgt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
71	G N	**21**	Green Key Project Area Phase I (RLA 4)	Elevation of 96 Repetitive Loss Properties in an area of older homes, the majority were built prior to the County joining the National Flood Insurance Program.	Pasco County OEM, Stormwater Mgt and New Port Richey	Floods	Property Protection	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	To date, 3 repetitive loss properties have been mitigated. Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
72	G H	**21**	Anclote Project Area (RLA 5)	Elevation of 8 Repetitive Loss Properties, in an area of older homes built prior to the County joining the National Flood Insurance Program.	Pasco County Developme nt Services, Emergency Manageme nt	Floods	Retrofitting of Structure(s)	FMA; HMGP; Pre-Disaster Mitigation Program	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	To date, 1 repetitive loss property has been mitigated. Pursuit of homeowners to elevate in this area will continue as funding is made available for modified elevations.
73	G C	**23**	Post-disaster Redevelopmen t for Business and Industry	Coordinate with business and industry on the development of a plan that addresses business interests/concerns for Post-Disaster Redevelopment.	Pasco County Economic Developme nt Council	All Hazards	Regulatory Initiatives		03 Encourage economic diversification and development	03.1 Assist and encourage new economic development and post-disaster redevelopment	> 12 mos.	14-Jan	This is an ongoing project.

74	A A	**34**	Crossbar-Al Bar Ranch Acquisition	Purchase Crossbar - Al Bar Ranch property because it is located in a Critical Linkage area and it will protect wildlife and floodplains.	Pasco County ELAMP	Floods, Wildfires	Restoration of Natural Features	County Sales Tax, Wetland Mitigation, SWFWMD, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	In progress; working with State partners.
75	A C	**33**	Horton-Beacon Point Acquisition	Purchase Horton-Beacon Point property because it has rare natural habitats in a primarily urban area and it will protect wildlife habitats and wetlands.	Pasco County ELAMP	Floods, Wildfires	Restoration of Natural Features	Florida Communities Trust, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	Deferred - On hold pending alternate funding
76	A D	**33**	Mickler Coastal Acquisition	Purchase Mickler property located along the Gulf of Mexico to protect wildlife and enhance floodplain	Pasco County ELAMP	Coastal Flooding, Coastal/ River Erosion, Hurricanes/ Tropical Storms, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, SWFWMD, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	< 12 mos.	14-Jan	On hold
77	A E	**32**	Cypress Creek Acquisition	Purchase Cypress Creek property located in a Critical Linkage to protect wildlife and floodplains	Pasco County ELAMP	Floods, Drought	Restoration of Natural Features	County Sales Tax	06 Encourage the protection of Natural Resources	06.2 Protect and restore wetlands and critical upland habitats	< 12 mos.	14-Jan	Acquired

78	A F	**32**	Hidden River South Acquisition	Purchase Hidden River South located in a Critical Linkage (along Hillsborough River) to protect wildlife and floodplains	Pasco County ELAMP	Floods, Drought, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, SWFWMD	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	< 12 mos.	14-Jan	Deferred - Inactive
79	A G	**31**	Boger Coastal Acquisition	Purchase Boger Coastal property because it is located in a coastal high hazard area and it will protect wildlife and floodplains.	Pasco County ELAMP	Coastal Flooding, Hurricanes/ Tropical Storms, Coastal/ River Erosion, Wildfires	Restoration of Natural Features	County Sales Tax, Wetland Mitigation, SWFWMD, Florida Communities Trust, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	Deferred - Inactive
80	A H	**31**	Castriota Acquisition	Purchase Castriota property located in a Critical Linkage to protect wildlife and floodplains	Pasco County ELAMP	Floods, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	Deferred - Inactive
81	AI	**31**	Dutchmen Key Acquisition	Purchase Dutchmen Key property located in a Critical Linkage to protect wildlife and floodplains	Pasco County ELAMP	Coastal Flooding, Hurricanes/ Tropical Storms, Coastal/ River Erosion, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.1 Partner with the State and other agencies in the acquisition of lands and/or development rights for environmental protection	> 12 mos.	14-Jan	Deferred - Inactive

82	AK	**31**	Malhotra Acquisition	Purchase Malhotra property because it is located in a Critical Linkage area and it will protect wildlife habitats, floodplains, and wetlands.	Pasco County ELAMP	Floods, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention, Wetland Mitigation	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	Deferred - Inactive
83	AL	**31**	Morsani Ranch Acquisition	Purchase Morsani Ranch property located in a Critical Linkage at the headwaters of the Pithlachascotee River to protect wildlife and floodplains. Property also includes portion of the Crews Lake Basin	Pasco County ELAMP	Floods, Drought, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, SWFWMD, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	< 12 mos.	14-Jan	Property acquired in 2009.
84	AP	**31**	Pasco Palms Acquisition	Purchase Pasco Palms property because it is located in a coastal high hazard area and it will protect wildlife and floodplains.	Pasco County ELAMP	Coastal Floods, Coastal/ River Erosion, Hurricanes/ Tropical Storms, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	< 12 mos.	14-Jan	Property acquired in 2009.

85	AZ	**30**	Rocky Creek Acquisition	Purchase Rocky Creek property because it is located in the coastal high hazard area, has rare natural habitats in a primarily urban area and it will protect wildlife habitats and wetlands.	Pasco County ELAMP	Coastal Flooding, Coastal Erosion, Hurricanes/ Tropical Storms, Wildfires	Restoration of Natural Features	County Sales Tax, Florida Communities Trust, Florida Forever, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	On hold
86	BB	**30**	Tierra del Sol Acquisition	Purchase Tierra del Sol property because it is located in a Critical Linkage area and it will protect wildlife and floodplains.	Pasco County ELAMP	Floods, Wildfires	Restoration of Natural Features	County Sales Tax, Wetland Mitigation, Conservation and Recreation Lands, Watershed Protection and Flood Prevention	06 Encourage the protection of Natural Resources	06.4 Provide and encourage preservation of open space	> 12 mos.	14-Jan	Acquired
87	AW	**30**	Local Incident Management Team	Develop and maintain a Local Incident Management Team (L-IMT) to reduce and/or eliminate excess expenditure costs associated with Type-4 incidents, and events.	Pasco County Emergency Management	All Hazards	Management Plan		05 Reduce the cost of disaster response and recovery	05.4 Efficiently manage all local disasters	> 12 mos.	14-Jan	Ongoing project.
88	BE	**29**	Hazardous Incident Team	Maintain a Hazardous Incident Team to respond to and mitigate hazardous material incidents.	Pasco County Emergency Management	All Hazards	Management Plan		02 Minimize the effects of Hazardous Materials incidents	02.2 Maintain a capability to respond to hazardous materials incidents	> 12 mos.	14-Jan	Ongoing project

89	C F	**25**	Community Emergency Response Teams	Create and support Community Emergency Response Teams (CERT) that are capable of performing public education, warning and notification, damage assessment and post-disaster coordination of service delivery	Pasco County Emergency Manageme nt	All Hazards	Public Education	Citizen Corps Grant Program	04 Maintain state of preparedness/coo rdination to mitigate and respond to disasters	04.1 Develop the capacity to mitigate, prepare, respond, and recover from all hazards	> 12 mos.	14-Jan	Ongoing project
90	C G	**25**	Counter-terrorism	Develop and maintain intelligence collection and dissemination capabilities to prevent and mitigate terrorism activity/incidents	Pasco County Emergency Manageme nt	Terrorism	Management Plan		12 Minimize the effects of a terrorist attack	12.1 Continue to enhance the capacity to aid in the prevention of and response to terror attacks	> 12 mos.	14-Jan	Ongoing project.
91	G S	**20**	Post-disaster Temporary Housing	Develop a provision in the Post-Disaster Recovery Ordinance that addresses post-disaster temporary housing	Pasco County Emergency Manageme nt	All Hazards	Regulatory Initiatives	Funding is not necessary to develop the addition to the ordinance.	05 Reduce the cost of disaster response and recovery	05.3 Establish and implement a plan for post-disaster temporary housing	> 12 mos.	14-Jan	The Office of Emergency Management is currently working with planning and growth management to develop a Post Disaster Redevelopment Plan. Target date for completion is mid-2012. Grant funding has been received to support plan development.
92	G U	**20**	Special Needs Population Software	Web-based HIPPA secure program to track the special needs population within the county.	Pasco County Emergency Manageme nt	All Hazards	Management Plan	EMPATF	01 Protect the health, safety and welfare of the public	01.1 Inform and educate the public about potential hazards and property protection measures	< 12 mos.	14-Jan	Funding has not been determined.

93	G Y	**18**	Retrofit of Critical Facilities	Ensure COOP by retrofitting selective Critical Facility Inventory (CFI) structures with window protection and security enhancements to ensure COOP	Pasco County Emergency Manageme nt	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	EM Preparednes s and Assistance Trust Fund; HMGP	10 Regulate and prioritize the construction and/or enhance critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	COOP working group conducting ongoing security surveys of critical facilities and identifying needed enhancements
94	H B	**14**	Community Shelter Retrofits in Recreational Vehicle Parks	Manufactured home communities and RV Parks are encouraged to retrofit community centers & clubhouses for use as shelters	Pasco County Emergency Manageme nt	Hurricanes, Tropical Storms	Retrofitting of Structures	EM Preparednes s and Assistance Trust Fund; HMGP; FMA	01 Protect the health, safety and welfare of the public	01.3 Provide sufficient shelter space to satisfy in-County demand	> 12 mos.	14-Jan	Project costs and benefits will vary by community given the 350+ such parks in Pasco. Ongoing initiative stressed during community outreach
95	G V	**19**	Pasco County Animal Control Power Back-Up	Purchase of emergency generator for Pasco County Animal Services, a critical facility	Pasco County Emergency Manageme nt and Animal Control	Hurricanes/ Tropical Storms	Critical Facilities Project	EM Preparednes s and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	New animal shelter scheduled to come online at earliest during 2009. Shelter to be wired for generator, but will not have generator included. Portable generator to be supplied by County when need arises. Will continue to search for funding to install permanent generator.
96	E G	**25**	Lost Lake Restoration Project	Phase I = Acquire 9 properties. Phase II = Demolish properties. Phase III = Construct additional retention facilities.	Pasco County Emergency Manageme nt and Stormwater Manageme nt	Floods	Property Acquisition and Stormwater Improvement Project/	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Received HMGP Award Oct 1999 for El Nino (DR-1195). Properties acquired and demolished. Phase I and II COMPLETED. Phase III, the construction of additional retention facilities, has not been scheduled yet, and funding for the project has not been determined.

97	EU	**25**	Public Hurricane Shelter Survey Project	Survey public buildings throughout the County to identify facilities for possible use as public shelters. (Cost per campus.)	Pasco County Emergency Management, Dade City, New Port Richey, Port Richey, St. Leo, San Antonio, Zephyrhills	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	EM Preparedness and Assistance Trust Fund; HMGP	01 Protect the health, safety and welfare of the public	01.3 Provide sufficient shelter space to satisfy in-County demand		14-Jan	Pasco County surveys will continue through 2010. New regional hurricane shelter opened in December 2009. We have no facilities in Port Richey.
98	GZ	**18**	Public Hurricane Shelter Retrofit Projects	Pasco County surveys public shelters to Hurricane Evacuation Shelter Standards. Retrofit table structures are submitted to State Retrofit List. Only those facilities approved on State Retrofit List will be retrofitted.	Pasco County Emergency Management, Dade City, New Port Richey, Port Richey, St. Leo, San Antonio, Zephyrhills	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	EM Preparedness and Assistance Trust Fund; HMGP	01 Protect the health, safety and welfare of the public	01.3 Provide sufficient shelter space to satisfy in-County demand	> 12 mos.	14-Jan	HB 7121 awarded grants for two generators for Pasco County. The generators are scheduled to be installed at two schools by June in 2007. Funds are pending for additional schools to receive generators. Funding fell short and only one school Wiregrass H
99	EW	**25**	Regional Hurricane Route and Signal Timing Study for Hurricane Evacuation	Study of each County Evacuation Plan in the Tampa Bay Area to determine adequacy of evacuation routes and development of signal timing plans for computerized signals.	Pasco County Emergency Management, Pinellas County, Hillsborough County and Manatee County	Hurricanes/ Tropical Storms	Feasibility Study	EM Preparedness and Assistance Trust Fund; Federal Highway Administration; Transportation Efficiency Act of the 21st Century	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.3 Encourage capital improvement expenditures for critical infrastructure	> 12 mos.	14-Jan	Tampa Bay Regional Planning Council completed and issued results of Regional Hurricane Evacuation Study during 2006. Awaiting the results of the January 2010 evacuation study. Signal timing study still needs to be done. Pasco County has installed automatic timing for signals.

100	BP	**27**	Regional Hurricane Shelter	Provide wind resistance capabilities up to 160 mph and backup power for a regional hurricane shelter. Shelter should be available to approximately 1,000 evacuating citizens of Pasco, Hernando and surrounding counties.	Pasco County Facilities and Emergency Management	Hurricanes	Critical Facilities Project	HMGP	01 Protect the health, safety and welfare of the public	01.3 Provide sufficient shelter space to satisfy in-County demand	> 12 mos.	14-Jan	Completed and opened in 2010.
101	HD	**13**	Pasco County Fleet Maintenance Hazardous Waste Mitigation Project - D&E Maintenance Facility	Development and implementation of a plan to control and capture the surface run-off from the D & E Maintenance Facility in New Port Richey.	Pasco County Fleet Maintenance	Floods	Critical Facilities Project	EM Preparedness and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	To be scheduled.
102	HE	**13**	Pasco County Hazardous Waste Mitigation Project - C Barn Maintenance Facility	Recycle motor vehicle car wash fluids. Purchase and construct a self-contained car wash system at C-Barn Maintenance Facility in the Dade City/San Antonio area.	Pasco County Fleet Maintenance	Hazard Materials Incidents	Critical Facilities Project	EM Preparedness and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	Not currently active, since County is outgrowing C-Barn facility and is contemplating moving to a larger facility in the County. Stopped washing cars and are pursuing a different location at this time
103	FX	**24**	Pandemic Flu Plan	A comprehensive plan designed to protect, prevent, implement and mitigate the effects of a large disease outbreak such as pandemic flu. Focus on prevention, isolation and quarantine, social distancing and treatment if any major public health emergency.	Pasco County Health Department	Pandemic Influenza	Management Plan	Centers for Disease Control	11 Minimize the effects of pandemic influenza or other disease outbreak	11.1 Continue to enhance measures addressing pandemic influenza or other disease outbreak	< 12 mos.	14-Jan	Completed. The Pasco County Pandemic Influenza Grant Team and the OEM the Pandemic Influenza Plan as the Biological Threat Incident Annex (BTIA). Document has been reviewed by the Health Department and adopted by all municipalities as part of the CEMP.

104	HC	**14**	Nextel Re-banding	Nextel is replacing the EDACS 800 trunk Public Safety Radio System with current EDACS site pro GPS simulcast system. Nextel needed to replace system due to outdated technology and not being able to re-tune for new frequencies, and FCC mandate	Pasco County Information Technology and Communications	All Hazards	Infrastructure	Funding is not necessary	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	< 12 mos.	14-Jan	
105	BY	**25**	Bass Lake Drainage Area Phase II (RLA 2)	Construct improvements in accordance with Bear Creek Master Plan (Rocky Sink).	Pasco County Stormwater Management	Floods	Stormwater Improvement Project	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program; SWFWMD Cooperative Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Completed.
106	CW	**25**	Duck Lake Regional Retention System	Construct 100+ acre detention system in the Duck Lake System near Happy Hill Road.	Pasco County Stormwater Management	Floods	Structural Project	Capitalization Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementation Grants; SWFWMD COOP Funding.	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Funding needs to be sourced. Stormwater Management Master Plan underway. Due to be completed 2014.

107	D V	**25**	Holiday Hills Project Area (RLA 16) Phase 1	Construct gravity outfall from existing pond in the Double Hammock Creek Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program; CDBG; Stormwater Utility funds; SWFWMD COOP Funding	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Completed. Pond major cleaning completed 10/08. Review of pump capacity and acquisition of properties along existing retention area underway.
108	D Y	**25**	Jarvis Street Project	Storm sewer improvements in Pinellas Anclote Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program; Stormwater Utility fund	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Review of system underway.

109	E B	**25**	Lake Padgett Estates Project Area	Maintenance of culverts and swales in South Lakes Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Project underway. Project will be continuing, since this is a continuous maintenance activity.
110	E E	**25**	Lake Zephyr Watershed Project	Design Phases I, II, III, IV, and VI. Channel improvements, culvert improvement/repla cement, wetland creation, secondary drainage system improvements and detention or retention storage off-line.	Pasco County Stormwater Manageme nt	Floods	Management Plan Development and Modification	Capitalizati on Grants for Clean Water State Revolving Funds; CDBG; EM Preparednes s and Assistance Trust Fund; Nonpoint Source Implementa tion Grant; Watershed Protection & Flood Prevention; SWFWMD Cooperative Funding	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Phase I redesigned for more cost feasible project. Negotiations for necessary easement underway.

111	E K	**25**	Moog Road/Pinehurst Drive Project	Construct new pond outfall and road improvements in Lower Coastal Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	A large tree that was growing in front of the outfall was removed. Completed.
112	E X	**25**	Riverside Village Project Area	Regrade roadside swales, rebuild roadway and clean/repair culverts.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Completed.
113	F B	**25**	Tampa Downs Project Area	Construct box culvert (Creek Drive) and repair road in Trout Creek Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Completed

114	F G	**25**	West Port Project Area Phase II	Ditch cleaning and storm sewer improvements in Double Hammock Creek Study Area.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; CDBG; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Major cleaning of the ditch completed 6/08. Improvements waiting on study.
115	F H	**25**	Williams Acres Project, Trout Creek, S.R. 54 & C.R. 577	Replace failing culverts.	Pasco County Stormwater Manageme nt	Floods	Stormwater Improvement Project	Capitalizati on Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementa tion Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Study due 02/01/09. BMPs delivered. Project to be scheduled in 2013.
116	A U	**30**	Drainage Improvements - Treadway	Construct drainage and roadway improvements on Treadway Drive	City of Port Richey	Floods	Stormwater Management	Capital Grants for Clean Water State Revolving Funds, FMA, HMGP, Nonpoint Source Implementa tion Grants, Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	< 12 mos.	14-Jan	Completed

117	B C	**29**	Drainage Improvements - River Gulf, Grand & Bay	Construct drainage and roadway improvements on River Gulf Dr., Grand Blvd. & Bay Blvd.	City of Port Richey	Floods	Stormwater Management	Capital Grants for Clean Water State Revolving Funds, FMA, HMGP, Nonpoint Source Implementation Grants, Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	< 12 mos.	14-Jan	Completed
118	B D	**29**	Drainage Improvements - Tabor, Papaya, Cormel, Quist, Wilkins, & Berlin	Construct drainage and roadway improvements on Tabor, Papaya, Cormel, Quist, Wilkins, & Berlin Dr.	City of Port Richey	Floods	Stormwater Management	Capital Grants for Clean Water State Revolving Funds, FMA, HMGP, Nonpoint Source Implementation Grants, Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	< 12 mos.	14-Jan	Completed

119	B O	**27**	Portable Generator for Utilities	Purchase of portable generator for operating lift stations in the event of a storm or hurricane event.	City of Port Richey	Floods	Critical Facilities	Capitalization Grants for Clean Water State Revolving Funds, HMGP, Pre-Disaster Mitigation Program, Water & Waste Disposal Loans & Grants, Water Pollution Control, Watershed Protection and Flood Prevention.	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	Completed
120	B R	**26**	Port Richey Repetitive Loss Mitigation 2007	Elevate 11 RLs	City of Port Richey	Floods, Coastal Flooding	Property Acquisition		05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Completed
121	B T	**26**	Port Richey Repetitive Loss Mitigation 2008	Elevation of 5 RLs at 8352 Carolyn Dr, 7515 Grand Blvd, 5024 Miller Bayou Dr, 5140 Miller Bayou Dr, and 4901 Waterside Dr.	City of Port Richey	Floods, Coastal Flooding	Property Acquisition		05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Completed
122	D X	**25**	Installation of ring guards on manhole covers	Install ring guards on approximately 50 utilities manhole covers	City of Port Richey	Floods	Critical Facilities	Capitalization Grants for Clean Water State Revolving Funds, CDBG, HMGP, Water and Waste Disposal Loans and Grants.	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	18 completed, 5 planned for 2010. On=going pending funding. 5-10 per year. 5 were completed in 2010.

123	E R	**25**	Port Richey RLP Elevations	Elevation of 17 Repetitive Loss Properties in an area of older homes, the majority of which were built prior to the City joining the NFIP	City of Port Richey	Floods	Retrofitting of Structures	FMA, HMGP	05 Reduce the cost of disaster response and recovery	05.2 Advocate property acquisition or retro-fitting for repetitive loss properties	> 12 mos.	14-Jan	Completed
124	F U	**24**	Bay Blvd Lift Station Upgrade	Upgrade of Bay Blvd Lift Station	City of Port Richey	Floods	Infrastructure	Capitalization Grants for Clean Water State Revolving Funds, HMGP	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	< 12 mos.	14-Jan	Project on hold pending adjacent development project. Ongoing.
125	F W	**24**	Oelsner Lift Station Upgrade	Upgrade of Oelsner Lift Station	City of Port Richey	Floods	Infrastructure	Capitalization Grants for Clean Water State Revolving Funds, HMGP	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	< 12 mos.	14-Jan	Awaiting funding
126	F Z	**24**	Port Richey Lift Station Flood Proofing Project Phase I (48 Lift Stations)	Elevate controls & floodproof 48 lift stations and manholes with three foot rings, all are located below BFEs	City of Port Richey	Floods	Critical Facilities Project	EM Preparedness and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	10 rings have been installed in the manholes. Completed as funding becomes available
127	G A	**24**	Queener Lift Station Upgrade	Upgrade Queener Avenue Lift Station	City of Port Richey	Floods	Infrastructure	Capitalization Grants for Clean Water State Revolving Funds, HMGP	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	< 12 mos.	14-Jan	Not completed. Expected completion in 2012.

128	HA	**18**	Review Stormwater Master Plan	Review of Stormwater Master Plan	City of Port Richey	Floods	Management Plan	Capitalization Grants for Clean Water State Revolving Funds, FMA, Pre-Disaster Mitigation (PDM) Program Water Pollution Control & Watershed Protection and Flood Prevention, SWFTMD	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	Ongoing
129	GT	**20**	San Antonio Stormwater Management Plan	City-wide engineering study to identify cost-effective stormwater improvements and prepare policy guidelines that will mitigate for potential flooding.	City of San Antonio	Floods	Stormwater Management	Capitalization Grants for Clean Water State Revolving Funds; FMA; HMGP; Nonpoint Source Implementation Grants; Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	< 12 mos.	14-Jan	The required field work for our stormwater study has been completed. After recommendations are compiled by the consulting engineers San Antonio will prioritize projects and pursue funding to implement the recommendations.
130	GW	**18**	Generators for San Antonio Municipal Facilities		City of San Antonio	Hurricanes/ Tropical Storms	Critical Facilities Project	EM Preparedness and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	Generator purchased and installed at water plant. Funding not currently available for generators at San Antonio City Hall and Fire Station next door.
131	GD	**23**	San Antonio Outreach Educational Program	Public Outreach Program (flyers/informational brochures) to inform residents about all types of hazards and disaster preparedness.	City of San Antonio and the Town of St. Leo	Multiple	Public Education Program	EM Preparedness and Assistance Trust Fund; Environmental Education Grant	01 Protect the health, safety and welfare of the public	01.1 Inform and educate the public about potential hazards and property protection measures	> 12 mos.	14-Jan	Ongoing. Hazard prevention and disaster preparedness info placed at City Halls. Future program expansion includes adding to selection and types material on display

132	B N	**27**	Generator for Town of St. Leo Town Hall	Purchase of generator for the Town Hall.	Town of St. Leo	Hurricanes/ Tropical Storms	Critical Facilities Project	EM Preparedness and Assistance Trust Fund	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	No action taken to date. A generator will be purchased when funding is available.
133	D D	**25**	Flood Insurance Rate Maps	Add the Town of St. Leo to the NFIP and to FIRMs (Panel #120230-0275 D)	Town of St. Leo	Floods	Public Education Project	EM Preparedness and Assistance Trust Fund	01 Protect the health, safety and welfare of the public	01.2 Ensure new development and redevelopment complies with all applicable federal, state and local regulations	> 12 mos.	14-Jan	Work is currently underway with SWFWMD and Pasco County to develop new Flood Insurance Rate Maps (FIRM). Upon completion of effort, St. Leo will receive flood maps for the township. New FIRM Maps are now anticipated to be released during 2015.
134	B Q	**27**	Zephyrhills Downtown Retention Pond / flood proofing	Expand existing retention pond to increase capacity and reduce flooding	City of Zephyrhills	Floods	Stormwater Management	Local Government, FMA, HMGP, Nonpoint Source Implementation Grants, Watershed Protection & Flood Prevention Program	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	< 12 mos.	14-Jan	Expansion of the retention pond is in progress.
135	G E	**23**	Zephyrhills Retrofit of Critical Facilities	Add window protection to City Hall, two fire stations and the police station in order to ensure continuation of critical municipal functions.	City of Zephyrhills	Hurricanes/ Tropical Storms	Critical Facilities Retrofit Project	EM Preparedness and Assistance Trust Fund; HMGP	10 Regulate and prioritize the construction and/or enhance the protection of critical facilities and infrastructure	10.2 Prioritize and retrofit existing critical facilities and infrastructure	> 12 mos.	14-Jan	As funding becomes available, retrofitting of critical facilities will be done.
136	F R	**25**	Zephyrhills Stormwater Management Plan	Identify/develop Master Stormwater improvement projects in City Community redevelopment area.	Zephyrhills Stormwater Management	Floods	Management Plan Development and Modification	EM Preparedness and Assistance Trust Fund	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	FY 2000 - Partially funded with EMPATF Competitive Grant. PROJECT COMPLETED.

137	IX	**25**	Bear Creek Pithlachascotee Watershed BMP Implementation	Implementation of BMP's identified in the Watershed Master Plan (proposed to be completed end of 2014).	Pasco County	Floods	Capital Projects, Property Acquisition, Restoration of Natural Features, Stormwater Management, Management Plan	Stormwater utility fund, SWFWMD, COOP Funding and HMGP	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	New project.
138	IY	**25**	Pinellas Anclote Watershed BMP Implementation	Implementation of BMP's identified in the Watershed Master Plan (proposed to be completed end of 2016).	Pasco County	Floods	Capital Projects, Property Acquisition, Restoration of Natural Features, Stormwater Management, Management Plan	Stormwater utility fund, SWFWMD COOP Funding and HMGP	08 Stormwater Improvement	08.1 Maintain and improve existing drainage systems to regulate management of stormwater runoff	> 12 mos.	14-Jan	New project.

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Appendix D

Annual Report of Repetitive Loss Properties
and Development of Repetitive Loss Areas
(Updated January 31, 2014)

Repetitive Loss Properties and Development of Repetitive Loss Areas
(Updated January 31, 2014)

Pasco County received its repetitive loss property information from the Federal Emergency Management Agency (FEMA). The latest listing provided from FEMA was dated December 31, 2011. Four hundred ninety-six (496) repetitive loss properties were identified in this information. After a review of these properties and correction to those properties already mitigated or not located within the jurisdiction of unincorporated Pasco County, it was determined that a total of four hundred sixty-one (461) properties need to be counted for CRS purposes. These properties were then located on the property appraiser parcel maps and the repetitive loss areas were then defined. The areas were defined through the use of contour information from the Southwest Florida Water Management District topographic maps and available flood elevation information.

Through evaluation of the repetitive loss property locations, map information, and site inspections, it was determined that 16 repetitive loss areas existed in Pasco County. Other repetitive loss properties were isolated in areas of the County. These isolated repetitive loss properties are identified by the drainage basin in which they are located.

By using the Geographical Information System, an inventory was conducted of each repetitive loss area. The total number of undeveloped and developed properties was identified along with the year in which the structures were built to determine how many structures were pre-Flood Insurance Rate Map (FIRM) (built prior to Pasco County joining National Flood Insurance Program [NFIP]) and post-FIRM (built after Pasco County joined NFIP). These were then further subdivided into type of structure based on the Use Codes assigned to structures by the Pasco County Property Appraiser's Office.

Each of the repetitive loss properties on the printout indicated an event date that resulted in an NFIP insurance claim. These dates were arranged in chronological order, and the Office of Emergency Management and the National Weather Service were consulted as to the event that occurred on the dates listed.

Repetitive Loss Area No. 1: Hudson

Repetitive Loss Area No. 1 is located west of U.S. 19 and east of the Gulf of Mexico in Sections 27, 28, and 33; Township 24 South; Range 16 East. The events attributed to flooding in this area are 8, 11, 15, 16, 23, and 33.

Repetitive Loss Area No. 1 is an area that consists of older homes on canals which were built in the 1960's and 1970's, prior to the County joining NFIP. The area was developed by the dredging and creation of a canal system with the excavated material deposited, graded, and then subdivided into lots and sold. This area consists of long main streets off of which branch cul-de-sac streets. The area is developed with few vacant lots remaining. Drainage in the area consists of sheet flow along the roadways into catch basins which directly discharge to the canals, leading directly to the Gulf of Mexico.

There are a total of 2,851 structures located within this area. Of those, 1,322 are pre-FIRM and 1,529 are post-FIRM. The flood zones in this area range from "A14" to "V17," with the base flood elevation (BFE) ranging from 13 to 19 feet. The average grade elevation in this area ranges from three to seven feet. The structures in this area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	712	936
Mobile Homes	475	228
Multifamily (less than five units)	35	4
Multifamily (five or more units)	2	1

Condominium	0	0
1Multi Story Retirement Apartments	0	0
Professional Offices or Medical	5	4
Commercial Buildings	51	23
Food-Related Buildings	3	2
Vehicle-Related Buildings	11	2
Financial Institutions	0	0
Hotels and Motels	2	0
Hospitals and Nursing Homes	2	0
Churches	4	0
Storage/Warehouses	9	2
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	7	0
Schools	1	0
Government Buildings/Facilities	2	1
Utility Buildings	1	5
Total Properties with Structures	1322	1529
Vacant Properties		855
Total Properties	1322	2384

Repetitive Loss Area No. 1 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours are needed to evacuate the entire Level A area. Flooding in this area impacts the roadway areas first. This in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-rise vehicles must be used. Past flooding in this area has ranged from a few inches to several feet causing damage mainly to the residential homes with few sustaining substantial damage. Development and redevelopment in this area consists of home improvements and repairs, and redevelopment of business properties. Substantially improved or damaged structures are required to comply with the standards for new construction. There are a total of 306 Repetitive Loss Properties within this area of which 14 have been mitigated. The County has assisted in the elevation of six (6) single-family homes in this area through the Flood Mitigation Assistance Program (FMAP).

Repetitive Loss Area No. 2: Lake Worrell

Repetitive Loss Area No. 2 is located east of Little Road (C.R. 1), north of Ridge Road (C.R. 587A), and adjacent to Yellow Lake, in Sections 25 and 26, Township 25 South, Range 16 East. The events attributed to flooding in this area are 10, 11, 15, 32, 33 and 34.

Repetitive Loss Area No. 2 contains larger lot property developed prior to the County joining NFIP. The area around the lakes known as Lake Worrell, Worley Lakes, Bass Lake, Yellow Lake, Scout Lake, and Rock Sink have experienced water levels which caused some flooding of the existing residential structures and streets. The two initial storm events which caused high water levels occurred during the summers of 1985 and 1988. In 1989, the Board of County Commissioners authorized a drainage study of the area to gather data, determine the extent of the flooding problem, and list alternatives for further consideration. The area of study included three major drainage basins. These basins were delineated and their characteristics were summarized. The flood levels for the various basins were then taken from information found in studies performed by SWFWMD. Field surveying and engineering analysis was then performed which supported these flood levels. The Two-, Five-, Ten-, 25-, 50-, and 100-year flood levels for the repetitive loss area were determined to be the following:

Bass Lake (Worrell Lake)

2-Year Storm Flood Level 20.9
5-Year Storm Flood Level 21.5
10-Year Storm Flood Level 22.1
25-Year Storm Flood Level 22.6
50-Year Storm Flood Level 23.2
100-Year Storm Flood Level 23.6

Based on the 100-year flood level, it was determined that any building with a finished floor elevation below 23.6 had a chance of experiencing flood damage with the occurrence of a 100-year storm event. Existing building elevations for structures in the area were then obtained. The finished floor elevations ranged from a low of 20.43 feet to a high of 37.56 feet.

Several possible solutions were then presented. These included retrofitting existing structures by elevating, sand bagging, constructing berms and sumps, and abandoning structures. The study also recommended that all new structures in this area be built with a minimum finished floor elevation of 24.0 feet.

Another solution that was proposed was the development of an alternative outfall for this area; however, this outfall may not provide relief to the water levels experienced during storm events, but it would provide a faster draw down of the flood waters after the peak level is achieved.

In 1993, Ghioto and Associates, Inc. completed the Bear Creek Stormwater Management Master Plan. A portion of the plan dealt with the Rocky Sink/Boggy Creek subbasin within the Bear Creek Basin. Repetitive Loss Area No. 2 is a part of this subbasin. The study determined that the Rocky Sink area is a persistent flood-prone area and the preferred alternative identified in the 1993 study involved diverting flood waters to the Pithlachascotee River. This project was determined to be highly complex that would not eliminate all of the flooding hazards associated with the Rocky Sink Basin. The primary benefit of the project will be to dramatically reduce flood durations.

Many projects, such as installation of Stormwater culverts, have been undertaken downstream of the area in order to assist in the reduction of flood duration.

There are a total of 409 structures located within this area. Of those, 197 are pre-FIRM and 212 are post-FIRM. The flood zone in this area is "A" with BFE of 23 feet. The average grade elevation in this area ranges from 19 to 27 feet. The structures consist of the following:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	159	178
Mobile Homes	22	24
Multifamily (less than five units)	10	4
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	2	0
Food-Related Buildings	0	1
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	1
Churches	1	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	4	2
Utility Buildings	0	1
Total Properties with Structures	197	212
Vacant Properties		136
Total Properties	197	348

Repetitive Loss Area No. 2 is in an Evacuation Level D area, which is the next to the last level to be evacuated. Approximately 13 hours are needed to evacuate the entire Level Darea. Flooding in this area is due to rising water in the existing lakes. Flooding is of varying depths creating damage to the residential homes. Redevelopment in this area consists of home improvements and repairs to existing homes.

The Spring/Summer 2003 Flood (Incident #03-06118) affected this Repetitive Loss Area. Based on County staffs review of the areas of flooding, in comparison to those areas shown on the FIRM map as within the 100-year flood zone, it has been determined by staff that the Spring/Summer 2003 Event has exceeded the 100-year storm in this area.

Impacts in this area began in June 2003 when Pasco County experienced between 20 and 30 inches of rain.

A Comfort Station for the residents in this area was set up at the end of June through August 4, 2003. The Comfort Station consisted of Shower Units, Port-a-Lets, Potable Water source and a dumpster.

On July 21, 2003, County officials and Southwest Florida Water Management District representatives met with area residents to discuss the flooding issues. Approximately 40 residents from this area attended. The residents received information on proposed solutions and packets and applications for the Pre-Disaster Mitigation Program. As a follow up to this meeting, on August 1, 2003 each resident in this area was sent a packet of information on the current situation and proposed solutions. In addition, on August 4, 2003, residents of flooded structures were sent a notice to determine any interest in a buy-out of their property. In response to this notice, one Pre-Disaster Mitigation application was submitted to the State of Florida for elevation of a repetitively flooded structure at 8526 Cameo Drive.

On July 26, 2004, the Florida Department of Community Affairs notified Pasco County that the PDM application would not be forwarded to FEMA for consideration. However, the application has been modified and submitted to the State of Florida for consideration under the 2004 Flood Mitigation Assistance Program application cycle. The 2004 FMAP award was received and the demolition/rebuild of this structure was completed in June of 2006.

Repetitive Loss Area No. 2 includes nine (9) repetitive loss properties of which 2 have been mitigated. The County has assisted in the elevation of one (1) single-family home in this area through FMAP.

Repetitive Loss Area No. 3: Pithlachascotee

Repetitive Loss Area No. 3 is located west of C.R. 77 and south of Plathe Road, directly adjacent to the Pithlachascotee River, in Section 10, Township 26 South, Range 16 East. The events attributed to flooding in this area are 11 and 14.

Repetitive Loss Area No. 3 is characterized by unplatted division of property along the Pithlachascotee River. There are a total of 11 structures located within this area. Of those, four (4) are pre-FIRM and seven (7) are post-FIRM. The flood zone in this area is "A7" with BFE of 11 feet. The average grade elevation in this area ranges from 6 to 16 feet. The structures consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	2	2
Mobile Homes	0	2
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	2	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	3
Utility Buildings	0	0
Total Properties with Structures	4	7
Vacant Properties		9
Total Properties	4	16

There are no plans for drainage improvements in this area.

Repetitive Loss Area No. 3 is in an Evacuation Level A area. Approximately ten hours are needed to evacuate the entire Level A area. Flooding in this area is due to rising water in the Pithlachascotee River. Redevelopment in this area consists mainly of repairs and maintenance to existing structures. No structures in this area have been substantially improved or substantially damaged.

There are two (2) Repetitive Loss Properties in this area.

Repetitive Loss Area No. 4: Green Key

Repetitive Loss Area No. 4 is located west of U.S. 19 and east of the Gulf of Mexico in Sections 31 and 32, Township 25 South, Range 16 East, and Sections 5 and 6, Township 26 South, Range 16 East. The events attributed to flooding in this area are 11, 13, 15, 21, 22, 23, 27, 28, 30, and 33.

Repetitive Loss Area No. 4 consists of older homes, the majority of which were built prior to the County joining NFIP. Drainage in the area consists of sheet flow to drainage swales which eventually lead to the Gulf of Mexico.

There are a total of 714 structures located within this area. Of these, 312 are pre-FIRM and 402 are post-FIRM. The flood zones in this area range from "A13" to "V17" with BFE ranging from 12 to 19 feet. The average grade elevation in this area ranges from 3 to 12 feet.

The structures in this area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	224	361
Mobile Homes	65	11
Multifamily (less than five units)	12	0
Multifamily (five or more units)	0	0

Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	1	1
Commercial Buildings	8	16
Food-Related Buildings	0	1
Vehicle-Related Buildings	2	2
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	1
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	5
0	0	4
Total Properties with Structures	312	402
Vacant Properties		293
Total Properties	312	695

Repetitive Loss Area No. 4 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours are needed to evacuate the entire Level A area. Flooding in this area impacts the roadway areas first with water then entering the structures. This area is affected by tidal action. Due to the tidal action and the terrain of this area, water often stands some period of time prior to draining to the Gulf of Mexico. Past flooding in this area has ranged from a few inches to several feet causing minor to substantial damage to the structures. Development and redevelopment in this area consists of home improvements and repairs with some redevelopment of business properties. Substantially improved or damaged structures are required to comply with the standards for new construction. The County has assisted in the elevation of two single-family homes in this area through FMAP. In addition, the State of Florida, Department of Community Affairs, has recently prepared a "Hazard Mitigation Planning Strategy" for a portion of this repetitive loss area.

There are 99 Repetitive Loss Properties within this area. The County has assisted in the elevation of three (3) single-family homes thorugh the FMAP.

Repetitive Loss Area No. 5: Anclote

Repetitive Loss Area No. 5 is located south of S.R. 54 and west of C.R. 77, directly adjacent to the Anclote River, in Sections 21 and 22, Township 26 South, Range 16 East. The events attributed to flooding in this area are 11, 12, 14, 15, and 32.

Repetitive Loss Area No. 5 consists of older homes built prior to the County joining NFIP. There are a total of 76 structures located within this repetitive loss area. Of these, 60 are pre-FIRM and 16 are post-FIRM. The flood zone is this area is "AE" with BFE ranging from 13 to 20 feet. The floodway of the Anclote River is also in this area. The average grade elevation in this area ranges from 6 to 15 feet. The structures consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	35	9
Mobile Homes	13	3
Multifamily (less than five units)	10	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	2
Commercial Buildings	2	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	2
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	1
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	60	16
Vacant Properties		49
Total Properties	60	65

Repetitive Loss Area No. 5 is in an Evacuation Level A area. Approximately ten hours are needed to evacuate the entire Level A area. Flooding in this area is due to rising water in the Anclote River. Redevelopment in this area consists mainly of repairs and maintenance to existing structures.

There are nine (9) RLP in this area. The County has assisted in the elevation of one single-family home in this area through HMGP.

Repetitive Loss Area No. 6: Lake Terrace Subdivision

Repetitive Loss Area No. 6 is located west of U.S. 19 and south of Gulf Harbors in Section 18, Township 26 South, Range 16 East. The events attributed to flooding in this area are 11 and 14.

Repetitive Loss Area No. 6 consists of homes built in the 1970's and early 1980's. All homes surround a retention area, which overflows during some storm events. There are a total of 23 structures located within this area. Of those, 21 are pre-FIRM and two (2) are post-FIRM. The flood zone in this area is "A13" with BFE of 12 feet. The average grade elevation in this area ranges from five to six feet. The structures consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	21	2
Mobile Homes	0	0
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	21	2
Vacant Properties		4
Total Properties	21	6

Repetitive Loss Area No. 6 is in an Evacuation Level A area. Approximately ten hours are needed to evacuate the entire Level A area. Flooding in this area occurs at times of heavy rainfall and high tide which causes the retention

pond to overflow. Flooding in this area has been relatively minor. Development and redevelopment in this area consists of home improvements and repairs. Substantially improved or damaged structures are required to comply with the standards for new construction.

There is one (1) repetitive loss property in this area.

Repetitive Loss Area No. 7: Withlacoochee

Repetitive Loss Area No. 7 is located west of C.R. 575 in the extreme northeast of Pasco County, in Section 24, Township 23 South, Range 21 East, along the Withlacoochee River. The events attributed to flooding in this area are 11, 14, 15, and 32.

Repetitive Loss Area No. 7 consists of large acre lots with homes built prior to the County's adoption of NFIP. During some rainfall events, the Withlacoochee River will top its banks, and low-lying flooding occurs approximately one-half mile in each direction. There are a total of 8 structures located within this area. Of those, three are pre-FIRM and five are post-FIRM. The flood zone in this area is "A9" with BFE of 71 feet. The average grade elevation in this area ranges from 59 to 68 feet. The structures consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	1	3
Mobile Homes	2	2
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	3	5
Vacant Properties		17
Total Properties	3	22

Repetitive Loss Area No. 7 is not in a designated evacuation zone except for the mobile home structures. Flooding in this area is due to the Withlacoochee River overflowing. Development and redevelopment in this area consists of home improvements and repairs. No structures in this area have been substantially improved or substantially damaged.

There are two (2) Repetitive Loss Properties within this area.

Repetitive Loss Area No. 8: Lake Bernadette Outfall

Repetitive Loss Area No. 8 is located south of S.R. 54 and to the west of the City of Zephyrhills, in Section 17, Township 26 South, Range 21 East. The events attributed to flooding in this area are two and seven.

Repetitive Loss Area No. 8 includes one repetitive loss property which has installed protective berms around the property . There are a total of 35 structures located within this repetitive loss area. Of those, 10 are pre-FIRM and 25 are post-FIRM. The flood zone in this area is "A" with a base flood elevation of 81 feet. The average grade in this area is 78 feet. The structures consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	2	14
Mobile Homes	5	12
Multifamily (less than five units)	3	7
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	2
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	10	25
Vacant Properties		4
Total Properties	10	29

The one repetitive loss property is located at the natural low point of the area which serves as the natural retention area for runoff. Berms have been installed around the property to divert the runoff. This area was developed prior to the County joining NFIP. This repetitive loss area is not in a designated evacuation zone.

Repetitive Loss Area No. 9: West Port/Salt Springs

Repetitive Loss Area No. 9 is located west of U.S. 19 and south of Fox Hollow Drive, in Sections 20 and 21, Township 25 South, Range 16 East. The events attributed to flooding in this area are 11, 18, 23, and 27.

Repetitive Loss Area No. 9 consists of residential homes built in the 1970's. This area is developed with few vacant lots remaining. The storm sewer system within the southeastern portion of West Port Subdivision drains to a ditch that parallels the rear lot line of homes located along the south side of Westport Drive. Storm sewers extend north from the ditch and tie into curb inlets located along the north and south sides of Westport Drive and Sea Breeze Drive. The ditch continues west along the southern limits of the subdivision and eventually discharges to a tidal creek centerline. Elevations of Westport Drive and Sea Breeze Drive are as low as 5.2 feet National Geodetic Vertical Datum.

Flooding problems within the area appear to result from the low elevation of the subdivision relative to the hydraulic profile of the outfall ditch, from limited storm sewer capacity, and from relatively flat road grades and cross slopes. Cleaning the outfall ditch may have some affect on hydraulic profiles. However, it is likely that the hydraulic profile is largely a reflection of tidal conditions.

The frequency of flooding may be reduced by replacing the existing curb inlets as the inlet throats are very narrow, installing eight additional inlets, repaving the road, and cleaning approximately 2,000 linear feet of outfall ditch. The additional inlets are needed due to the relatively flat road profiles and due to the wide spacing between existing inlets. The 1995 estimated cost to complete these conceptual improvements is $318,000.00.

It should be noted that this conceptual improvement plan was developed without the aid of detailed survey data or modeling. The conceptual plan assumes that cleaning the outfall ditch may have an affect on the hydraulic profiles. However, the hydraulic profiles of the outfall ditch are often a reflection of tidal conditions. It is also unclear if the existing storm sewers have adequate capacity. A stormwater modeling evaluation of the existing system and any proposed improvements is needed to determine the affects of the proposed improvements. Due to limited budget in 1996, the Board of County Commissioners authorized only the cleaning of the ditch to provide some relief to the area.

There are a total 0f 506 structures located within this repetitive loss area. Of those, 418 are pre-FIRM and 88 are post-FIRM.
The flood zones in this area range from "A13" to "V17," with BFE ranging from 12 to 15 feet. The average grade elevation in this area ranges from five to eight feet. The structures in this area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	276	44
Mobile Homes	1	0
Multifamily (less than five units)	7	1
Multifamily (five or more units)	11	1

Condominium	122	37
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	3
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	1	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	2
Total Properties with Structures	418	88
Vacant Properties		68
Total Properties	418	156

Repetitive Loss Area No. 9 is in an Evacuation Level A area. Approximately ten hours are needed to evacuate the entire Level A area. Development and redevelopment in this area consists of home improvements and repairs, and redevelopment of business properties. Substantially improved or damaged structures are required to comply with the standards for new construction. There are twelve (12) Repetitive Loss Properties in this area.

Repetitive Loss Area No. 10: Grove Park

Repetitive Loss Area No. 10 is located south of S.R. 54 and east of U.S. 19, in Section 19, Township 26 South, Range 16 East. The events attributed to flooding in this area are 15, 25, and 27.

Repetitive Loss Area No. 10 is known as Grove Park, Unit 4, consists of residential and commercial structures built in the 1960's. At the time the area was constructed, Pasco County did not have drainage or site development regulations enacted. Drainage improvements were not required by regulation and, therefore, were at the discretion of the developer.

The retention pond located at the southernmost end of Winston Drive was built in the mid-1970 by Beacon Construction Company to alleviate flooding in Beacon Hill Subdivision, Units 1 and 2. The retention pond was deeded to the County in 1979. Improvements to the pond were later constructed, consisting of widening and deepening the pond and an addition of drainage pipes into the pond from Grove Park, Unit 4. Although the drainage pipes assisted in the relief of stormwater runoff, the pond was never designed to alleviate all of the flooding in the area. To alleviate flooding in this area, the construction of a stormwater drainage system and additional drainage retention areas would be needed along with a funding source.

There are a total of 51 structures located within this area. Of these, all 51 are pre-FIRM. The average grade elevation in this area ranges from 25 to 26 feet. The structures in this area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	50	0
Mobile Homes	0	0
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0

Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	1	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	51	0
Vacant Properties		6
Total Properties	51	6

Repetitive Loss Area No. 10 is not in a designated evacuation zone. Development and redevelopment in this area consists of home improvements and repairs, and redevelopment of business properties. There are two (2) Repetitive Loss Properties of which one (1) has been demolished.

Repetitive Loss Area No. 11: Aurora Drive

Repetitive Loss Area No. 11 is located north of Massachusetts Avenue and west of Rowan Road, in Section 33, Township 25 South, Range 16 East. The events attributed to flooding in this area are 1, 2, 17, 19, 20, 27, 32 and 36.

Repetitive Loss Area No. 11 consists of a mixture of older residential and commercial properties built within a 24.33-acre closed, drainage basin. The area does not lie within a designated flood zone. High water levels within a small pond just west of Aurora Drive and Carnelian Avenue have caused restrictions to at least two homes and an automobile repair shop on numerous occasions. The automobile repair shop on the north side of the pond has also experienced flooding due to the overflow of stormwater from a drainage ditch, which is located immediately west of the automobile repair shop.

This area lies within a 24.33-acre closed, drainage basin. There are 123 parcels within the drainage basin. The small retention pond is located at the lowest point within the basin. The storage volume of the pond is recovered only through infiltration. During mean annual storm events with approximately five inches of rainfall in 24 hours, the rate of infiltration and storage capacity of the pond are sufficient to prevent flooding of homes and only minor flooding of Aurora Drive. During ten-year storm events with eight inches of rainfall in 24 hours, the storage capacity of the pond is exceeded and Aurora Drive becomes flooded. Events larger than a ten-year storm event have caused flooding to buildings, including a duplex, a home, and an automobile repair shop, and have caused Aurora Drive to be impassible with high water levels.

The frequency of flooding within this closed drainage basin could be reduced by expanding the existing pond to provide additional storage. Expansion of the existing pond would require property acquisition, demolition of existing buildings, and construction. The following paragraphs represent various estimates/options developed by County staff for the Aurora Drive area:

1. Estimate No. 1; Retrofit the Basin to Current Standards. Since this area is a closed basin, current standards require that the stormwater system must handle a 100-year storm event, which is the equivalent of 12 inches of rainfall in 24 hours. Therefore, 24 acre-feet of stormwater storage would be required. To accomplish this, a retention area of three acres would be required. The pond would require the purchase of 14 properties and the partial closure of Aurora Drive, Carnelian Avenue, and Temple Avenue. The 1995 total estimated cost, which includes design costs, land acquisition, demolition of structures, and construction, is $1,292,000.00.

2. Estimate No. 2; Construct a 0.50-Acre Pond. Due to the extreme cost of Estimate No. 1, other estimates were developed which would reduce the flooding only. Estimate No. 2 considers the construction of a 0.50-acre retention pond. The existing pond would be expanded to the north and would require the purchase of two properties. This option would not require street closure in the subdivision. This pond would improve the storage capacity of the drainage basin for up to a five-year storm event (seven inches of rainfall in 24 hours). The 1995 total estimated cost, which includes design costs, land acquisition, demolition of structures, and construction, is $198,000.00.

3. Estimate No. 3, Purchase Affected Properties. Estimate No. 3 considers the purchase of the four properties that are flood prone and does not include the costs to construct an expansion of the pond. This option would allow the possibility of expanding the pond in the future. The 1995 total estimated cost, which includes land acquisition and demolition of the existing structures, is $226,000.00.

4. Estimate No. 4; Construct a 0.45-Acre Pond. Estimate No. 4 considers the construction of a 0.45-acre retention pond by expanding the pond to the north and west, and would require the purchase of two properties. This project would require the closure of a portion of Aurora Drive, but would not deny access to homeowners within the subdivision. This pond would improve the storage capacity of the drainage basin for

up to a ten-year storm event (eight inches of rainfall in 24 hours). The 1995 total estimated cost, which includes design costs, land acquisition, demolition of structures, and construction, is $140,500.00.

5. Estimate No. 5, Build a Lift Station. Estimate No. 5 considers building a pumping station adjacent to the existing pond and piping the excess stormwater to a newly constructed 2.4-acre retention pond on the south side of Massachusetts Avenue. This estimate would require the purchase of one commercially zoned property. This estimate would improve the storage capacity of the drainage basin for up to a 100-year storm event (12 inches of rainfall in 24 hours). The 1995 total estimated cost, which includes design costs, land acquisition, and construction, is $680,000.00.

Please note that all of the above estimates, with the exception of Estimate No. 3, will require annual operation and maintenance expenses ranging from $1,500.00 to $3,000.00 per year. There currently is no funding available for construction of any drainage improvements in this or any other problem area. Since funding sources to construct any drainage improvement do not exist at this time, the Board of County Commissioners selected not to proceed with the project.

There are a total of 95 structures located within this area. Of those, 87 are pre-FIRM and 8 are post-FIRM. The structures in this area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	62	6
Mobile Homes	2	0
Multifamily (less than five units)	13	2
Multifamily (five or more units)	0	0

Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	4	0
Food-Related Buildings	1	0
Vehicle-Related Buildings	3	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	2	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	87	8
Vacant Properties		26
Total Properties	87	34

Repetitive Loss Area No. 11 is in an Evacuation Level C area, which is the third level to be evacuated. Approximately 11 hours are needed to evacuate the entire Level C area. Development and redevelopment in this area consists of home improvements and repairs, and redevelopment of business properties.
There are two (2) Repetitive Loss Properties within this area.

Repetitive Loss Area No. 12: Aripeka

Repetitive Loss Area No. 12 is located west of U.S. 19 and south of Hernando County line in Sections 1 and 2, Township 24 South, Range 16 East. The events attributed to flooding in this are 11, 23, and 31.

Repetitive Loss Area No. 12 consists of older homes built in the 1950's and 1960's as a fishing village next to the Gulf of Mexico.

. There are a total of 85 structures within this repetitive loss area. Of those, 71 are pre-FIRM and 14 are post-FIRM. The flood zones in this area range from "A14" to "V18" with BFE ranging from 13 to 17. The average grade in this area ranges from 6 to 18 feet.

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	55	10
Mobile Homes	9	1
Multifamily (less than five units)	4	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	1	0
Commercial Buildings	0	2
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	1	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	1	0
Utility Buildings	2	0
Total Properties with Structures	71	14
Vacant Properties		60
Total Properties	71	74

Repetitive Loss Area No. 12 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours is needed to evacuate the entire Level A area. Flooding in this area impacts the structure areas first. This in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-profile vehicles must be used. Past flooding in this area has ranged from a few inches to several feet, causing damage mainly to residential homes. Development and redevelopment in this area consists of home improvements and repairs. There are eight (8) Repetitive Loss Properties within this area.

Repetitive Loss Area No. 13: Baillies Bluff

Repetitive Loss Area No. 13 is located west of U.S. 19 in the southern area of Pasco County adjacent to the Gulf of Mexico in Sections 22 and 23, Township 26 South, Range 15 East. The events attributed to flooding in this area are 11, 23, and 33.

Repetitive Loss Area No. 13 consists of single-family structures built between 1967 and 1977. There are a total of 50 structures located within this repetitive loss area. Of those, 32 are pre-FIRM and 18 are post-FIRM. The flood zones in this area range from "A13" to "V17," with BFE ranging from 13 to 17 feet. The average grade elevation in this area ranges from 4 to 11 feet. The structures in the area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	31	18
Mobile Homes	0	0
Multifamily (less than five units)	1	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	0	0
Schools	0	0
Government Buildings/Facilities	0	0
Utility Buildings	0	0
Total Properties with Structures	32	18
Vacant Properties		5
Total Properties	32	23

Repetitive Loss Area No. 13 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours is needed to evacuate the entire Level A area. Flooding in this area impacts the roadway areas first. This

in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-profile vehicles must be used. Past flooding in this area has ranged from a few inches to several feet, causing damage mainly to residential homes. Development and redevelopment in this area consists of home improvements and repairs. There are five (5) Repetitive Loss Properties in this area of which one (1) has been mitigated.

Repetitive Loss Area No. 14: Bonita

Repetitive Loss Area No. 14 is located west of U.S. 19 in the southern area of Pasco County in Section 30, Township 26 South, Range 16 East. The events attributed to flooding in this area are 1, 2, 32 and 33 and localized flooding issues.

Repetitive Loss Area No. 14 includes two repetitive loss properties which are adjacent to one another. These two properties are at the lowest elevation of the area (elevation 11 ft, msl) and all stormwater runoff ponds at these properties. The area consists of single-family structures built in the mid-1960s. The flood zones in this area range from "A13" to "B," with a BFE ranging of 12 feet. The average grade elevation in this area ranges from 11 to 20 feet.

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	14	0
Mobile Homes	7	0
Multifamily (less than five units)	1	0
Total Strucutres	22	0

Repetitive Loss Area No. 14 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours is needed to evacuate the entire Level A area. Flooding in this area impacts the roadway areas first. This in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-profile vehicles must be used. Past flooding in this area has ranged from a few inches to several feet, causing damage mainly to residential homes. Development and redevelopment in this area consists of home improvements and repairs.

Repetitive Loss Area No. 15: Flor A Mar

Repetitive Loss Area No. 15 is located west of U.S. 19 in the southern area of Pasco County adjacent to the Gulf of Mexico in Section 12, Township 26 South, Range 15 East. The events attributed to flooding in this area are 23, 24 and 33.

Repetitive Loss Area No. 15 consists of single-family structures built in the late 1960s and the 1970s. There are a total of 1,861 structures in this area of which 1,517 are pre-FIRM and 344 are post-FIRM. The flood zones in this area range from "A13" to "V19," with BFE ranging from 12 to 17 feet. The average grade elevation in this area ranges from 4 to 7 feet. The structures in the area consist of the following types:

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	1364	331
Mobile Homes	0	0
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0
Condominium	149	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	1	2
Commercial Buildings	0	2
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	1	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	2	0
Schools	0	0
Government Buildings/Facilities	0	2
Utility Buildings	0	9
Total Properties with Structures	1517	344
Vacant Properties		

Repetitive Loss Area No. 15 is in an Evacuation Level A area which is the first level to be evacuated. Approximately ten hours is needed to evacuate the entire Level A area. Flooding in this area impacts the roadway areas first. This in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-profile vehicles must be

used. Past flooding in this area has ranged from a few inches to several feet, causing damage mainly to residential homes. Development and redevelopment in this area consists of home improvements and repairs.

Repetitive Loss Area No. 15 includes four repetitive loss properties. These four properties are located adjacent to man-made canals and at the lowest elevation of the area. The rainfall events contributing to flooding were intense rainfall with high tide that pushed the waters up in the canals and flooded the structures.

Repetitive Loss Area No. 16: Holiday Hills

Repetitive Loss Area No. 16 is located east of U.S. 19 in the west central area of Pasco County in Section 21, Township 25 South, Range 16 East. The events attributed to flooding in this area are 27 and 35.

Repetitive Loss Area No. 16 includes five repetitive loss properties. There are a total of 185 structures located within this repetitive loss area. Of those, 185 are pre-FIRM. The area consists of single-family structures built in the late 1960's. The flood zone in this area is "A13". The average grade elevation in this area is approximately 10 feet.

TYPE OF STRUCTURE	PRE-FIRM	POST-FIRM
Single-Family Residential, Single-Family Villas	182	0
Mobile Homes	0	0
Multifamily (less than five units)	0	0
Multifamily (five or more units)	0	0
Condominium	0	0
Multi Story Retirement Apartments	0	0
Professional Offices or Medical	0	0
Commercial Buildings	0	0
Food-Related Buildings	0	0
Vehicle-Related Buildings	0	0
Financial Institutions	0	0
Hotels and Motels	0	0
Hospitals and Nursing Homes	0	0
Churches	0	0
Storage/Warehouses	0	0
Industrial Buildings	0	0
Social Buildings/Entertainment/Sporting Facilities	1	0
Schools	0	0
Government Buildings/Facilities	2	0
Utility Buildings	0	0
Total Properties with Structures	185	0
Vacant Properties		1
Total Properties	185	1

Repetitive Loss Area No. 16 is in an Evacuation Level B area which is the second level to be evacuated. Approximately ten hours are needed to evacuate the entire Level B area. Flooding in this area impacts the roadway areas first. This in turn hampers evacuation efforts as normal passenger vehicles cannot be used and high-rise vehicles must be used. Past flooding in this area has ranged from a few inches to a few feet causing damage

mainly to the residential homes with few sustaining substantial damage. Development and redevelopment in this area consists of home improvements and repairs, and redevelopment of business properties. Substantially improved or damaged structures are required to comply with the standards for new construction.

The County arranged for the construction of a 36-inch outfall pipe to help alleviate the flooding.

REPETITIVE LOSS ARE MITIGATION EFFORTS

REPETITIVE LOSS AREA	MITIGATION EFFORTS WITHIN THE REPETITIVE LOSS AREA
1-Hudson	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
2-Lake Worrell	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
3-Pithlachascotee	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
4-Green Key	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
5-Anclote	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
6-Lake Terrace	The one repetitive loss property has been removed.
7-Withlacoochee	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
8-Lake Bernadette Outfall	The one repetitive loss property has constructed a berm as a property protection measure.
9-Westport/Salt Springs	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
10-Grove Park	Drainage improvements were completed as part of the State of Florida SR 54 Improvements.
11-Aurora Drive	Local stormwater drainage improvements have been considered.
12-Aripeka	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
13-Baillies Bluff	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
14-Bonita	Local stormwater drainage improvements have been considered.
15-Flor A Mar	Elevation of Repetitive Loss Properties in an area characterized by older homes built prior to the County joining the National Flood Insurance Program (NFIP).
16-Holiday Hills	Local stormwater drainage improvements have been constructed.

Office of Emergency Management

National Weather Service

1. May 8, 1979: 11.09 inches of rainfall measured in Tarpon Springs.

2. August 11, 1979: 1.5 inches of rainfall measured at Tampa International Airport (TIA).

3. August 22, 1979: 0.25 inch of rainfall measured at TIA.

4. June 26, 1981: 3.67 inches of rainfall measured in St. Leo over a two-day period.

5. June 18, 1982: 6.32 inches of rainfall measured in Tarpon Springs and five inches of rainfall measured in Brooksville.

6. June 23, 1982: No significant amount of rainfall attributed to this day.

7. October 6, 1982: 3.7 inches of rainfall measured in St. Leo.

8. March 24, 1983: No significant amount of rainfall attributed to this day.

9. September 18 and 19, 1983: 5.67 inches of rainfall measured in Tarpon Springs.

10. July 31, 1984: No significant amount of rainfall attributed to this day.

11. August 30 to September 5, 1985: Hurricane Elena was a Category 3 Hurricane, which stalled off the west coast of Florida, causing saltwater and freshwater flooding.

12. January 10, 1986: 4.21 inches of rainfall measured in Tarpon Springs.

13. December 31, 1986: No significant amount of rainfall attributed to this day.

14. March 27 to March 31, 1987: 10.69 inches of rainfall in six days was measured in St. Leo.

15. September 5 to September 9, 1988: 15.38 inches of rainfall in five days was measured in Tarpon Springs. A front had stalled over Central Florida and a series of tropical waves moved along the front, causing widespread freshwater flooding.

16. November 11, 1988: No significant amount of rainfall attributed to this day.

17. June 28, 1989: 0.2 inch of rainfall measured at TIA.

18. July 15, 1990: 3.0 inches of rainfall measured at TIA.

19. August 23, 1991: 1.5 inches of rainfall measured at TIA.

20. August 12, 1992: No significant amount of rainfall attributed to this day.

21. August 27, 1992: 2.3 inches of rainfall measured at TIA.

22. October 3, 1992: 2.0 inches of rainfall measured at TIA.

23. March 13, 1993: No Name Storm. 5.0 inches of rainfall measured at TIA. Due to astronomically high tides, extremely heavy rainfall, wind of near tropical storm strength, and a storm surge of six to eight feet, the coastal areas of Aripeka, Hudson, Port Richey, and New Port Richey experienced severe flooding. Flooding in homes and businesses ranged from several inches to more than four feet of water. Several thousand homes were impacted. The Pasco County Emergency Operations Center (EOC) was fully activated in response to the event. Recovery operations commenced within 24 hours of the storm. The County received a Presidential Disaster Declaration for public assistance and individual assistance.

24. April 6, 1993: 0.4 inch of rainfall measured at TIA.

25. June 7, 1994: 1.4 inches of rainfall measured at TIA.

26. July 7, 1995: 0.4 inch of rainfall measured at TIA.

27. July 18, 1995: 5.1 inches of rainfall measured at TIA. Pasco County experienced localized flooding due to extremely heavy rainfall of more than five inches falling within a few hours on already saturated ground. The flooding was concentrated mainly in the Port Richey area. Homes and businesses received one to two feet of water. The County responded with a partial activation of EOC. A Small Business Administration disaster declaration was awarded to assist in the recovery effort.

28. August 2, 1995: Hurricane Erin. 5.0 to 6.0 inches of rainfall measured at TIA. Hurricane Erin passed over Pasco County with the eye of the storm passing near Dade City. EOC was fully activated as Pasco County was in the direct path of the storm. Damage was minimal, confined mostly to electric power and tree damage. One apartment building housing the elderly received roof damage and the residents evacuated to a local shelter. Rainfall associated with Hurricane Erin caused minor street flooding; however, storm surge was not a problem. Hurricane Erin exited to the north of Pasco County during a low tide period. Pasco County was included in the Presidential Disaster Declaration for Hurricane Erin.

29. October 4, 1995: Hurricane Opal. 1.6 inches of rainfall measured at TIA. Pasco County fully activated EOC in expectation of receiving an impact from Hurricane Opal. Though no direct impact was felt, Hurricane Opal, a gulf storm, was responsible for prolonged high tides. Pasco County did not receive a disaster declaration.

30. October 13, 1995: No significant amount of rainfall attributed to this day.

31. October 7, 1996: Tropical Storm Josephine. 2.0 inches of rainfall measured at TIA. Pasco County fully activated EOC in response to the threat of Tropical Storm Josephine. Tropical Storm Josephine impacted Aripeka, Hudson, Port Richey, and New Port Richey. The City of Port Richey received the greatest impact from the storm, consisting mainly of flooding in homes. The impact of Tropical Storm Josephine was not as severe as the March 13, 1993, No Name Storm, as residents received generally less than one foot of water in their homes. Pasco County received a Presidential Disaster Declaration for individual assistance due to the damage received from Tropical Storm Josephine.

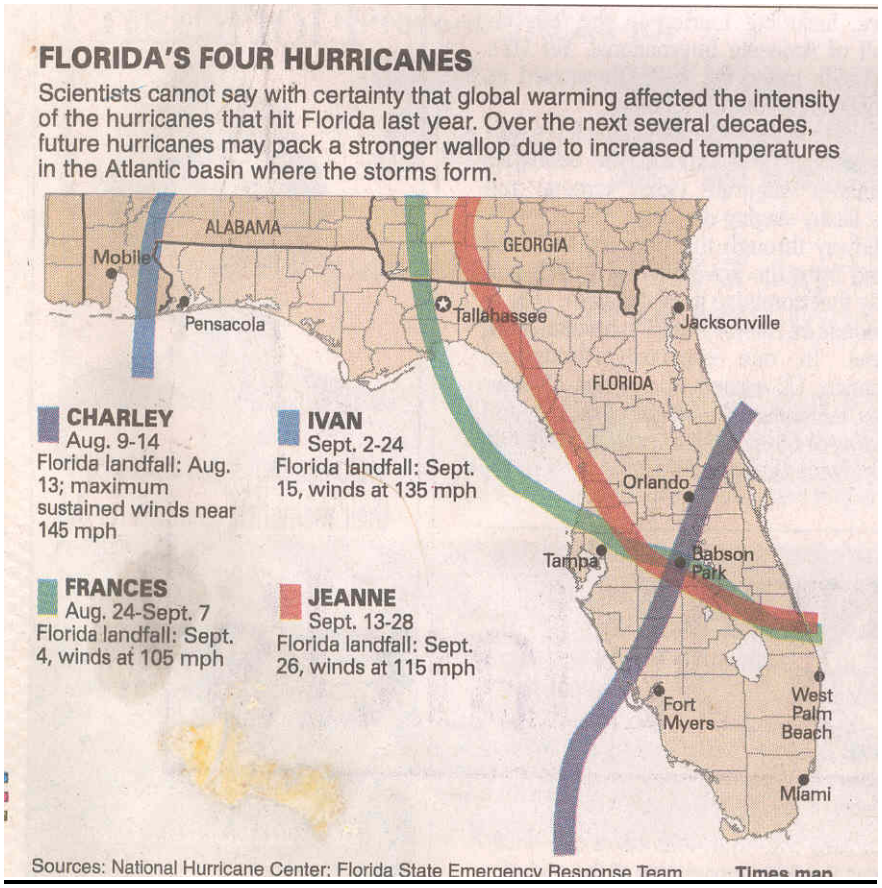
32. December 1997 through March 1998: El Niño.

33. January 1, 1999: Pasco County experienced localized flooding due to extremely heavy rainfall within a few hours coinciding with high tide.

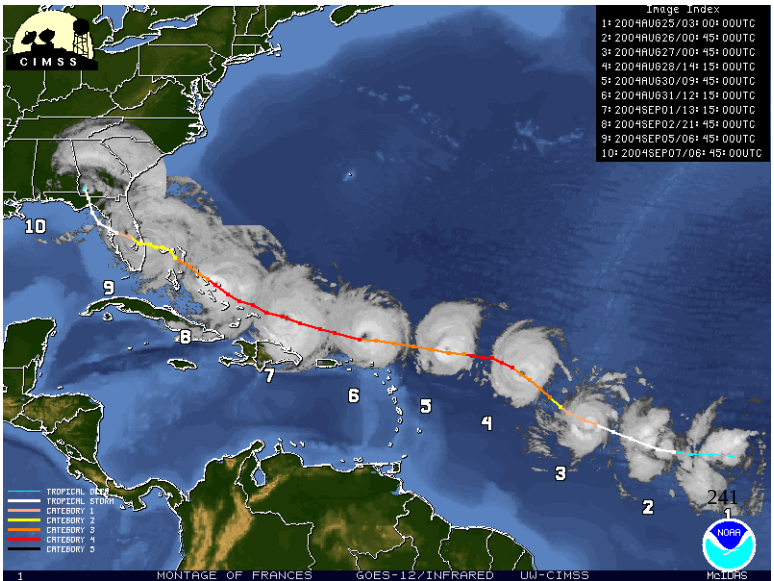
34. Spring/Summer 2003 Floods (Incident #03-06118): Impacts in this area began in June 2003 when Pasco County experienced between 20 and 30 inches of rain.

35. 2004 Tropical Storms and Hurricanes:

Tropical Storms and Hurricanes of 2004



The 2004 Hurricane Season was a very active season with a total of fifteen named storms. Eight of the storms grew to become hurricanes and the State of Florida saw four of those storms make landfall as major (Category 3 or higher) hurricanes. The names of the four major hurricanes were Charley, Frances, Ivan and Jeanne. Pasco County was involved in preparation actions for Hurricanes Charley, Frances and Jeanne, as well as response and recovery operations for Frances and Jeanne. Fortunately, when Hurricane Ivan arrived in mid September, it moved from south to north through the Gulf of Mexico towards landfall in the Panhandle some 300 miles offshore from Pasco County. Therefore, the County was not impacted by this storm.

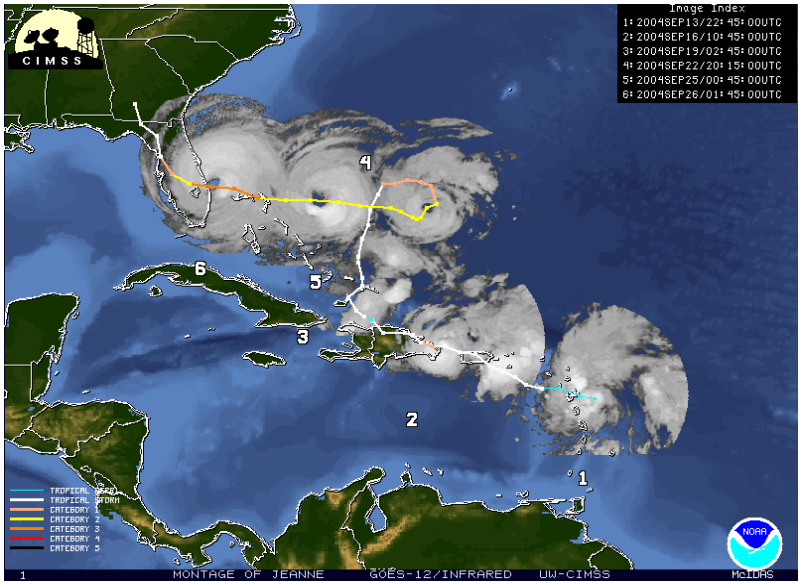


The State of Florida has experienced several Labor Day/Labor Day weekend storms during its history. Hurricane Frances proved to be the latest in this string of storms, tracking through southwest Pasco County around 11 p.m. on September 5 as it exited the state.

Hurricane Frances made landfall in Martin County

on Florida's east coast early in the morning of September 5 as a Category 3. It tracked towards the northwest through Polk and Hillsborough Counties, eventually exiting the State into the Gulf of Mexico through the southwest portion of Pasco County on September 5.

Unlike Hurricane Charley where only preparation actions were necessary on the part of Pasco County, response and recovery actions were needed following Hurricane Francis, since it passed through Pasco County with sustained gale force winds (55+ mph) that caused significant damage as it exited the state. Primary response and recovery operations conducted were flood response/pumping operations and debris removal. Damage assessment reports issued after the storm reflected 782 buildings (primarily mobile homes) in the County with minor damage and 114 with major damage resulting from the storm winds. In addition, 459 flooding reports were received by the County as a result of rains that accompanied the storm. Repetitive Loss Area No. 2, Bass Lake experienced flooding.



The third and final weekend storm of the 2004 Hurricane Season to impact Pasco County was Hurricane Jeanne. Jeanne proved to be a special challenge for Pasco County in that recovery operations that was well underway for Hurricane Frances had to be suspended in order to retrench and initiate preparation (protective) actions for Jeanne. Likewise, after the storm passed, the concurrent efforts of resuming recovery operations for Frances and initiating recovery operations for Jeanne had to be undertaken.

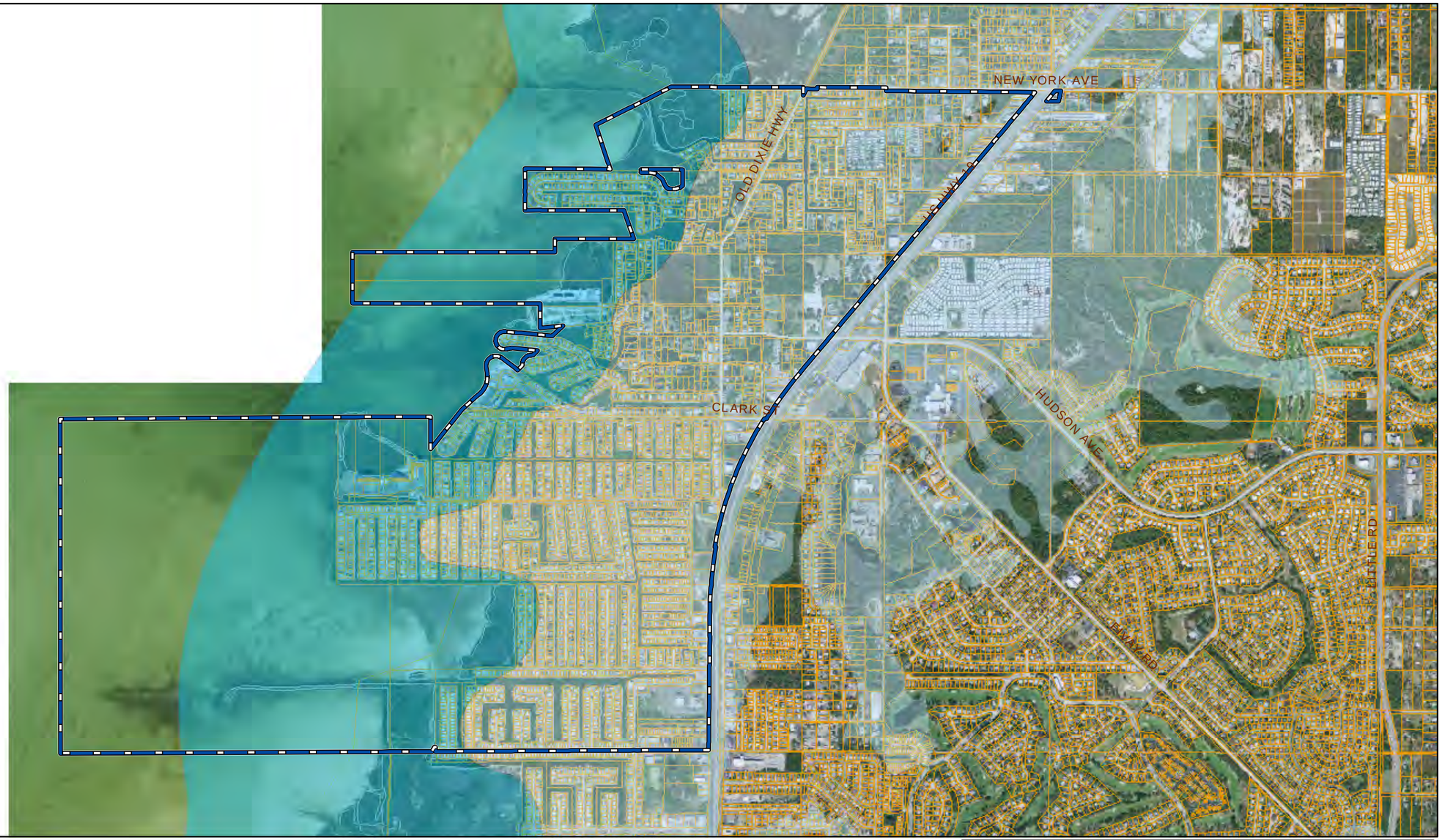
Similar to Hurricane Frances, Jeanne made landfall in Martin County on Florida's east coast early in the morning of September 26 as a Category 3. It followed a track similar to Frances as it generally moved to the north-northwest through Polk, the northeastern part of Hillsborough and into Pasco County with the track taking the center of the storm very close to Zephyrhills and Dade City prior to it exiting the County into Hernando County late in the evening of September 26.

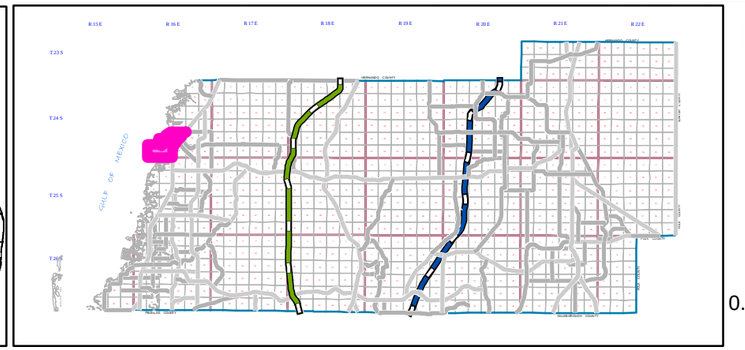
Hurricane Jeanne passed through Pasco County with sustained gale force winds (55+ mph) that once again caused significant damage. Primary response and recovery operations conducted were flood response/pumping operations and debris removal. Damage assessment reports issued after the storm reflected 2,805 buildings (primarily homes) in the County with minor damage, and 558 with major damage resulting from the storm winds. As of the end of September 2004, 462 flooding complaints were received and tasked to field investigators. Unfortunately, Pasco County had one fatality attributable to Hurricane Jeanne.

36. July 13, 2008: Flash floods were experienced in western Pasco County in the early morning hours. The locations were all west of Little Road.

37. April 4, 2011: Flooding along Anclote River.

38. June 23-27 2012: Tropical Storm Debby that lashed the Gulf Coast on June 23-27, 2012. The storm delivered total rainfall amounts that exceeded 15-19 inches in some locations as it slowly moved through the area and caused extensive river flooding.





Pasco County Repetitive Loss Area
RLA Number 1

N
W E
S

0.25 0.125 0 0.25 0.5 0.75 1
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:01

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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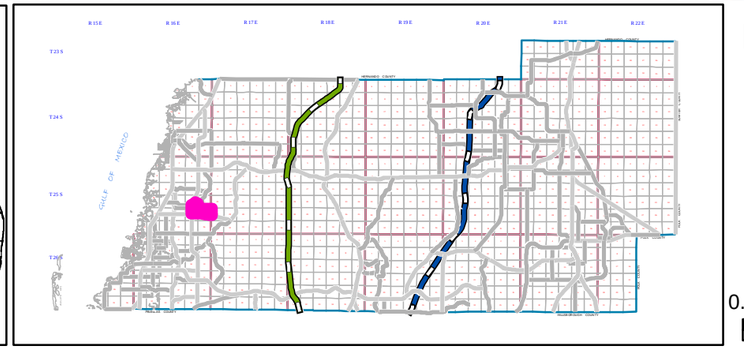

Pasco County Repetitive Loss Area
RLA Number 2

N
W E
S

0.1 0.05 0 0.1 0.2 0.3 0.4
Miles

"Bringing Opportunities Home"

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:02

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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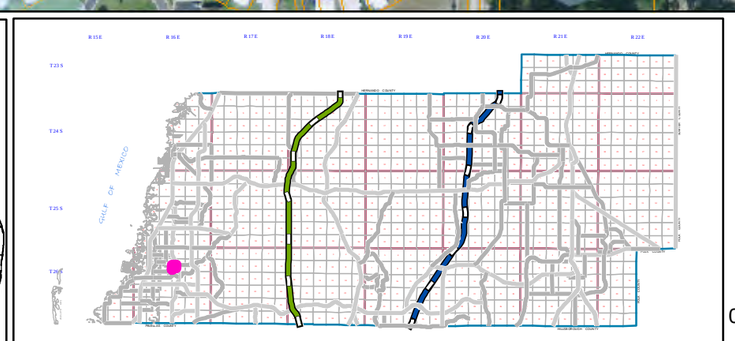

Pasco County Repetitive Loss Area
RLA Number 3

PASCO GIS

N
W E
S

"Bringing Opportunities Home"

0.04 0.02 0 0.04 0.08 0.12 0.16
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:03

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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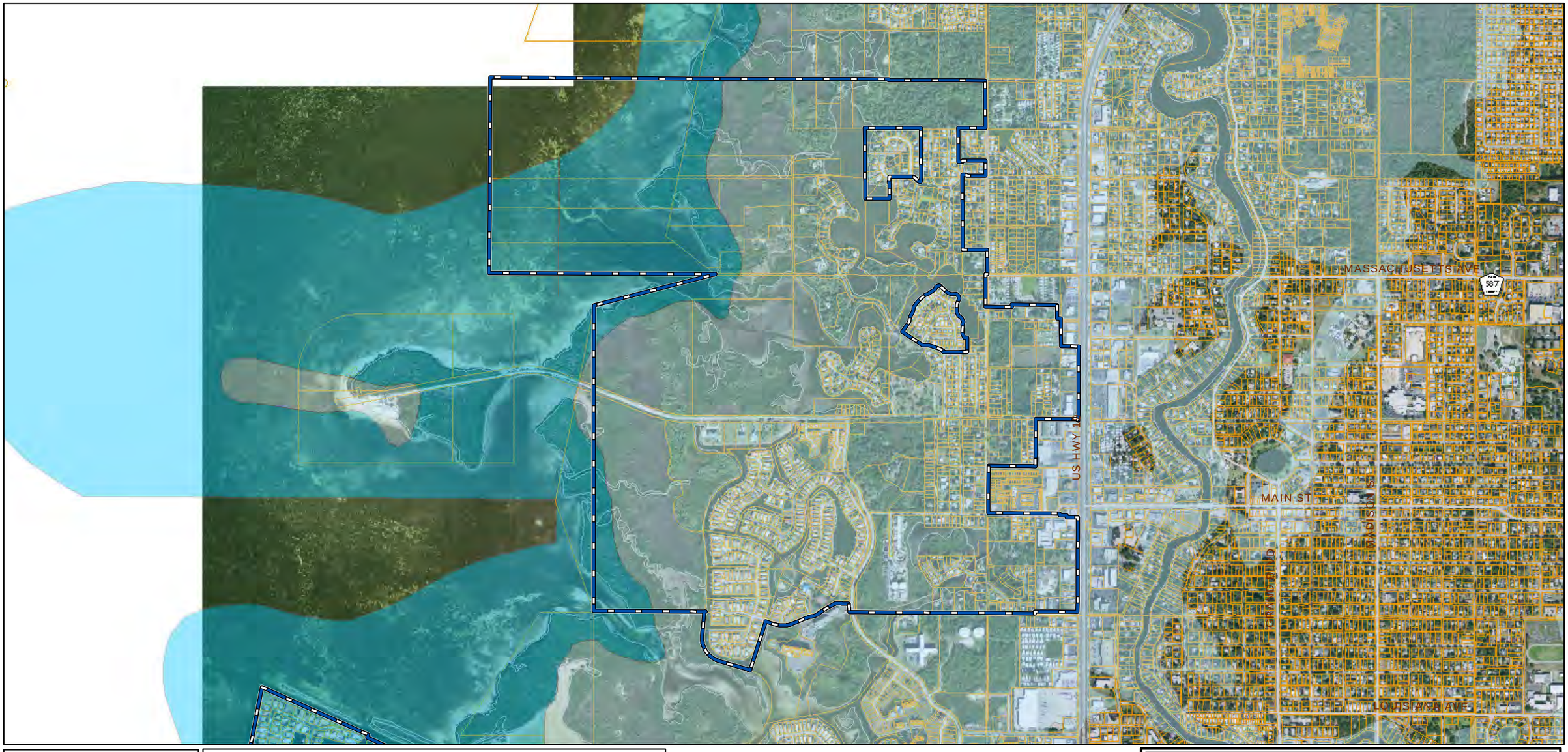

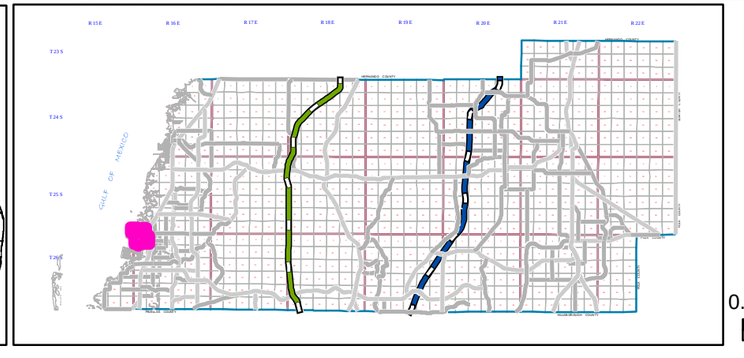

Pasco County Repetitive Loss Area
RLA Number 4

N
W E
S

0.2 0.1 0 0.2 0.4 0.6 0.8 Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:04

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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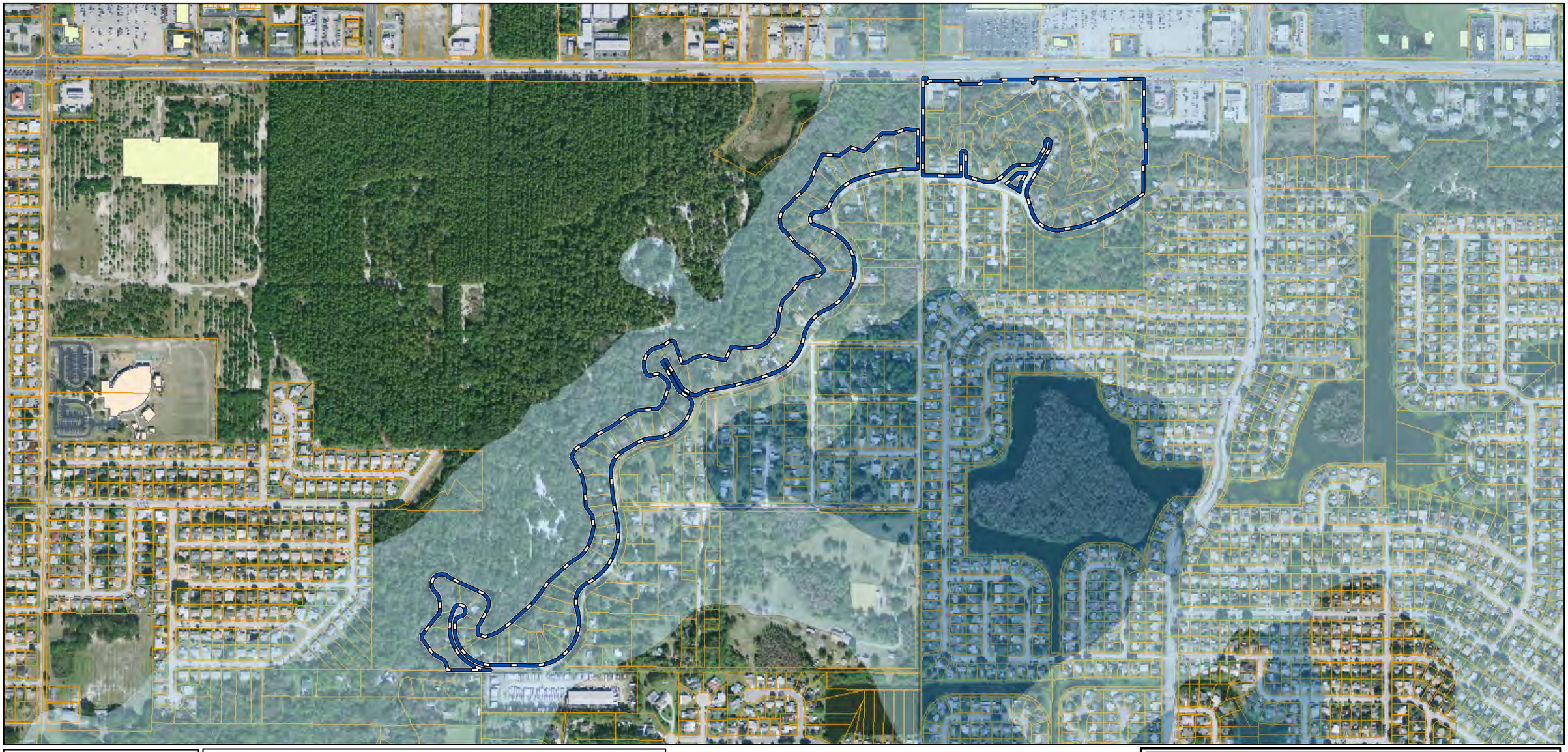

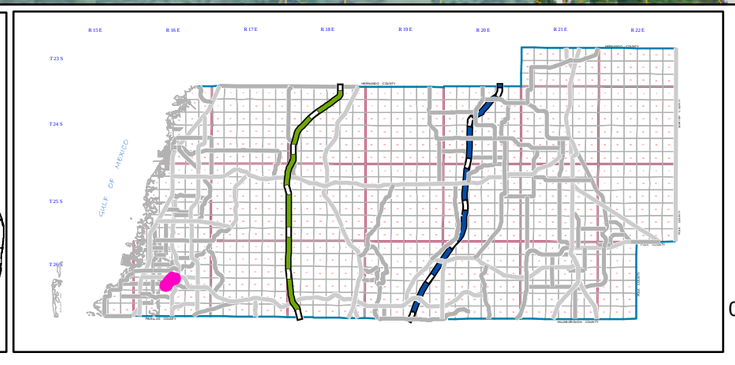

Pasco County Repetitive Loss Area
RLA Number 5

PASCO GIS

"Bringing Opportunities Home"

N
W E
S

0.09 0.045 0 0.09 0.18 0.27 0.36
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:05

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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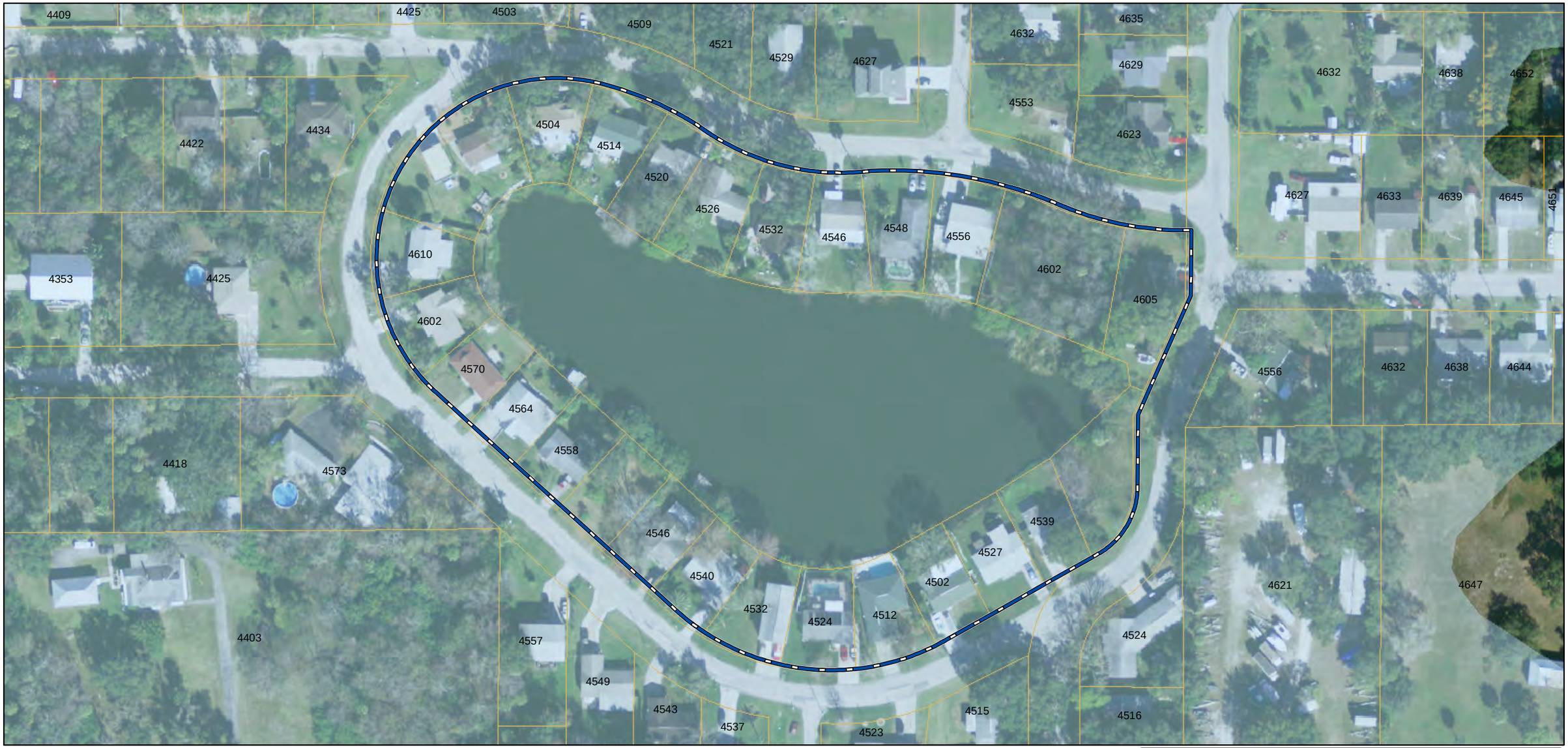

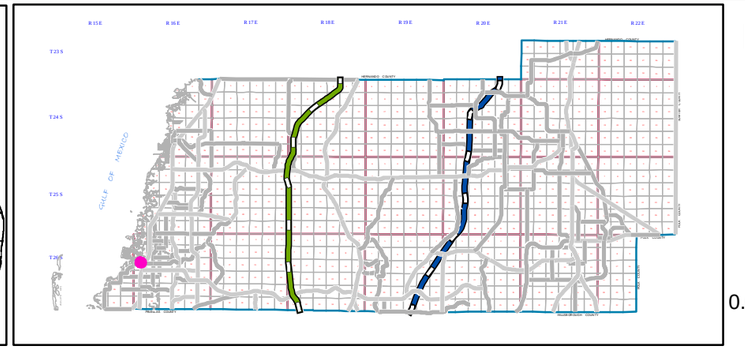

Pasco County Repetitive Loss Area
RLA Number 6

N
W E
S

0.01 0.005 0 0.01 0.02 0.03 0.04 Miles

"Bringing Opportunities Home"

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:06

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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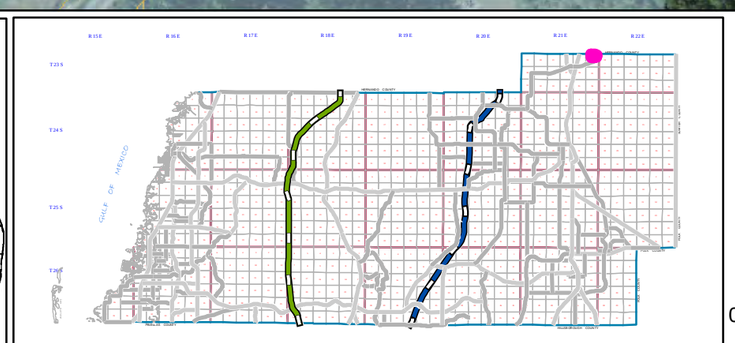

Pasco County Repetitive Loss Area
RLA Number 7

N
W E
S

0.04 0.02 0 0.04 0.08 0.12 0.16
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:07

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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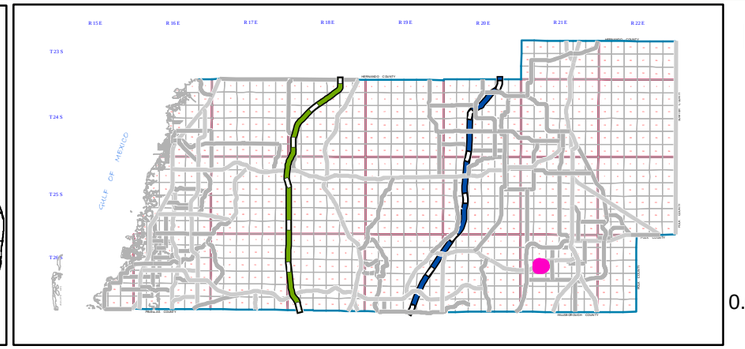
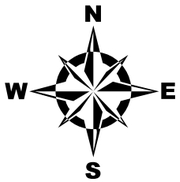


Pasco County Repetitive Loss Area
RLA Number 8



0.06 0.03 0 0.06 0.12 0.18 0.24 Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:08

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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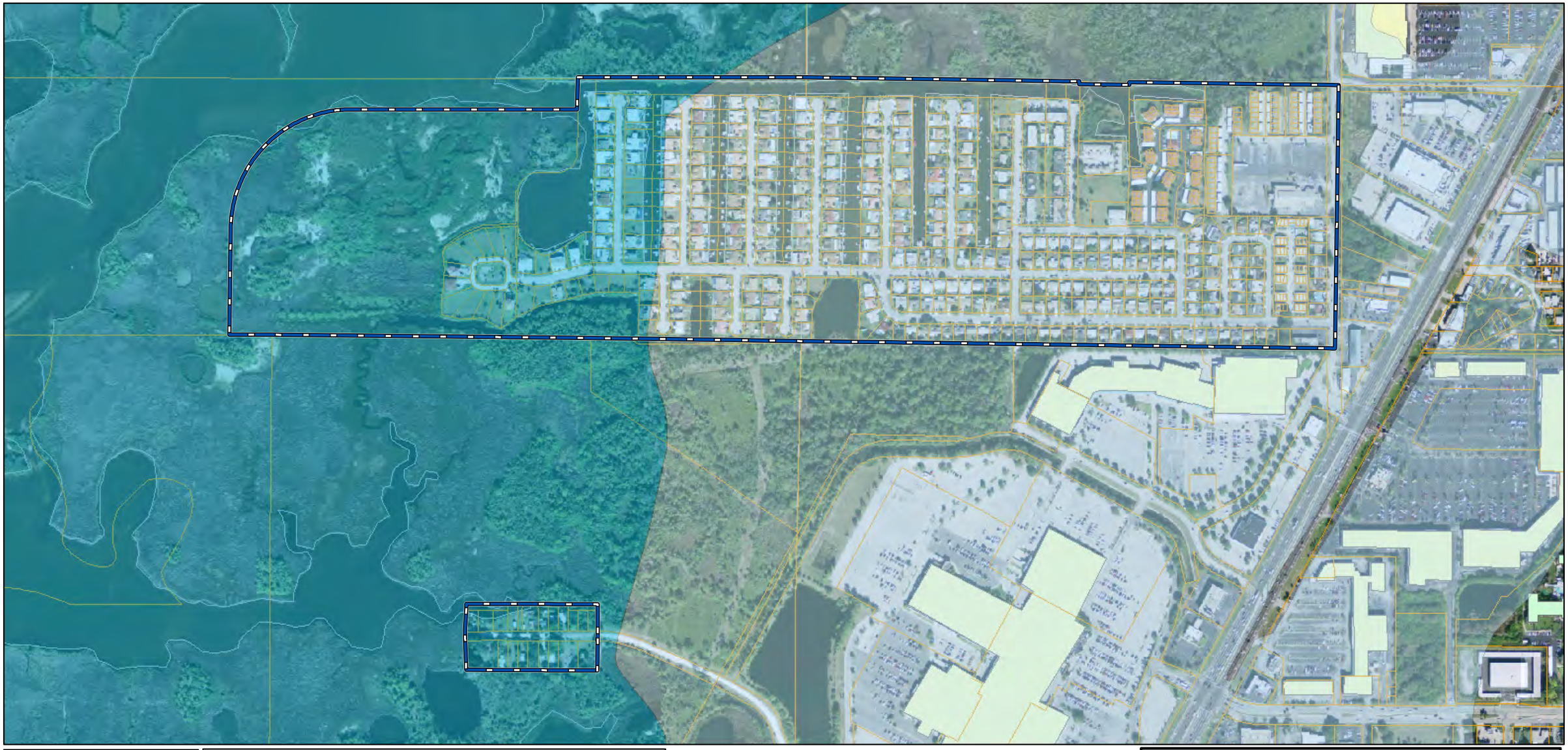

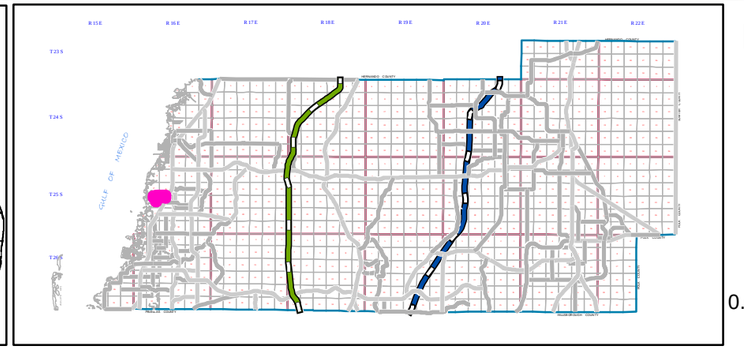

Pasco County Repetitive Loss Area
RLA Number 9

N
W E
S

0.075 0.0375 0 0.075 0.15 0.225 0.3
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:09

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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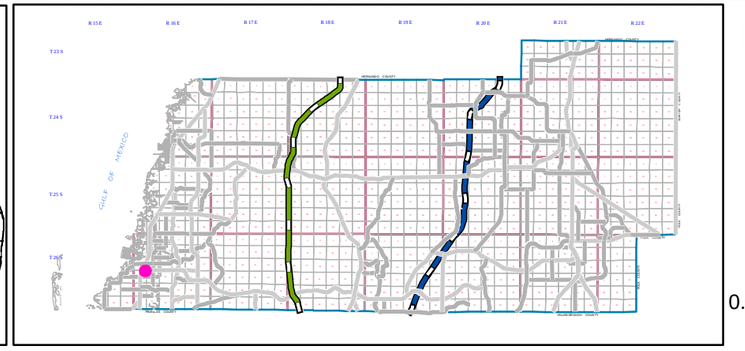

Pasco County Repetitive Loss Area
RLA Number 10

PASCO GIS

N
W E
S

"Bringing Opportunities Home"

0.01 0.005 0 0.01 0.02 0.03 0.04 Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:10

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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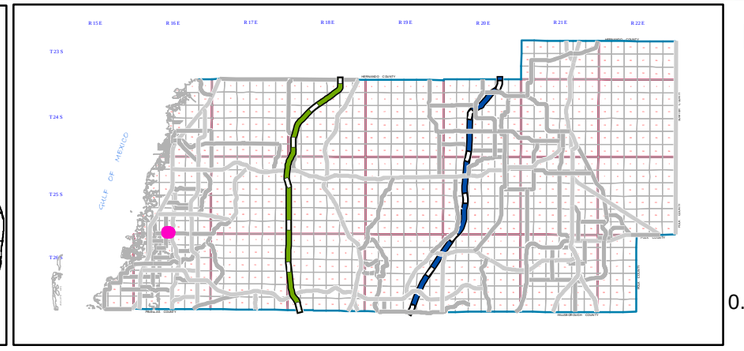

Pasco County Repetitive Loss Area
RLA Number 11

N
W E
S

0.025 0.0125 0 0.025 0.05 0.075 0.1
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:11

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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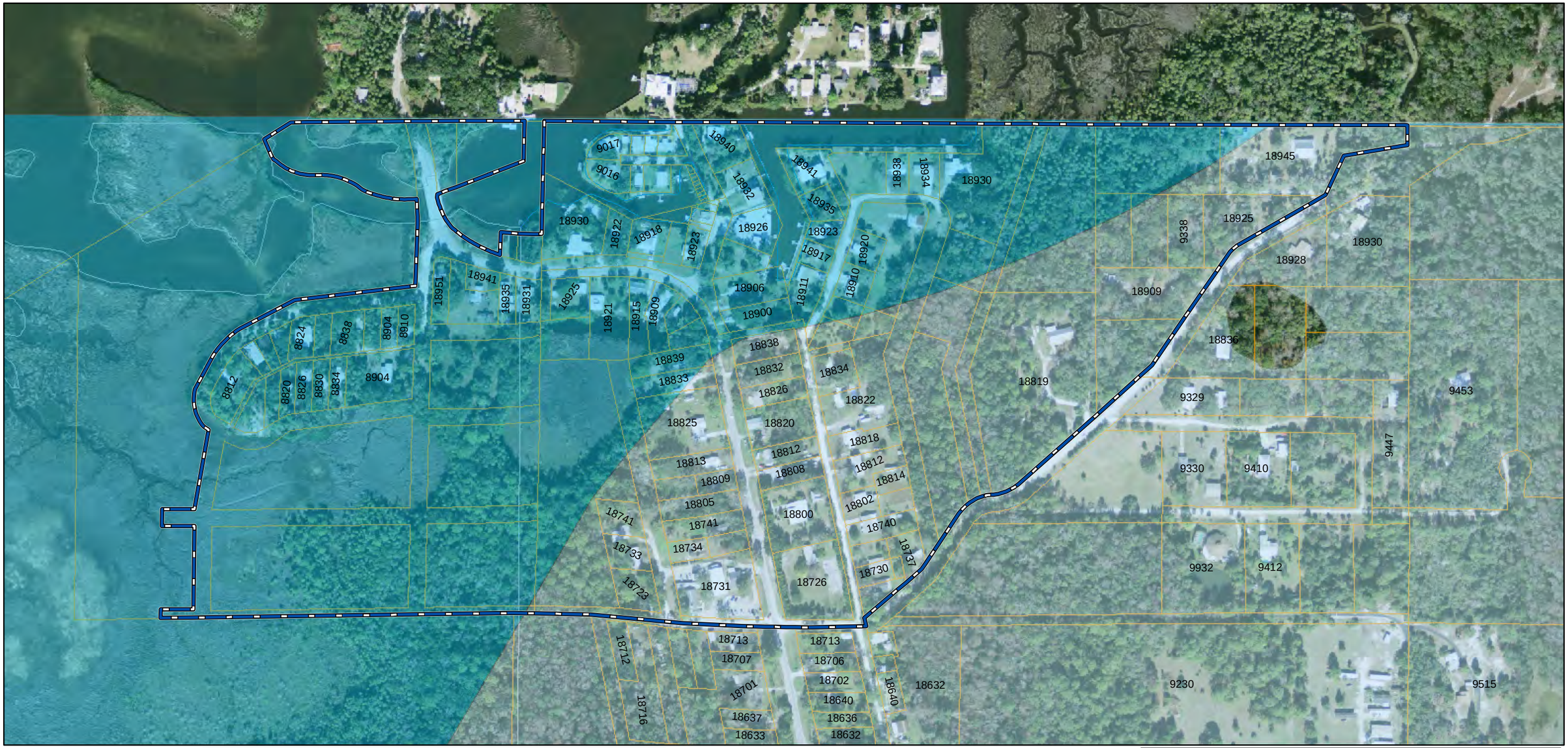

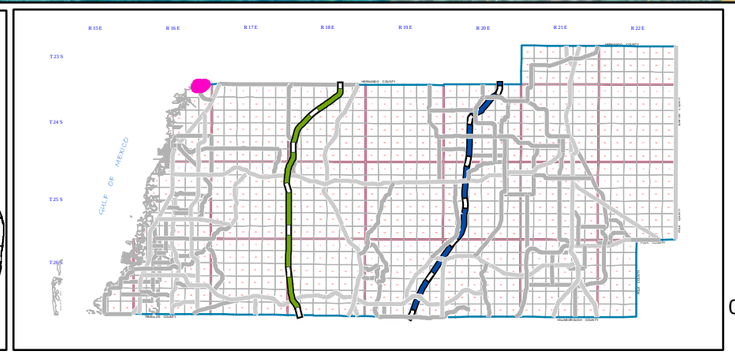

Pasco County Repetitive Loss Area
RLA Number 12

N
W E
S

0.04 0.02 0 0.04 0.08 0.12 0.16
Miles

"Bringing Opportunities Home"

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:12

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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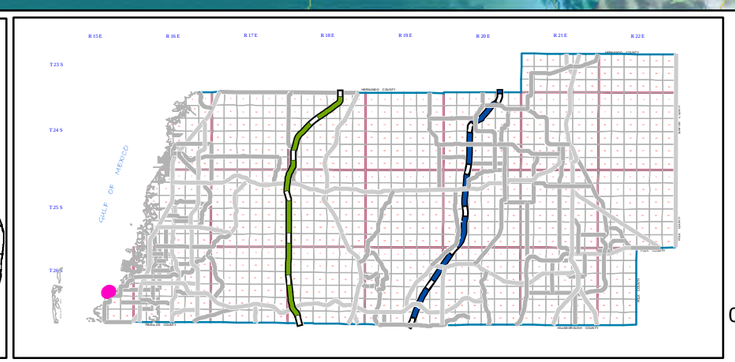

Pasco County Repetitive Loss Area
RLA Number 13

N
W E
S

0.03 0.015 0 0.03 0.06 0.09 0.12
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:13

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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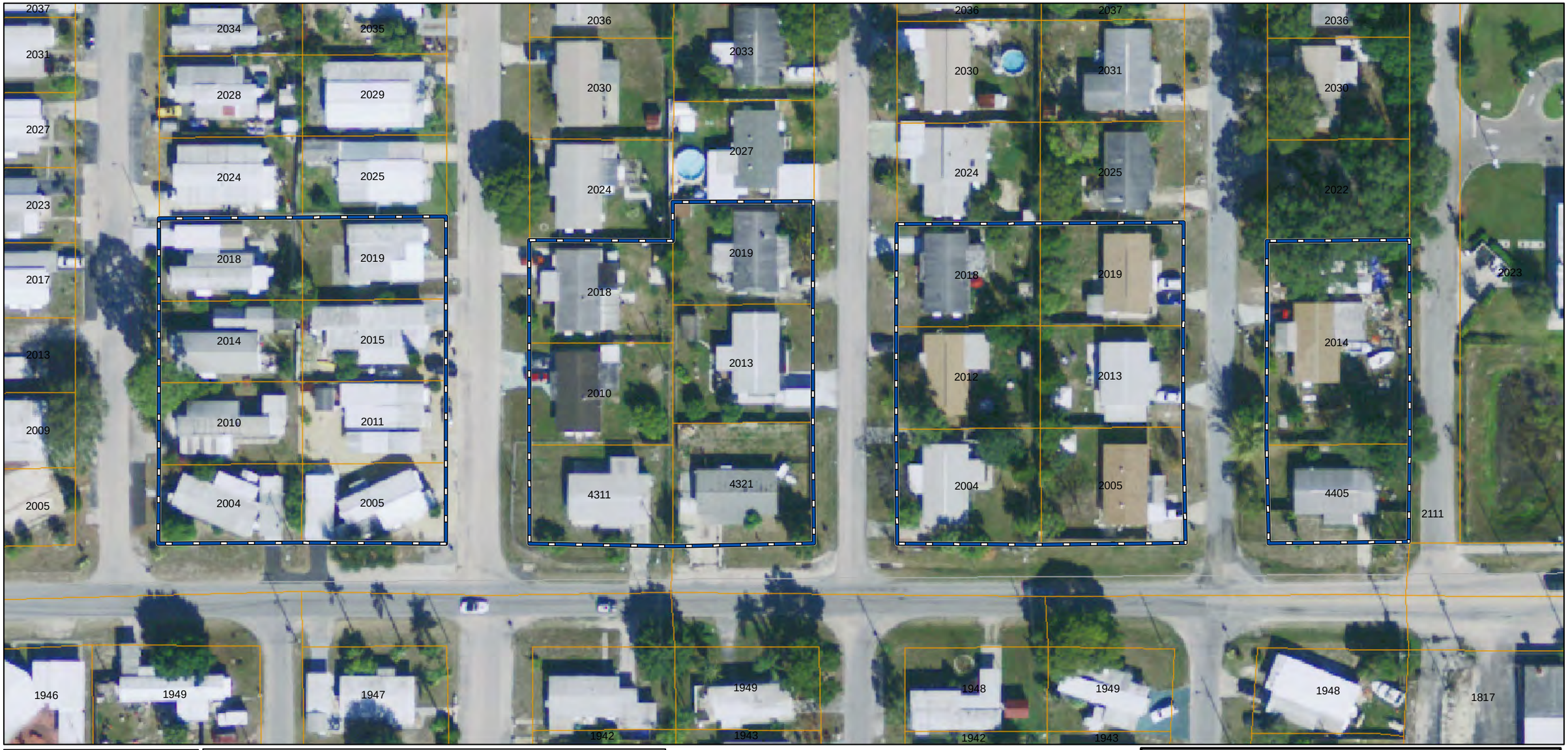

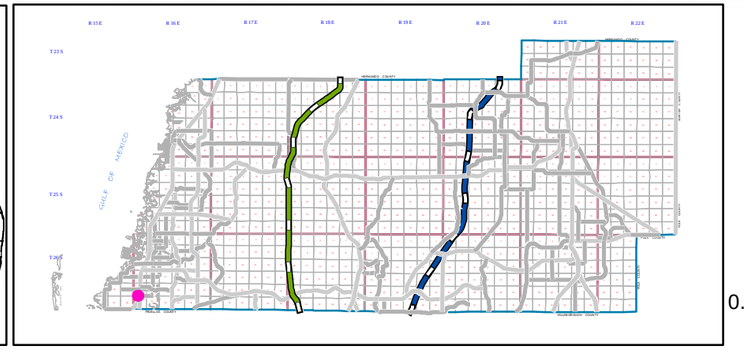

Pasco County Repetitive Loss Area
RLA Number 14

N
W E
S

0.009 0.0045 0 0.009 0.018 0.027 0.036
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:14

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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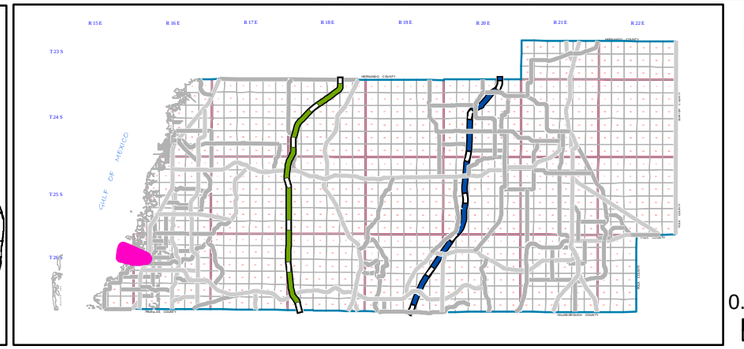

Pasco County Repetitive Loss Area
RLA Number 15

PASCO GIS

N
W E
S

"Bringing Opportunities Home"

0.1 0.05 0 0.1 0.2 0.3 0.4 Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:15

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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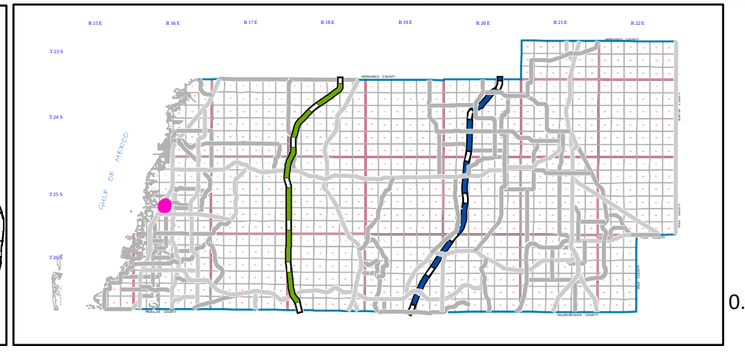

Pasco County Repetitive Loss Area
RLA Number 16

PASCO GIS

N
W E
S

"Bringing Opportunities Home"

0.05 0.025 0 0.05 0.1 0.15 0.2
Miles

PASCO COUNTY FLORIDA
Geographic Information Systems Division (GIS)
Survey Department
Engineering Services

Title:
CRS 2011 Section 501:16

Created By: E.C.Dumas
Date: July 2011
Reviewed By:
Source Data: Pasco County GIS

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Appendix E

State of Florida Weather Incidents: 1953-2011

Major Disaster Declarations

Appendix E: State of Florida Weather Incidents: 1953-2011

Major Disaster Declarations

Source: *http://www.fema.gov/disasters/grid/state-tribal-government/47, accessed 06/15/2014*

	DR-#	Date	Incident Description
1	4177	5/6/2014	Severe Storms, Tornadoes, Straight-line Winds, and Flooding
2	4138	8/2/2013	Severe Storms and Flooding
3	4084	10/18/2012	Hurricane Isaac
4	4068	7/3/2012	Tropical Storm Debby
5	1840	5/27/2009	Severe Storms, Flooding, Tornadoes, and Straight-line Winds
6	1831	4/21/2009	Severe Storms, Flooding, Tornadoes, and Straight-line Winds
7	1806	10/27/2008	Hurricane Gustav
8	1785	8/24/2008	Tropical Storm Fay
9	1680	2/8/2007	Severe Storms, Tornadoes, and Flooding
10	1679	2/3/2007	Severe Storms and Tornadoes
11	1609	10/24/2005	Hurricane Wilma
12	1602	8/28/2005	Hurricane Katrina
13	1595	7/10/2005	Hurricane Dennis
14	1561	9/26/2004	Hurricane Jeanne
15	1551	9/16/2004	Hurricane Ivan
16	1545	9/4/2004	Hurricane Frances
17	1539	8/13/2004	Hurricane Charley and Tropical Storm Bonnie
18	1481	7/29/2003	Severe Storms and Flooding
19	1460	4/25/2003	Tornado
20	1393	9/28/2001	Tropical Storm Gabrielle
21	1381	6/17/2001	Tropical Storm Allison
22	1359	2/5/2001	Severe Freeze
23	1345	10/4/2000	Heavy Rains And Flooding
24	1344	10/3/2000	Tropical Storm
25	1306	10/20/1999	Hurricane Irene
26	1300	9/22/1999	Hurricane Floyd
27	1259	11/6/1998	Tropical Storm Mitch
28	1249	9/28/1998	Hurricane Georges
29	1241	9/4/1998	Hurricane Earl
30	1223	6/18/1998	Florida Extreme Fire Hazard
31	1204	2/12/1998	Severe Thunderstorms, Tornadoes and Flooding
32	1195	1/6/1998	Tornadoes
33	1141	10/15/1996	Severe Storms/Flooding
34	1074	10/27/1995	Severe Storm, Flooding
35	1069	10/4/1995	Hurricane Opal
36	1062	8/10/1995	Hurricane Erin
37	1043	11/28/1994	Tropical Storm Gordon, Heavy Rain, Tornadoes, Flooding
38	1035	7/10/1994	Severe Storm, Flooding, Tropical Storm Alberto
39	982	3/13/1993	Tornadoes, Flooding, High Winds, Tides, Freezing
40	966	10/8/1992	Flooding, Severe Storm, Tornadoes
41	955	8/24/1992	Hurricane Andrew
42	952	8/14/1992	Flooding, Severe Storm
43	862	4/3/1990	Flooding, Severe Storm
44	851	1/15/1990	Severe Freeze
45	756	12/3/1985	HURRICANE KATE
46	743	9/12/1985	HURRICANE ELENA
47	732	3/18/1985	Severe Freeze
48	698	3/29/1984	Freezing Temperatures
49	664	7/7/1982	SEVERE STORMS, FLOODING
50	607	9/29/1979	SEVERE STORMS, FLOODING
51	600	9/13/1979	HURRICANE FREDERIC
52	586	5/15/1979	SEVERE STORMS, TORNADOES, FLOODING
53	526	1/31/1977	SEVERE WINTER WEATHER
54	484	9/26/1975	High Winds, Heavy Rains, Flooding
55	479	8/22/1975	FLOODING

Appendix E: State of Florida Weather Incidents: 1953-2011

Major Disaster Declarations

56	387	5/26/1973		SEVERE STORMS, FLOODING
57	337	6/23/1972		Tropical Storm Agnes
58	304	3/15/1971		Freeze
59	289	7/3/1970		Heavy Rains, Flooding
60	252	11/7/1968		HURRICANE GLADYS
61	209	9/14/1965		HURRICANE BETSY
62	176	9/10/1964		HURRICANE DORA
63	175	9/8/1964		HURRICANE CLEO
64	141	12/17/1962		Abnormally High Tides
65	106	9/12/1960		HURRICANE DONNA
66	97	3/23/1960		Severe Weather
67	12	10/22/1953		FLOOD

Emergency Declarations

1	Number	Date		Incident Description
2	3293	9/7/2008		Hurricane Ike
3	3288	8/21/2008		Tropical Storm Fay
4	3259	9/20/2005		Tropical Storm Rita
5	3220	9/5/2005		Hurricane Katrina Evacuation
6	3150	10/15/1999		Hurricane Irene
7	3143	9/14/1999		Hurricane Floyd
8	3139	4/27/1999		Fire Hazard
9	3131	9/25/1998		Hurricane Georges
10	3116	8/3/1995		Hurricane Erin
11	3114	7/8/1994		Tropical Storm Alberto
12	3079	5/6/1980		Undocumented Aliens from Cuba "Mariel Boatlift"
13	3075	3/24/1979		Severe Storms & Flooding

Appendix E: State of Florida Weather Incidents: 1953-2011

Major Disaster Declarations

Fire Management Assistance Declarations

	Number	Date	Incident Description
1	2902	4/27/2011	Slope Fire
2	2819	5/12/2009	Martin County Fire Complex
3	2765	5/12/2008	Brevard Fire Complex
4	2696	6/27/2007	Okeechobee Fire Complex
5	2692	5/9/2007	Caloosahatchee Fire Complex
6	2690	5/8/2007	Black Creek Fire
7	2689	5/7/2007	Suwannee Fire Complex
8	2687	5/2/2007	Deland Fire Complex
9	2684	3/26/2007	53 Big Pine Fire
10	2638	5/15/2006	Volusia Fire Complex
11	2363	5/23/2001	Perry Fire Complex
12	2361	5/16/2001	Escambia Fire Complex
13	2360	5/15/2001	Chipola River Fire Complex
14	2359	4/25/2001	Everglades Fire Complex
15	2358	4/18/2001	Myakka Fire Complex
16	2357	4/17/2001	Orlando Fire Complex
17	2353	3/18/2001	Lakeland Fire Complex
18	2354	2/19/2001	Okeechobee Fire Complex
19	2355	2/19/2001	Caloosahatchee Fire Complex
20	2307	6/9/2000	Perry Fire Complex
21	2306	6/5/2000	Suwannee Fire Complex
22	2305	6/2/2000	Jacksonville Fire Complex
23	2303	5/29/2000	Waccasassa Fire Complex
24	2301	5/28/2000	Orlando District Fire Complex
25	2302	5/28/2000	Bunnell District Fire Complex
26	2300	5/20/2000	Lakeland District Fire Complex
27	2299	5/19/2000	Withlacootchee District Fire Complex
28	2298	5/16/2000	Flowers-Myakka Fire Complex
29	2294	4/11/2000	Merritt Fire
30	2262	5/14/1999	Jacksonville District Fire
31	2260	4/23/1999	Myakka River District Fire
32	2259	4/21/1999	Lakeland Fire
33	2258	4/20/1999	Suwannee District Fire
34	2257	4/19/1999	Tallahassee Fire District.
35	2256	4/18/1999	Everglades District Fire
36	2255	4/17/1999	Chipola District Fire
37	2254	4/15/1999	Caloosahatchee Fire Complex
38	2252	4/15/1999	Wacasassa Fire Complex
39	2253	4/15/1999	Fire Complex
40	2251	4/15/1999	Okeechobee Fire Complex
41	2215	6/28/1998	Orlando Fire Complex
42	2214	6/27/1998	Withlacootchee Fire Complex
43	2212	6/21/1998	Calooshattchee Fire Complex
44	2211	6/21/1998	Depot Creek Fire
45	2209	6/20/1998	Suwanee Fire Comlex
46	2208	6/20/1998	Bunnelle Fire Comlex
47	2207	6/19/1998	Waccassa Fire Complex
48	2206	6/19/1998	San Pedro Day Fire
49	2205	6/19/1998	Waldo Southeast Fire
50	2204	6/19/1998	Race Track - Waldo Fire
51	2203	6/18/1998	County Line Fire
52	2201	6/16/1998	Jacksonville Complex Fire
53	2200	6/8/1998	Pine Coast 98 Fire
54	2053	5/20/1985	Tomoka Fire
55	2050	5/17/1985	Perry Fire
56	2051	5/17/1985	Aster Fire
57	2052	5/17/1985	Bonell Fire

Appendix F

NCDC Weather Data 1974-2014 (first 500 events)

	Location	Date	Time	Type	Magnitude	Deaths	Injuries	Property Damage	Crop Damage	# Events
1	Pasco Co.	3/8/1998	22:30	Coastal Flood		0	0	175.00K	0.00K	1
2	Pasco (Zone)	1/29/2007	4:00	Cold/wind Chill		0	0	0.00K	0.00K	
3	Pasco (Zone)	10/29/2008	4:00	Cold/wind Chill		0	0	0.00K	0.00K	2
4	Pasco (Zone)	2/1/1996	3:00	Dense Fog		0	0	0.00K	0.00K	
5	Pasco (Zone)	2/11/1996	3:00	Dense Fog		0	0	0.00K	0.00K	
6	Pasco (Zone)	2/21/1996	4:00	Dense Fog		0	0	0.00K	0.00K	
7	Pasco (Zone)	2/22/1996	4:00	Dense Fog		0	0	0.00K	0.00K	
8	Pasco (Zone)	12/27/1996	4:00	Dense Fog		0	0	0.00K	0.00K	
9	Pasco (Zone)	12/28/1996	3:00	Dense Fog		0	0	0.00K	0.00K	
10	Pasco (Zone)	12/29/1996	3:00	Dense Fog		0	0	0.00K	0.00K	
11	Pasco (Zone)	12/30/1996	3:00	Dense Fog		0	0	0.00K	0.00K	
12	Pasco (Zone)	12/31/1996	1:00	Dense Fog		0	0	0.00K	0.00K	
13	Pasco (Zone)	1/1/1997	1:00	Dense Fog		0	0	0.00K	0.00K	
14	Pasco (Zone)	1/3/1997	1:00	Dense Fog		0	0	0.00K	0.00K	
15	Pasco (Zone)	1/4/1997	1:00	Dense Fog		0	0	0.00K	0.00K	
16	Pasco (Zone)	1/7/1997	4:00	Dense Fog		0	0	0.00K	0.00K	
17	Pasco (Zone)	2/2/1997	4:00	Dense Fog		0	0	0.00K	0.00K	
18	Pasco (Zone)	3/11/1997	5:00	Dense Fog		0	0	0.00K	0.00K	
19	Pasco (Zone)	11/15/1998	5:00	Dense Fog		0	0	0.00K	0.00K	
20	Pasco (Zone)	11/17/1998	6:00	Dense Fog		0	0	0.00K	0.00K	
21	Pasco (Zone)	11/18/1998	3:00	Dense Fog		0	0	0.00K	0.00K	
22	Pasco (Zone)	11/20/1998	3:00	Dense Fog		0	0	0.00K	0.00K	
23	Pasco (Zone)	11/25/1998	3:00	Dense Fog		0	0	0.00K	0.00K	
24	Pasco (Zone)	11/27/1998	2:00	Dense Fog		0	0	0.00K	0.00K	
25	Pasco (Zone)	12/1/1998	4:00	Dense Fog		0	0	0.00K	0.00K	
26	Pasco (Zone)	12/4/1998	4:00	Dense Fog		0	0	0.00K	0.00K	
27	Pasco (Zone)	12/5/1998	5:00	Dense Fog		0	0	0.00K	0.00K	
28	Pasco (Zone)	12/21/1998	3:00	Dense Fog		0	0	0.00K	0.00K	
29	Pasco (Zone)	12/22/1998	3:00	Dense Fog		0	0	0.00K	0.00K	
30	Pasco (Zone)	12/23/1998	5:00	Dense Fog		0	0	0.00K	0.00K	
31	Pasco (Zone)	12/28/1998	1:00	Dense Fog		0	0	0.00K	0.00K	
32	Pasco (Zone)	12/29/1998	0:30	Dense Fog		0	0	0.00K	0.00K	
33	Pasco (Zone)	1/16/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
34	Pasco (Zone)	1/18/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
35	Pasco (Zone)	1/21/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
36	Pasco (Zone)	2/4/1999	3:00	Dense Fog		0	0	0.00K	0.00K	
37	Pasco (Zone)	2/7/1999	3:00	Dense Fog		0	0	0.00K	0.00K	
38	Pasco (Zone)	2/8/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
39	Pasco (Zone)	2/9/1999	1:00	Dense Fog		0	0	0.00K	0.00K	

40	Pasco (Zone)	2/10/1999	3:00	Dense Fog		0	0	0.00K	0.00K	
41	Pasco (Zone)	2/19/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
42	Pasco (Zone)	2/26/1999	1:00	Dense Fog		0	0	0.00K	0.00K	
43	Pasco (Zone)	11/16/1999	4:00	Dense Fog		0	0	0.00K	0.00K	
44	Pasco (Zone)	11/26/1999	4:30	Dense Fog		0	0	0.00K	0.00K	
45	Pasco (Zone)	12/9/1999	6:00	Dense Fog		0	0	0.00K	0.00K	
46	Pasco (Zone)	1/18/2000	4:30	Dense Fog		0	0	0.00K	0.00K	
47	Pasco (Zone)	1/30/2000	4:00	Dense Fog		0	0	0.00K	0.00K	
48	Pasco (Zone)	2/15/2000	0:00	Dense Fog		0	0	0.00K	0.00K	
49	Pasco (Zone)	2/10/2001	5:00	Dense Fog		0	0	0.00K	0.00K	
50	Pasco (Zone)	2/11/2001	6:00	Dense Fog		0	0	0.00K	0.00K	
51	Pasco (Zone)	2/12/2001	6:00	Dense Fog		0	0	0.00K	0.00K	
52	Pasco (Zone)	2/13/2001	6:00	Dense Fog		0	0	0.00K	0.00K	
53	Pasco (Zone)	2/14/2001	3:00	Dense Fog		0	0	0.00K	0.00K	
54	Pasco (Zone)	2/16/2001	6:00	Dense Fog		0	0	0.00K	0.00K	
55	Pasco (Zone)	2/27/2001	7:00	Dense Fog		0	0	0.00K	0.00K	
56	Pasco (Zone)	12/9/2001	4:00	Dense Fog		0	0	0.00K	0.00K	
57	Pasco (Zone)	1/20/2002	2:00	Dense Fog		0	0	0.00K	0.00K	
58	Pasco (Zone)	1/21/2002	0:00	Dense Fog		0	0	0.00K	0.00K	
59	Pasco (Zone)	1/22/2002	0:00	Dense Fog		0	0	0.00K	0.00K	**57**
60	Pasco Co.	4/23/2001	15:30	Dust Devil		0	0	3.00K	0.00K	**1**
61	Pasco (Zone)	11/29/2002	1:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	
62	Pasco (Zone)	12/2/2002	4:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	
63	Pasco (Zone)	12/16/2002	3:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	
64	Pasco (Zone)	12/29/2002	3:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	
65	Pasco (Zone)	1/19/2003	2:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	
66	Pasco (Zone)	1/24/2003	1:00	Extreme Cold/wind Chill		0	0	0.00K	7.500M	
67	Pasco (Zone)	1/25/2003	1:00	Extreme Cold/wind Chill		0	0	0.00K	0.00K	**7**
68	Pasco Co.	9/27/1997	5:00	Flash Flood		0	0	200.00K	0.00K	
69	Pasco Co.	12/13/1997	13:00	Flash Flood		0	0	2.950M	500.00K	
70	Pasco Co.	3/19/1998	3:00	Flash Flood		0	0	1.500M	0.00K	
71	Pasco Co.	9/22/1998	12:00	Flash Flood		0	0	100.00K	0.00K	
72	Pasco Co.	9/14/2001	9:00	Flash Flood		0	0	150.00K	0.00K	
73	Pasco Co.	6/19/2003	8:40	Flash Flood		0	0	250.00K	0.00K	**6**
74	Pasco Co.	2/2/1996	23:00	Flood		0	0	0.00K	0.00K	
75	Pasco Co.	8/5/1996	17:30	Flood		0	0	0.00K	0.00K	
76	Pasco Co.	8/12/1996	11:55	Flood		0	0	15.00K	0.00K	
77	Pasco Co.	1/29/1997	21:25	Flood		0	0	75.00K	0.00K	
78	Pasco Co.	9/2/1997	17:00	Flood		0	0	30.00K	0.00K	
79	Pasco Co.	9/3/1997	17:30	Flood		0	0	30.00K	0.00K	

80	Pasco Co.	9/26/1997	17:30	Flood		0	0	20.00K	0.00K	
81	Pasco Co.	10/27/1997	12:00	Flood		0	0	2.00K	0.00K	
82	Pasco Co.	11/30/1997	8:00	Flood		0	0	100.00K	0.00K	
83	Pasco Co.	12/12/1997	8:00	Flood		0	0	10.00K	0.00K	
84	Pasco Co.	12/15/1997	8:00	Flood		0	0	1.100M	0.00K	
85	Pasco Co.	12/21/1997	8:00	Flood		0	0	200.00K	0.00K	
86	Pasco Co.	1/1/1998	0:00	Flood		0	0	10.00K	0.00K	
87	Pasco Co.	1/1/1998	0:00	Flood		0	0	500.00K	0.00K	
88	Pasco Co.	1/8/1998	4:30	Flood		0	0	200.00K	0.00K	
89	Pasco Co.	1/15/1998	12:45	Flood		0	0	20.00K	0.00K	
90	Pasco Co.	1/22/1998	8:00	Flood		0	0	0.00K	0.00K	
91	Pasco Co.	2/2/1998	21:00	Flood		0	0	10.00K	0.00K	
92	Pasco Co.	2/3/1998	8:00	Flood		0	0	5.00K	0.00K	
93	Pasco Co.	2/16/1998	10:00	Flood		0	0	40.00K	100.00K	
94	Pasco Co.	2/19/1998	22:45	Flood		0	0	30.00K	0.00K	
95	Pasco Co.	2/22/1998	8:00	Flood		0	0	500.00K	0.00K	
96	Pasco Co.	2/28/1998	10:00	Flood		0	0	40.00K	0.00K	
97	Pasco Co.	3/1/1998	0:00	Flood		0	0	10.00K	0.00K	
98	Pasco Co.	3/1/1998	0:00	Flood		0	0	750.00K	0.00K	
99	Pasco Co.	3/21/1998	20:00	Flood		0	0	300.00K	0.00K	
100	Pasco Co.	3/21/1998	20:00	Flood		0	0	450.00K	0.00K	
101	Pasco Co.	4/1/1998	0:00	Flood		0	0	100.00K	0.00K	
102	Pasco Co.	4/1/1998	0:00	Flood		0	0	2.00K	0.00K	
103	Pasco Co.	7/9/1998	1:30	Flood		0	0	25.00K	0.00K	
104	Pasco Co.	7/19/1998	16:00	Flood		0	0	10.00K	0.00K	
105	Pasco Co.	7/20/1998	18:00	Flood		0	0	10.00K	0.00K	
106	Pasco Co.	9/21/1998	8:00	Flood		0	0	5.00K	0.00K	
107	Pasco Co.	10/1/1998	0:00	Flood		0	0	1.00K	0.00K	
108	Pasco Co.	6/26/2000	14:00	Flood		0	0	0.00K	0.00K	
109	Pasco Co.	8/12/2000	11:00	Flood		0	0	100.00K	0.00K	
110	Pasco Co.	8/26/2000	16:00	Flood		0	0	25.00K	0.00K	
111	Pasco Co.	12/13/2002	8:00	Flood		0	0	0.00K	0.00K	
112	Pasco (Zone)	12/14/2002	3:00	Flood		0	0	0.00K	0.00K	
113	Pasco Co.	12/31/2002	19:00	Flood		0	0	0.00K	0.00K	
114	Pasco (Zone)	6/22/2003	13:30	Flood		0	0	0.00K	0.00K	
115	Pasco (Zone)	7/1/2003	0:00	Flood		0	0	0.00K	0.00K	
116	Pasco (Zone)	8/2/2003	16:54	Flood		0	0	150.00K	0.00K	
117	Pasco (Zone)	9/1/2003	0:00	Flood		0	0	0.00K	0.00K	
118	Pasco (Zone)	9/6/2004	12:00	Flood		0	0	0.00K	0.00K	**45**
119	Pasco (Zone)	1/9/1996	1:00	Frost/freeze		0	0	0.00K	0.00K	

120	Pasco (Zone)	2/5/1996	1:00	Frost/freeze		0	0	0.00K	0.00K	
121	Pasco (Zone)	2/17/1996	1:00	Frost/freeze		0	0	0.00K	20.00K	
122	Pasco (Zone)	1/19/1997	2:00	Frost/freeze		0	0	0.00K	0.00K	
123	Pasco (Zone)	1/5/1999	23:00	Frost/freeze		0	0	0.00K	0.00K	
124	Pasco Co.	12/2/1999	4:00	Frost/freeze		0	0	0.00K	0.00K	
125	Pasco (Zone)	1/27/2000	4:00	Frost/freeze		0	0	0.00K	0.00K	
126	Pasco (Zone)	2/6/2000	0:00	Frost/freeze		0	0	0.00K	0.00K	
127	Pasco (Zone)	11/22/2000	5:00	Frost/freeze		0	0	0.00K	0.00K	
128	Pasco (Zone)	12/20/2000	6:00	Frost/freeze		0	0	0.00K	0.00K	
129	Pasco (Zone)	12/20/2000	22:00	Frost/freeze		0	0	0.00K	0.00K	
130	Pasco (Zone)	12/31/2000	0:00	Frost/freeze		0	0	0.00K	0.00K	
131	Pasco (Zone)	12/31/2000	22:00	Frost/freeze		0	0	0.00K	0.00K	
132	Pasco (Zone)	1/1/2001	0:00	Frost/freeze		0	0	0.00K	0.00K	
133	Pasco (Zone)	1/1/2001	0:00	Frost/freeze		0	0	0.00K	0.00K	
134	Pasco (Zone)	1/3/2001	6:00	Frost/freeze		0	0	0.00K	0.00K	
135	Pasco (Zone)	1/4/2001	6:00	Frost/freeze		0	0	0.00K	0.00K	
136	Pasco (Zone)	1/5/2001	0:00	Frost/freeze		0	0	0.00K	0.00K	
137	Pasco (Zone)	1/7/2001	2:00	Frost/freeze		0	0	0.00K	0.00K	
138	Pasco (Zone)	1/10/2001	0:00	Frost/freeze		0	0	0.00K	0.00K	
139	Pasco (Zone)	1/21/2001	6:00	Frost/freeze		0	0	0.00K	0.00K	
140	Pasco (Zone)	1/24/2001	7:00	Frost/freeze		0	0	0.00K	0.00K	
141	Pasco (Zone)	1/4/2002	6:00	Frost/freeze		0	0	0.00K	0.00K	
142	Pasco (Zone)	1/4/2002	23:00	Frost/freeze		0	0	0.00K	0.00K	
143	Pasco (Zone)	1/8/2002	5:00	Frost/freeze		0	0	0.00K	0.00K	
144	Pasco (Zone)	1/9/2002	0:00	Frost/freeze		0	0	0.00K	0.00K	
145	Pasco (Zone)	2/28/2002	3:00	Frost/freeze		0	0	0.00K	0.00K	
146	Pasco (Zone)	1/8/2003	4:00	Frost/freeze		0	0	0.00K	0.00K	
147	Pasco (Zone)	1/18/2003	1:00	Frost/freeze		0	0	0.00K	0.00K	
148	Pasco (Zone)	4/1/2003	0:00	Frost/freeze		0	0	0.00K	0.00K	
149	Pasco (Zone)	12/15/2004	1:00	Frost/freeze		0	0	0.00K	0.00K	
150	Pasco (Zone)	12/20/2004	22:00	Frost/freeze		0	0	0.00K	0.00K	
151	Pasco (Zone)	12/27/2004	4:00	Frost/freeze		0	0	0.00K	0.00K	
152	Pasco (Zone)	1/23/2005	22:00	Frost/freeze		0	0	0.00K	0.00K	
153	Pasco (Zone)	1/3/2008	0:00	Frost/freeze		0	0	0.00K	0.00K	
154	Pasco (Zone)	1/21/2009	23:00	Frost/freeze		0	0	0.00K	0.00K	
155	Pasco (Zone)	1/23/2009	6:00	Frost/freeze		0	0	0.00K	0.00K	
156	Pasco (Zone)	2/5/2009	0:00	Frost/freeze		0	0	0.00K	0.00K	
157	Pasco (Zone)	2/6/2009	0:00	Frost/freeze		0	0	0.00K	0.00K	**39**
158	Pasco Co.	3/27/2003	15:07	Funnel Cloud		0	0	0.00K	0.00K	**1**
159	Pasco Co.	3/17/1960	6:15	Hail	0.75 in.	0	0	0.00K	0.00K	

160	Pasco Co.	5/5/1962	14:15	Hail	0.75 in.	0	0	0.00K	0.00K
161	Pasco Co.	6/16/1966	14:45	Hail	1.75 in.	0	0	0.00K	0.00K
162	Pasco Co.	9/3/1967	13:53	Hail	0.75 in.	0	0	0.00K	0.00K
163	Pasco Co.	6/14/1968	13:45	Hail	2.00 in.	0	0	0.00K	0.00K
164	Pasco Co.	6/20/1971	13:15	Hail	1.00 in.	0	0	0.00K	0.00K
165	Pasco Co.	6/11/1972	15:11	Hail	1.00 in.	0	0	0.00K	0.00K
166	Pasco Co.	7/15/1977	15:50	Hail	0.75 in.	0	0	0.00K	0.00K
167	Pasco Co.	8/8/1977	11:30	Hail	1.00 in.	0	0	0.00K	0.00K
168	Pasco Co.	6/1/1981	13:30	Hail	0.75 in.	0	0	0.00K	0.00K
169	Pasco Co.	9/21/1981	15:00	Hail	1.75 in.	0	0	0.00K	0.00K
170	Pasco Co.	1/21/1983	7:55	Hail	1.75 in.	0	0	0.00K	0.00K
171	Pasco Co.	3/24/1983	3:30	Hail	1.00 in.	0	0	0.00K	0.00K
172	Pasco Co.	9/12/1983	11:45	Hail	1.00 in.	0	0	0.00K	0.00K
173	Pasco Co.	7/7/1990	15:50	Hail	0.75 in.	0	0	0.00K	0.00K
174	Pasco Co.	7/23/1992	16:35	Hail	0.75 in.	0	0	0.00K	0.00K
175	Pasco Co.	8/7/1992	15:23	Hail	1.00 in.	0	0	0.00K	0.00K
176	Pasco Co.	3/24/1993	11:38	Hail	0.75 in.	0	0	0.00K	0.00K
177	Pasco Co.	3/31/1993	19:15	Hail	0.75 in.	0	0	0.00K	0.00K
178	Pasco Co.	4/15/1993	15:42	Hail	1.00 in.	0	0	0.00K	0.00K
179	Pasco Co.	9/5/1993	15:20	Hail	0.75 in.	0	0	0.00K	0.00K
180	Pasco Co.	7/11/1994	19:15	Hail	1.75 in.	0	0	0.00K	0.00K
181	Pasco Co.	3/18/1995	12:10	Hail	0.75 in.	0	0	0.00K	0.00K
182	Pasco Co.	5/12/1995	3:45	Hail	1.75 in.	0	0	0.00K	0.00K
183	Pasco Co.	5/12/1995	4:15	Hail	1.75 in.	0	0	0.00K	0.00K
184	Pasco Co.	6/10/1995	17:05	Hail	1.00 in.	0	0	0.00K	0.00K
185	Pasco Co.	7/15/1995	19:15	Hail	0.00 in.	0	0	0.00K	0.00K
186	Pasco Co.	7/15/1995	19:15	Hail	0.75 in.	0	0	0.00K	0.00K
187	Pasco Co.	3/30/1996	14:45	Hail	0.75 in.	0	0	0.00K	0.00K
188	Pasco Co.	6/18/1996	22:35	Hail	0.75 in.	0	0	0.00K	0.00K
189	Pasco Co.	8/6/1996	17:15	Hail	0.75 in.	0	0	0.00K	0.00K
190	Pasco Co.	9/9/1996	15:30	Hail	1.75 in.	0	0	5.00K	0.00K
191	Pasco Co.	1/29/1997	21:10	Hail	0.75 in.	0	0	0.00K	0.00K
192	Pasco Co.	4/23/1997	10:14	Hail	0.75 in.	0	0	0.00K	0.00K
193	Pasco Co.	6/25/1997	16:59	Hail	1.75 in.	0	0	0.00K	0.00K
194	Pasco Co.	7/16/1997	16:10	Hail	0.75 in.	0	0	0.00K	0.00K
195	Pasco Co.	8/16/1997	19:15	Hail	0.75 in.	0	0	0.00K	0.00K
196	Pasco Co.	2/28/1998	9:30	Hail	0.75 in.	0	0	0.00K	0.00K
197	Pasco Co.	2/28/1998	9:39	Hail	0.88 in.	0	0	0.00K	0.00K
198	Pasco Co.	2/28/1998	20:53	Hail	0.75 in.	0	0	0.00K	0.00K
199	Pasco Co.	2/28/1998	21:13	Hail	0.75 in.	0	0	0.00K	0.00K

200	Pasco Co.	2/28/1998	20:40	Hail	3.00 in.	0	0	150.00K	0.00K
201	Pasco Co.	6/27/1998	12:13	Hail	1.00 in.	0	0	0.00K	0.00K
202	Pasco Co.	6/27/1998	15:55	Hail	0.88 in.	0	0	0.00K	0.00K
203	Pasco Co.	5/10/1999	14:00	Hail	0.75 in.	0	0	0.00K	0.00K
204	Pasco Co.	6/5/1999	13:28	Hail	0.75 in.	0	0	0.00K	0.00K
205	Pasco Co.	6/5/1999	14:10	Hail	0.75 in.	0	0	0.00K	0.00K
206	Pasco Co.	5/9/2000	16:11	Hail	1.00 in.	0	0	0.00K	0.00K
207	Pasco Co.	6/17/2000	16:10	Hail	0.75 in.	0	0	0.00K	0.00K
208	Pasco Co.	8/6/2000	16:10	Hail	0.88 in.	0	0	0.00K	0.00K
209	Pasco Co.	3/29/2001	10:53	Hail	1.00 in.	0	0	0.00K	0.00K
210	Pasco Co.	3/29/2001	11:05	Hail	0.88 in.	0	0	0.00K	0.00K
211	Pasco Co.	3/29/2001	10:12	Hail	1.75 in.	0	0	50.00K	0.00K
212	Pasco Co.	6/4/2001	17:22	Hail	0.88 in.	0	0	0.00K	0.00K
213	Pasco Co.	6/14/2001	16:20	Hail	0.75 in.	0	0	0.00K	0.00K
214	Pasco Co.	6/15/2001	14:50	Hail	1.00 in.	0	0	0.00K	0.00K
215	Pasco Co.	6/18/2001	15:53	Hail	0.75 in.	0	0	0.00K	0.00K
216	Pasco Co.	6/21/2001	16:39	Hail	0.75 in.	0	0	0.00K	0.00K
217	Pasco Co.	7/1/2001	17:05	Hail	0.88 in.	0	0	0.00K	0.00K
218	Pasco Co.	5/31/2002	17:04	Hail	1.00 in.	0	0	0.00K	0.00K
219	Pasco Co.	7/29/2002	17:35	Hail	1.00 in.	0	0	0.00K	0.00K
220	Pasco Co.	7/29/2002	17:45	Hail	0.88 in.	0	0	0.00K	0.00K
221	Pasco Co.	3/27/2003	14:21	Hail	1.00 in.	0	0	0.00K	0.00K
222	Pasco Co.	3/27/2003	15:03	Hail	0.75 in.	0	0	0.00K	0.00K
223	Pasco Co.	3/27/2003	13:30	Hail	1.75 in.	0	0	50.00K	0.00K
224	Pasco Co.	7/28/2003	14:28	Hail	0.75 in.	0	0	0.00K	0.00K
225	Pasco Co.	9/25/2003	12:57	Hail	0.88 in.	0	0	0.00K	0.00K
226	Pasco Co.	6/9/2004	18:02	Hail	0.75 in.	0	0	0.00K	0.00K
227	Pasco Co.	6/13/2004	17:50	Hail	1.00 in.	0	0	0.00K	0.00K
228	Pasco Co.	5/4/2005	7:50	Hail	1.00 in.	0	0	0.00K	0.00K
229	Pasco Co.	5/28/2006	14:38	Hail	0.75 in.	0	0	0.00K	0.00K
230	Pasco Co.	7/27/2006	15:22	Hail	0.88 in.	0	0	0.00K	0.00K
231	Pasco Co.	8/4/2006	14:06	Hail	1.00 in.	0	0	0.00K	0.00K
232	Pasco Co.	8/4/2006	14:10	Hail	0.88 in.	0	0	0.00K	0.00K
233	Pasco Co.	4/11/2007	20:10	Hail	0.75 in.	0	0	0.00K	0.00K
234	Pasco Co.	4/15/2007	8:30	Hail	0.88 in.	0	0	0.00K	0.00K
235	Pasco Co.	5/5/2007	14:42	Hail	1.00 in.	0	0	0.00K	0.00K
236	Pasco Co.	6/8/2007	14:28	Hail	0.75 in.	0	0	0.00K	0.00K
237	Pasco Co.	7/2/2007	14:00	Hail	0.88 in.	0	0	0.00K	0.00K
238	Pasco Co.	2/26/2008	16:35	Hail	0.88 in.	0	0	0.00K	0.00K
239	Pasco Co.	6/6/2008	17:40	Hail	0.75 in.	0	0	0.00K	0.00K

240	Pasco Co.	6/20/2008	14:59	Hail	0.88 in.	0	0	0.00K	0.00K	
241	Pasco Co.	6/30/2008	14:25	Hail	0.75 in.	0	0	0.00K	0.00K	
242	Pasco Co.	7/1/2008	13:25	Hail	0.88 in.	0	0	0.00K	0.00K	
243	Pasco Co.	7/6/2008	18:26	Hail	0.75 in.	0	0	0.00K	0.00K	
244	Pasco Co.	5/14/2009	14:34	Hail	0.75 in.	0	0	0.00K	0.00K	
245	Pasco Co.	5/14/2009	14:34	Hail	1.00 in.	0	0	0.00K	0.00K	**86**
246	Pasco Co.	6/11/1997	16:50	Heavy Rain		0	0	0.00K	0.00K	
247	Pasco Co.	6/24/1997	14:30	Heavy Rain		0	0	0.00K	0.00K	
248	Pasco Co.	8/12/2000	14:42	Heavy Rain		0	0	0.00K	0.00K	
249	Pasco Co.	2/25/2004	8:00	Heavy Rain		0	0	0.00K	0.00K	
250	Pasco Co.	9/4/2004	6:00	Heavy Rain		0	0	0.00K	0.00K	
251	Pasco Co.	6/22/2005	13:00	Heavy Rain	4	0	0	0.00K	0.00K	
252	Pasco Co.	6/1/2007	12:00	Heavy Rain		0	0	0.00K	0.00K	
253	Pasco Co.	7/12/2008	22:00	Heavy Rain		0	0	0.00K	0.00K	
254	Pasco Co.	7/12/2008	22:15	Heavy Rain		0	0	0.00K	0.00K	
255	Pasco Co.	7/12/2008	22:15	Heavy Rain		0	0	0.00K	0.00K	
256	Pasco Co.	7/12/2008	22:30	Heavy Rain		0	0	0.00K	0.00K	
257	Pasco Co.	7/12/2008	22:30	Heavy Rain		0	0	0.00K	0.00K	
258	Pasco Co.	7/12/2008	22:30	Heavy Rain		0	0	0.00K	0.00K	
259	Pasco Co.	7/16/2008	15:00	Heavy Rain		0	0	0.00K	0.00K	**14**
260	Pasco (Zone)	12/26/2004	4:12	High Surf		0	0	0.00K	0.00K	**1**
261	Pasco (Zone)	9/2/1998	12:00	Hurricane (typhoon)		0	0	0.00K	0.00K	
262	Pasco (Zone)	9/25/1998	0:00	Hurricane (typhoon)		0	0	0.00K	0.00K	
263	Pasco (Zone)	9/17/2000	5:00	Hurricane (typhoon)		0	0	250.00K	0.00K	**3**
264	Pasco Co.	6/27/1996	16:50	Lightning		0	1	0.00K	0.00K	
265	Pasco Co.	8/6/1996	16:59	Lightning		0	1	0.00K	0.00K	
266	Pasco Co.	8/11/1997	17:30	Lightning		0	3	0.50K	0.00K	
267	Pasco Co.	6/24/1998	18:30	Lightning		0	0	0.00K	0.00K	
268	Pasco Co.	6/29/1998	16:00	Lightning		1	0	0.00K	0.00K	
269	Pasco Co.	7/6/1998	14:15	Lightning		0	0	0.00K	0.00K	
270	Pasco Co.	5/21/1999	20:00	Lightning		0	0	150.00K	0.00K	
271	Pasco Co.	6/4/1999	13:45	Lightning		0	0	1.00K	0.00K	
272	Pasco Co.	7/26/2001	16:30	Lightning		1	3	0.00K	0.00K	
273	Pasco Co.	5/31/2002	16:40	Lightning		0	0	0.00K	10.00K	
274	Pasco Co.	6/19/2003	12:15	Lightning		0	0	25.00K	0.00K	
275	Pasco Co.	6/29/2004	17:30	Lightning		0	0	8.00K	0.00K	
276	Pasco Co.	7/6/2004	13:30	Lightning		0	1	0.00K	0.00K	
277	Pasco Co.	5/4/2005	8:00	Lightning		0	1	0.00K	0.00K	
278	Pasco Co.	8/17/2006	15:19	Lightning		1	0	0.00K	0.00K	
279	Pasco Co.	8/24/2006	13:30	Lightning		0	4	0.00K	0.00K	**16**

280	Pasco Co.	1/2/1998	21:00	Storm Surge/tide		0	0	1.800M	0.00K	
281	Pasco Co.	1/2/1999	21:00	Storm Surge/tide		0	0	1.800M	0.00K	
282	Pasco (Zone)	9/6/2004	2:00	Storm Surge/tide		0	0	0.00K	0.00K	
283	Pasco (Zone)	9/26/2004	17:00	Storm Surge/tide		0	0	0.00K	0.00K	
284	Pasco (Zone)	7/10/2005	7:30	Storm Surge/tide		0	0	0.00K	0.00K	
285	Pasco (Zone)	8/28/2005	19:00	Storm Surge/tide		0	0	0.00K	0.00K	**6**
286	Pasco (Zone)	3/10/2004	0:45	Strong Wind	43 kts. EG	0	0	25.00K	0.00K	
287	Pasco (Zone)	12/26/2004	4:00	Strong Wind	46 kts. MG	0	0	20.00K	0.00K	**2**
288	Pasco Co.	6/10/1956	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
289	Pasco Co.	6/4/1960	11:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
290	Pasco Co.	7/26/1961	16:45	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K	
291	Pasco Co.	4/28/1966	16:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
292	Pasco Co.	6/16/1966	14:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
293	Pasco Co.	1/23/1968	21:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
294	Pasco Co.	6/14/1968	14:03	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
295	Pasco Co.	6/11/1972	15:11	Thunderstorm Wind	69 kts.	0	0	0.00K	0.00K	
296	Pasco Co.	3/23/1974	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
297	Pasco Co.	8/15/1974	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
298	Pasco Co.	9/8/1974	13:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
299	Pasco Co.	5/14/1976	15:10	Thunderstorm Wind	65 kts.	0	0	0.00K	0.00K	
300	Pasco Co.	7/22/1976	11:55	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
301	Pasco Co.	6/3/1977	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
302	Pasco Co.	9/17/1977	17:55	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K	
303	Pasco Co.	1/25/1978	20:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
304	Pasco Co.	5/4/1978	10:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
305	Pasco Co.	7/31/1980	12:14	Thunderstorm Wind	51 kts.	0	0	0.00K	0.00K	
306	Pasco Co.	3/18/1981	23:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
307	Pasco Co.	6/1/1981	13:10	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
308	Pasco Co.	6/3/1981	17:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
309	Pasco Co.	1/14/1982	4:30	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K	
310	Pasco Co.	8/20/1982	16:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
311	Pasco Co.	2/2/1983	7:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
312	Pasco Co.	11/20/1983	10:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
313	Pasco Co.	2/27/1984	12:00	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K	
314	Pasco Co.	5/5/1984	14:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
315	Pasco Co.	8/21/1984	8:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
316	Pasco Co.	4/6/1985	10:50	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
317	Pasco Co.	10/1/1985	17:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
318	Pasco Co.	10/31/1985	9:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	
319	Pasco Co.	1/10/1986	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K	

320	Pasco Co.	3/15/1986	7:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
321	Pasco Co.	7/6/1987	16:15	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
322	Pasco Co.	8/11/1987	9:00	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
323	Pasco Co.	5/24/1988	21:30	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
324	Pasco Co.	6/6/1988	13:16	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
325	Pasco Co.	8/29/1988	15:00	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
326	Pasco Co.	5/1/1989	4:50	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
327	Pasco Co.	5/1/1989	15:00	Thunderstorm Wind	50 kts.	0	2	0.00K	0.00K
328	Pasco Co.	6/16/1989	17:00	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
329	Pasco Co.	7/12/1989	13:15	Thunderstorm Wind	70 kts.	0	0	0.00K	0.00K
330	Pasco Co.	7/22/1989	14:45	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
331	Pasco Co.	3/17/1990	14:00	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
332	Pasco Co.	5/27/1990	15:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
333	Pasco Co.	7/11/1990	17:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
334	Pasco Co.	1/19/1991	21:25	Thunderstorm Wind	0 kts.	0	4	0.00K	0.00K
335	Pasco Co.	3/3/1991	8:34	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
336	Pasco Co.	3/3/1991	9:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
337	Pasco Co.	3/3/1991	9:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
338	Pasco Co.	4/23/1991	18:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
339	Pasco Co.	5/16/1991	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
340	Pasco Co.	5/16/1991	16:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
341	Pasco Co.	6/22/1991	15:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
342	Pasco Co.	7/17/1991	18:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
343	Pasco Co.	7/19/1991	18:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
344	Pasco Co.	7/19/1991	18:20	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
345	Pasco Co.	7/20/1991	13:57	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
346	Pasco Co.	2/5/1992	3:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
347	Pasco Co.	2/5/1992	4:00	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
348	Pasco Co.	6/7/1992	15:08	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
349	Pasco Co.	7/12/1992	10:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
350	Pasco Co.	7/15/1992	17:22	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
351	Pasco Co.	9/3/1992	14:45	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
352	Pasco Co.	9/7/1992	14:30	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
353	Pasco Co.	10/3/1992	10:10	Thunderstorm Wind	58 kts.	0	0	0.00K	0.00K
354	Pasco Co.	10/3/1992	10:48	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
355	Pasco Co.	11/5/1992	10:02	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
356	Pasco Co.	11/5/1992	12:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
357	Pasco Co.	12/10/1992	5:05	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
358	Pasco Co.	12/10/1992	6:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
359	Pasco Co.	3/3/1993	22:35	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K

360	Pasco Co.	3/13/1993	0:35	Thunderstorm Wind	0 kts.	0	0	50.00K	0.00K
361	Pasco Co.	3/31/1993	18:45	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
362	Pasco Co.	8/5/1993	17:30	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
363	Pasco Co.	8/5/1993	18:21	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
364	Pasco Co.	6/29/1994	19:08	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
365	Pasco Co.	7/11/1994	19:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
366	Pasco Co.	7/28/1994	10:28	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
367	Pasco Co.	8/3/1994	16:10	Thunderstorm Wind	0 kts.	0	0	0.50K	0.00K
368	Pasco Co.	3/31/1995	18:50	Thunderstorm Wind	0 kts.	0	0	3.00K	0.00K
369	Pasco Co.	7/15/1995	19:15	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
370	Pasco Co.	7/15/1995	19:20	Thunderstorm Wind	0 kts.	0	0	5.00K	0.00K
371	Pasco Co.	7/27/1995	16:19	Thunderstorm Wind	40 kts.	0	0	2.00K	0.00K
372	Pasco Co.	11/8/1995	4:15	Thunderstorm Wind	43 kts.	0	0	10.00K	0.00K
373	Pasco Co.	11/8/1995	4:10	Thunderstorm Wind	43 kts.	0	0	7.00K	0.00K
374	Pasco Co.	6/24/1996	11:49	Thunderstorm Wind	49 kts.	0	0	0.00K	0.00K
375	Pasco Co.	1/9/1997	13:37	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
376	Pasco Co.	1/29/1997	21:25	Thunderstorm Wind	52 kts.	0	0	40.00K	0.00K
377	Pasco Co.	4/23/1997	10:11	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
378	Pasco Co.	6/24/1997	16:15	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
379	Pasco Co.	1/8/1998	5:30	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
380	Pasco Co.	2/2/1998	19:46	Thunderstorm Wind	56 kts.	0	0	25.00K	0.00K
381	Pasco Co.	3/8/1998	23:10	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
382	Pasco Co.	7/18/1999	18:10	Thunderstorm Wind	60 kts.	0	0	0.00K	0.00K
383	Pasco Co.	6/18/2000	18:40	Thunderstorm Wind	52 kts. E	0	0	10.00K	0.00K
384	Pasco Co.	5/31/2002	16:43	Thunderstorm Wind	50 kts. M	0	0	10.00K	0.00K
385	Pasco Co.	7/29/2002	17:40	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
386	Pasco Co.	3/27/2003	16:40	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
387	Pasco Co.	5/14/2003	16:15	Thunderstorm Wind	50 kts. EG	0	0	3.00K	0.00K
388	Pasco Co.	6/23/2003	15:25	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
389	Pasco Co.	7/8/2003	18:15	Thunderstorm Wind	58 kts. EG	0	0	40.00K	0.00K
390	Pasco Co.	6/8/2004	17:03	Thunderstorm Wind	50 kts. EG	0	0	50.00K	0.00K
391	Pasco Co.	8/3/2006	15:15	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
392	Pasco Co.	12/25/2006	11:20	Thunderstorm Wind	60 kts. EG	0	0	30.00K	0.00K
393	Pasco Co.	4/11/2007	20:45	Thunderstorm Wind	55 kts. EG	0	1	25.00K	0.00K
394	Pasco Co.	4/15/2007	8:30	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
395	Pasco Co.	6/8/2007	14:28	Thunderstorm Wind	56 kts. EG	0	0	0.00K	0.00K
396	Pasco Co.	6/9/2007	17:50	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
397	Pasco Co.	8/14/2007	22:12	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
398	Pasco Co.	9/20/2007	16:58	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K
399	Pasco Co.	12/16/2007	4:52	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K

400	Pasco Co.	1/19/2008	17:20	Thunderstorm Wind	54 kts. EG	0	0	0.00K	0.00K	
401	Pasco Co.	1/19/2008	17:25	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K	
402	Pasco Co.	1/19/2008	17:23	Thunderstorm Wind	63 kts. EG	0	0	5.00K	0.00K	
403	Pasco Co.	1/19/2008	17:25	Thunderstorm Wind	60 kts. EG	0	0	5.00K	0.00K	
404	Pasco Co.	2/26/2008	16:45	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K	
405	Pasco Co.	6/30/2008	17:10	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K	
406	Pasco Co.	4/14/2009	8:06	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K	**119**
407	Pasco Co.	4/2/1959	2:00	Tornado	F2	0	12	250.00K	0.00K	
408	Pasco Co.	6/30/1964	14:00	Tornado	F1	0	0	2.50K	0.00K	
409	Pasco Co.	11/9/1968	12:45	Tornado	F2	0	4	2.500M	0.00K	
410	Pasco Co.	3/3/1971	13:31	Tornado	F1	0	0	2.50K	0.00K	
411	Pasco Co.	6/18/1972	15:40	Tornado	F1	0	4	25.00K	0.00K	
412	Pasco Co.	1/28/1973	10:35	Tornado	F1	0	1	25.00K	0.00K	
413	Pasco Co.	3/17/1973	2:45	Tornado	F2	0	1	25.00K	0.00K	
414	Pasco Co.	4/3/1973	0:45	Tornado	F1	0	0	25.00K	0.00K	
415	Pasco Co.	6/15/1973	14:56	Tornado	F0	0	0	2.50K	0.00K	
416	Pasco Co.	2/19/1974	17:30	Tornado	F1	0	0	2.500M	0.00K	
417	Pasco Co.	5/16/1974	15:18	Tornado	F1	0	0	25.00K	0.00K	
418	Pasco Co.	5/27/1974	8:10	Tornado	F0	0	0	2.50K	0.00K	
419	Pasco Co.	5/27/1974	17:35	Tornado	F0	0	0	2.50K	0.00K	
420	Pasco Co.	2/12/1975	16:05	Tornado	F1	0	0	25.00K	0.00K	
421	Pasco Co.	9/11/1975	15:00	Tornado	F0	0	0	2.50K	0.00K	
422	Pasco Co.	6/27/1976	17:50	Tornado	F0	0	0	0.00K	0.00K	
423	Pasco Co.	7/1/1976	14:35	Tornado	F0	0	0	2.50K	0.00K	
424	Pasco Co.	9/30/1976	15:40	Tornado	F0	0	0	2.50K	0.00K	
425	Pasco Co.	6/16/1977	19:50	Tornado	F0	0	0	2.50K	0.00K	
426	Pasco Co.	7/7/1977	15:15	Tornado	F0	0	0	2.50K	0.00K	
427	Pasco Co.	5/4/1978	9:45	Tornado	F0	0	0	2.50K	0.00K	
428	Pasco Co.	5/13/1978	4:45	Tornado	F0	0	0	2.50K	0.00K	
429	Pasco Co.	7/12/1978	13:30	Tornado	F0	0	0	0.00K	0.00K	
430	Pasco Co.	7/26/1978	13:10	Tornado	F0	0	0	0.25K	0.00K	
431	Pasco Co.	7/26/1978	13:30	Tornado	F0	0	0	0.25K	0.00K	
432	Pasco Co.	12/1/1978	0:01	Tornado	F2	0	0	250.00K	0.00K	
433	Pasco Co.	12/1/1978	0:30	Tornado	F2	0	0	250.00K	0.00K	
434	Pasco Co.	12/5/1978	4:14	Tornado	F1	0	2	25.00K	0.00K	
435	Pasco Co.	3/23/1979	12:28	Tornado	F1	0	6	250.00K	0.00K	
436	Pasco Co.	5/8/1979	4:30	Tornado	F0	0	1	25.00K	0.00K	
437	Pasco Co.	5/8/1979	11:00	Tornado	F0	0	0	25.00K	0.00K	
438	Pasco Co.	5/24/1979	12:30	Tornado	F1	0	0	250.00K	0.00K	
439	Pasco Co.	8/23/1979	15:15	Tornado	F0	0	0	0.00K	0.00K	

440	Pasco Co.	6/17/1981	18:15	Tornado	F1	0	0	250.00K	0.00K
441	Pasco Co.	7/25/1983	14:40	Tornado	F1	0	0	25.00K	0.00K
442	Pasco Co.	8/31/1985	1:30	Tornado	F1	0	0	250.00K	0.00K
443	Pasco Co.	2/8/1986	7:35	Tornado	F0	0	0	2.50K	0.00K
444	Pasco Co.	5/14/1986	14:17	Tornado	F0	0	0	2.50K	0.00K
445	Pasco Co.	1/22/1987	5:35	Tornado	F0	0	0	25.00K	0.00K
446	Pasco Co.	1/22/1987	6:10	Tornado	F0	0	0	25.00K	0.00K
447	Pasco Co.	3/29/1987	10:30	Tornado	F0	0	0	0.00K	0.00K
448	Pasco Co.	5/7/1987	17:00	Tornado	F0	0	0	2.50K	0.00K
449	Pasco Co.	6/5/1988	18:30	Tornado	F0	0	2	2.50K	0.00K
450	Pasco Co.	5/30/1989	14:55	Tornado	F0	0	0	25.00K	0.00K
451	Pasco Co.	6/6/1989	10:30	Tornado	F1	0	0	250.00K	0.00K
452	Pasco Co.	7/14/1990	8:20	Tornado	F0	0	0	250.00K	0.00K
453	Pasco Co.	7/25/1990	9:00	Tornado	F0	0	0	0.00K	0.00K
454	Pasco Co.	7/25/1990	9:00	Tornado	F0	0	0	0.00K	0.00K
455	Pasco Co.	5/18/1991	16:45	Tornado	F0	0	0	25.00K	0.00K
456	Pasco Co.	7/11/1991	10:15	Tornado	F0	0	0	25.00K	0.00K
457	Pasco Co.	10/3/1992	9:32	Tornado	F0	0	0	2.50K	0.00K
458	Pasco Co.	3/3/1993	22:00	Tornado	F1	0	0	50.00K	0.00K
459	Pasco Co.	3/13/1993	0:04	Tornado	F0	0	11	0.00K	0.00K
460	Pasco Co.	8/1/1994	17:54	Tornado	F0	0	0	5.00K	0.00K
461	Pasco Co.	3/8/1995	7:10	Tornado	F0	0	0	120.00K	0.00K
462	Pasco Co.	8/24/1995	11:47	Tornado	F0	0	0	0.00K	0.00K
463	Pasco Co.	8/31/1995	15:15	Tornado	F0	0	0	10.00K	0.00K
464	Pasco Co.	9/22/1996	9:00	Tornado	F0	0	0	10.00K	0.00K
465	Pasco Co.	10/7/1996	12:15	Tornado	F0	0	0	3.00K	0.00K
466	Pasco Co.	2/2/1998	19:45	Tornado	F0	0	0	5.00K	0.00K
467	Pasco Co.	9/2/1998	14:23	Tornado	F0	0	0	0.00K	0.00K
468	Pasco Co.	9/25/1998	11:32	Tornado	F0	0	0	1.00K	0.00K
469	Pasco Co.	7/15/2000	10:33	Tornado	F0	0	0	0.00K	0.00K
470	Pasco Co.	7/15/2000	10:26	Tornado	F0	0	0	2.00K	0.00K
471	Pasco Co.	7/28/2000	19:38	Tornado	F0	0	0	0.00K	0.00K
472	Pasco Co.	3/4/2001	8:03	Tornado	F0	0	0	250.00K	0.00K
473	Pasco Co.	3/29/2001	10:45	Tornado	F0	0	0	150.00K	0.00K
474	Pasco Co.	6/21/2001	16:25	Tornado	F0	0	0	100.00K	0.00K
475	Pasco Co.	6/29/2003	17:52	Tornado	F0	0	0	40.00K	0.00K
476	Pasco Co.	8/14/2004	13:10	Tornado	F0	0	0	0.00K	0.00K
477	Pasco Co.	9/6/2004	21:00	Tornado	F0	0	0	0.00K	0.00K
478	Pasco Co.	5/31/2005	22:38	Tornado	F1	0	0	80.00K	0.00K
479	Pasco Co.	7/20/2006	16:58	Tornado	F0	0	0	0.00K	0.00K

480	Pasco Co.	12/25/2006	11:20	Tornado	F2	0	2	3.500M	0.00K	
481	Pasco Co.	12/16/2007	5:20	Tornado	EF1	0	0	1.000M	0.00K	
482	Pasco Co.	4/14/2009	7:29	Tornado	EF1	0	0	240.00K	0.00K	
483	Pasco Co.	4/14/2009	8:00	Tornado	EF0	0	0	30.00K	0.00K	**77**
484	Pasco (Zone)	10/7/1996	8:00	Tropical Storm	37	0	0	3.270M	0.00K	
485	Pasco (Zone)	9/20/1999	21:00	Tropical Storm		0	0	0.00K	0.00K	
486	Pasco (Zone)	9/14/2001	7:00	Tropical Storm		0	0	100.00K	0.00K	
487	Pasco (Zone)	9/5/2004	8:00	Tropical Storm		0	0	31.200M	0.00K	
488	Pasco (Zone)	9/26/2004	1:00	Tropical Storm		0	0	21.200M	0.00K	
489	Pasco (Zone)	10/24/2005	7:00	Tropical Storm		0	0	34.00K	0.00K	
490	Pasco (Zone)	6/13/2006	0:30	Tropical Storm		0	0	0.00K	0.00K	**7**
491	Pasco Co.	8/8/1996	15:05	Waterspout		0	0	0.00K	0.00K	
492	Pasco Co.	9/30/1997	12:32	Waterspout		0	0	0.00K	0.00K	
493	Pasco Co.	10/18/1997	13:15	Waterspout		0	0	0.00K	0.00K	
494	Pasco Co.	10/18/1997	13:24	Waterspout		0	0	0.00K	0.00K	
495	Pasco Co.	3/27/2000	16:10	Waterspout		0	0	0.00K	0.00K	
496	Pasco Co.	7/5/2001	9:52	Waterspout		0	0	0.00K	0.00K	**6**
497	Pasco (Zone)	5/23/2001	16:00	Wildfire		0	0	0.00K	0.00K	
498	Pasco (Zone)	5/24/2001	5:00	Wildfire		0	0	0.00K	0.00K	
499	Pasco (Zone)	5/26/2001	8:00	Wildfire		0	0	0.00K	0.00K	**3**
500	Pasco (Zone)	1/8/1996	5:10	Winter Weather		0	0	0.00K	0.00K	**1**
						3	67	0	0	**500**

APPENDIX G

Community HazMat Reports:

Annual Report of Inspections Sent to Regional Emergency Planning Council

Documentation that State-Required Site Visit was Conducted at Industries Handling Hazardous Materials

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

Dade City	(352) 521-5137	**Office of Emergency Management**
Land O'Lakes	(813) 996-2411	Emergency Operations Center
New Port Richey	**(727) 847-8137**	8744 Government Dr, Bldg A
Facsimile	(727) 847-8004	New Port Richey, FL 34654-5598

Mr. John Meyer
Tampa Bay Local Emergency Planning Counsel
4000 Gateway Centre Blvd
Pinellas Park, FL 33782

Dear Mr. Meyer,

Good morning. I have completed the 2012 Extremely Hazardous Substances (EHS) Hazard Analysis surveys for Pasco County. I have submitted a copy to the State of Florida Division of Emergency Management in Tallahassee. I have currently burned a CD of this year's records and will be sending it to you in the mail so you will have a copy for your records.

Please feel free to call my office with any question or comments that you may have.

Coordinator

Letter sent to Regional Emergency Planning Council after surveying community businesses and other sites dealing with hazardous materials.

DocumentationAfter State-Required Site Visit Conducted at Industries Handling Hazardous Materials

Attachment F

FLORIDA STATE EMERGENCY RESPONSE COMMISSION FOR HAZARDOUS MATERIALS

HAZARDS ANALYSIS SITE VISIT CERTIFICATION FORM

VERIZON AIRPORT RSU - FL5322B02
Facility Name (Please print)

COUNTY ROAD 54 NEWPORT RICHEY 34652
Street Address, City & Zip Code (Please print)

PASCO
County (Please print)

Name of Facility Representative (Please print)

Facility Representative Signature — Site Visit Date

RICK CARAVONA
Site Visit Performed by (Please print)

Signature — Site Visit Date

The individuals signing above certify that a hazards analysis site visit was conducted on the above date.

Notes:

☐ Check if facility representative was informed about using E-Plan (https://erplan.net/eplan/login.htm) for EPCRA on-line filing

23

Documentation Provided to Company Employees Explaining Emergency Procedures and Protocol for Handling Hazardous Materials

Distributed Following Visit from Pasco County Emergency Management Inspector

#706
Wal-Mart
7631 Gall Blvd
Zephyrhills, FL 33541
813-782-1957

Subject: Store #706, Zephyrhills, FL

Dear Sir/Madam:

In accordance with the federal and state hazardous waste regulations, Wal-Mart is required to notify you of our facility's hazardous waste activities. Wal-Mart is required to give local police, fire departments, hospitals, and state or local emergency response teams a layout of the facility, so they may become familiar with entrances to roads inside the facility, and possible evacuation routes. A copy of the facility layout is enclosed for your review and should be kept on file at your organization.

Wal-Mart is also required to familiarize local hospitals with the properties of hazardous waste handled at the facility and the type of injuries or illnesses that could result form fires, explosions, or releases at the facility. Wal-Mart deals with hazardous waste commonly associated with retail operations, and this type of waste could cause injury or illness if an employee is exposed to it. A list of all chemicals handled is maintained at the facility and a Material Safety Data Sheet for each item can be supplied at your request

We have also enclosed a copy of our modified contingency plan. The plan is designed to minimize hazards to human health or the environment from fires, explosions or any unplanned sudden or non sudden release of hazardous waste to the air, soil or surface water. Please review and retain this plan in your files in the event of an emergency.

Thank you for your cooperation in this matter. Should you have any questions or desire to visit the facility, please contact me at 813-782-1957.

Sincerely,

Mike Gault
APC
Asset Protection Coordinator
Wal-Mart #706

BASIC CONTINGENCY PLAN
SMALL QUANTITY HAZARDOUS WASTE GENERATOR FACILITY

---

1) FACILITY NAME: Walmart Supercenter #706

2) FACILITY ADDRESS: 7631 Gall Blvd, Zephyrhills, FL 33540

3) FACILITY PHONE #: 813-782-1957

4) FACILITY EPA ID #: FLR 000074823

5) DATE PREPARED: 01/19/2010

The purpose of this Contingency Plan is to provide information to Associates on how to respond to emergencies such as fires, explosions, or spills that result from hazardous materials or hazardous wastes stored at your facility. The underlying premise of the basic contingency plan is to identify an Emergency Coordinator at the facility, define the responsibilities of the Emergency Coordinator, provide relevant emergency numbers, provide a list of emergency equipment available at the facility, and provide an evacuation plan for facility personnel.

At all times there must be at least one Management Associate either on the premises or on call (i.e. available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. The facility manager is the primary Emergency Coordinator, and the manager on duty is the alternate Emergency Coordinator. While the Emergency Coordinator is responsible for coordinating all emergency response measures, all Associates must also be thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities.

In responding to an emergency, the Emergency Coordinator must respond in the following manner:

FIRE

In the event of a fire, call the fire department. If it is possible to do so without harm to yourself or others, attempt to extinguish the fire using a fire extinguisher and call the fire department.

SPILL

In the event of a spill of a hazardous material or hazardous waste, contain the flow of the spill to the extent possible, and as soon as is practicable, using the appropriate personal protective equipment, clean up the spill and any contaminated materials or soil. If the spill is too large to contain and/or clean up, call the Compliance Hotline immediately.

FIRE, EXPLOSION, OR OTHER RELEASE

In the event of a fire, explosion, or other release which could threaten human health or when the generator has knowledge that a spill of a hazardous material or hazardous waste has reached surface water, the generator must immediately notify the National Response Center (using their 24-hour toll free number (800) 424-8802). The report must include the following information:

- **The name, address, and US EPA Identification Number of the generator**
- **Date, time, and type of incident (e.g. spill or fire)**
- **Quantity and type of hazardous material or hazardous waste involved in the incident**
- **Extent of injuries, if any**
- **Estimated quantity and disposition of recovered materials, if any**

In the event of an emergency, contact the **WAL-MART COMPLIANCE HOTLINE at (800) 530-9923**.

EMERGENCY SERVICES CONTACT INFORMATION

The following table provides a list of emergency services contact numbers.

Agency Name	Phone Number
Fire Department	Station 2 813-780-0041
Police Department	813-780-0050
Emergency Medical Services	911
Poison Control	1-800-222-1222
Emergency Response Contractor	1-800-839-3975
Wal-Mart Compliance Hotline	**(800) 530-9923**
National Response Center	**(800) 424-8802**
Local Emergency Planning Commission	352-521-5137
State Environmental Agency	813-987-6771
Hospital	813-788-0411

The following table provides the name and contact information for those Management Associates designated as Emergency Coordinators for this facility. **This information must be inserted into the table by the facility.** This Contingency Plan must be updated should there be a change in any of these Associate's responsibilities or if other Management Associates are designated as Emergency Coordinators.

FACILITY EMERGENCY COORDINATORS

NAME	TITLE	PRIMARY/ALTERNATE	OTHER CONTACT NUMBER
Tom Schoendorf	Store Manager		Alarm central : 352-686-8684 / 352-346-7400
Michael Smith	Co-Mgr		813-833-0481 / 813-907-7375
Alvona Ellington	Co-Mgr		727-504-8934
Michael Gault	APC	Alternate	813-629-0055
Sandy Hines	Asst Mgr	Alternate	352-424-2192

The generator must post the following information next to the telephone at the service desk and fitting room:

- ☐ The name and telephone number of the Emergency Coordinator and alternate Emergency Coordinator. (Facility manager and manager on duty)
- ☐ Location of fire extinguishers and spill control material, and, if present, fire alarm. [It is recommended this be provided in map form with the Central Hazardous Waste Storage Area also shown along with evacuation routes]
- ☐ Evacuation plan. [It is also recommended that the evacuation plan be provided in map form, and include procedures and routes for evacuation.]
- ☐ The telephone number of the fire department.

The primary Emergency Coordinator should ensure the above requirements are met. A copy of this Contingency Plan can be used to meet these requirements.

The following page should be completed by the Emergency Coordinator. The page must be printed and posted by telephones located at the fitting room or service desk.

OTHER INFORMATION SOURCES

The following documents which are on file at the facility can be referred to for additional information:

- Environmental Management Guidance (EMG) Manual – The EMG is kept in the Manager's office in a green binder.

SPCC Plan (not applicable to all facilities).

The following sources can be used to provide additional information on the storage, handling, and health and safety issues related to hazardous materials and hazardous wastes.

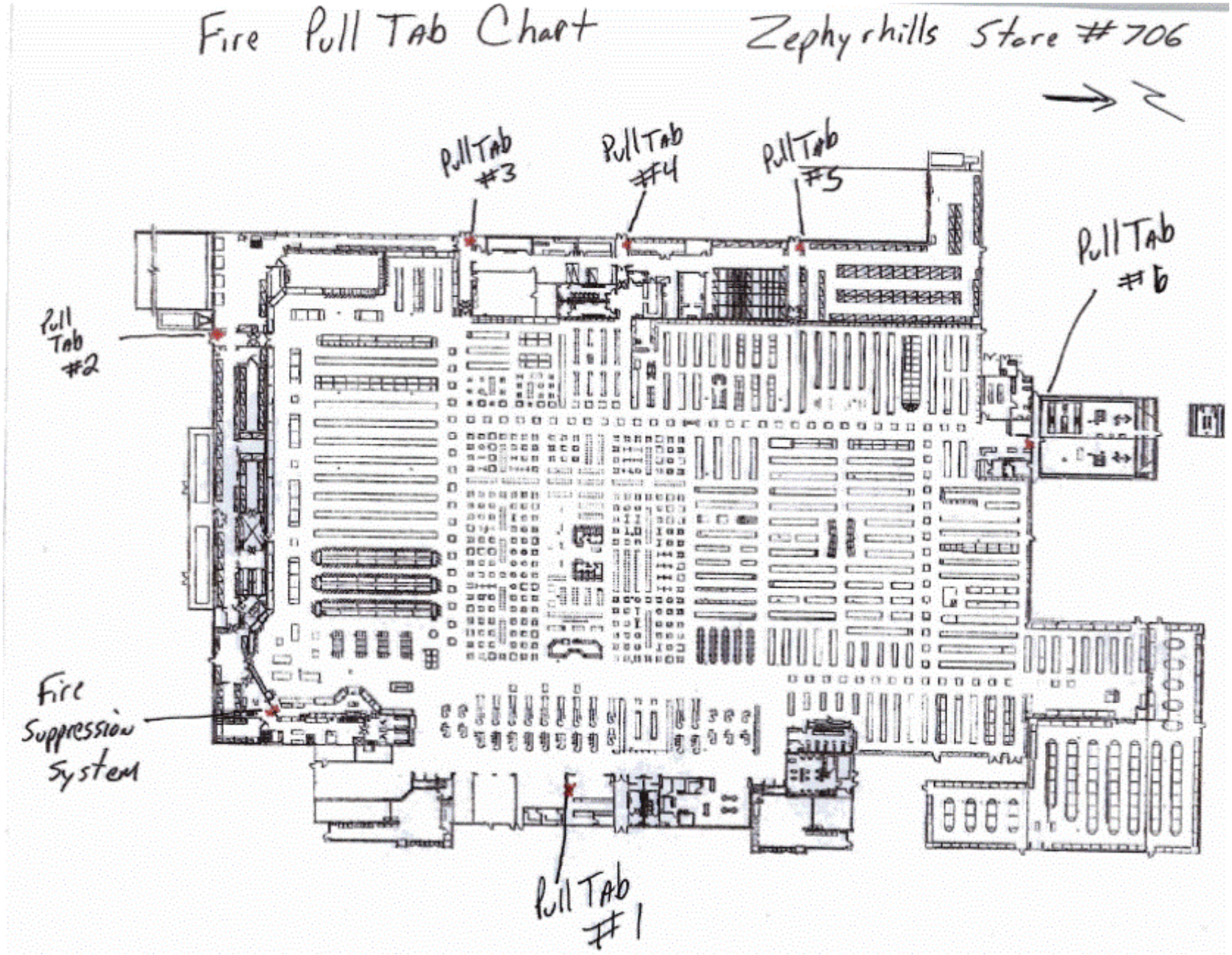
24-Hour National Spill Reporting Center
National Response Center
Phone: 800-424-8802 or 202-267-2180
http://www.nrc.uscg.mil

Department of Transportation (DOT) Hotline
Office of Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration
400 7th Street, SW,
Washington, DC 20590-0001
Phone: 202-366-4488 or 800-467-4922
Fax: 202-366-3753
http://hazmat.dot.gov
Answers questions on matters related to DOT's hazardous materials transportation regulations.

NIOSH - National Institute for Occupational Safety and Health
Phone: 800-356-4674
http://www.cdc.gov/niosh/homepage.html

OSHA - Occupational Safety & Health Administration
Phone: 800-321-OSHA (6742)
http://www.osha.gov/

N
- Spill Stations
- Fire Exit
- Hazwaste
- Fire Extinguisher


Fire Pull Tab Chart
Zephyrhills Store #706
N
Pull Tab #3
Pull Tab #4
Pull Tab #5
Pull Tab #6
Pull Tab #2
Fire Suppression System
Pull Tab #1

Appendix H
Hazard Impact and Estimated Losses

Appendix H: Hazard Impact and Estimated Losses

Category 1 Hurricane…….....4
Category 2 Hurricane…….12
Category 3 Hurricane…….20
Category 4 Hurricane…….28
Category 5 Hurricane…….36
Earthquake…….....44
Sinkhole…….52
Severe Storms……..……..61
Tornado…….....70
Tsunami……..79
Wildland Fire…….84

Hurricanes

The following data describes the threat of wind and flood damage from tropical cyclones (hurricanes). These threats are described in terms of the peak one minute sustained wind in mph for wind, and the peak water level in feet for storms of this Saffir Simpson hurricane category. This is a Maximum Envelope data set, representing the peak possible impact this storm type could have on Pasco County and its municipalities. These notes and charts contain notes on the data sources, how the population is segmented in the reports, and some basic notes on how loss estimates were calculated.

Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3: Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. The relevant hazard data such as wind and water levels were extracted from the TAOS output files and processed by the automatic report generator.

1.2 Department of Revenue Tax Record notes

The 2000 Department of Revenue Tax Records were used to create an exposure database for use in these analyses.

1.2.1 Georeferencing

A three stage process was used for georeferencing the tax data. Stage one attempted an address match against the Census TIGER file road network. Stage one georeferencing was successful in 70%of cases. Stage two attempted a partial address match, using both zip code and the Public Land Survey System (PLSS) as supplemental data. Stage two georeferencing matched an additional 15% of locations. Stage three, which matched the final 15% of primarily rural locations, used the PLSS data, zip code, and satellite derived land cover to allocate these remaining locations to built locations in the designated Township/Range/Section grid cell. The percentage of address matches (Stages one and two) in rural areas the match rate was as low as 60%.
Census Designated Places (CDP) were used for sub-county regions to insure consistency with other Census based products.

1.3 Census Data and Population at risk notes

Census 2000 data was used at the block group level. Georeferencing of the block groups was provided by the US Census Bureau. The population at risk analysis was divided into the following segments for each hazard zone:
Total: Total population in this census block group.
Minority: Non-white population.
Over 65: Population age 65 and over.

Disabled: Disabled population.
Poverty: Population living in households below the poverty limit.
Lang Iso: Population living in a language isolated household. To qualify as language isolated, a household must contain no one overage 10 that speaks English.
Sing Prnt: Persons living in a single parent household.

* Note that the categories are not exclusive. Therefore, a mobility-impaired person 70 years old in a low income household would count in the Over 65, Low Income, and Disabled categories.

1.4 Loss Estimates

The loss estimates in this document are based on the census housing survey. The housing data includes the number and median value of various types of housing units such as mobile homes, single family, etc. From that data the total infrastructure in each census block is estimated. Thus, the exposure in the block is a composite of the survey data (for housing) and estimate of other infrastructure (commercial, governmental) that typically supports a given level of housing.

Note that these estimates can (and will) differ from the DOR tax parcel based data, which should be more accurate. The census based estimates are included because these are used in the real time damage estimation system. Census based losses estimates are total losses (insured and uninsured), including cleanup.

Something to consider with respect to the Census based estimates is the impact of georeferencing and flood data. The Census data is at the block group level and the exact position of the block group centroid may fall in or out of the flood zone. For lower flood levels such as Category1 storms with very narrow flood zones, there may be a larger difference between the tax based assessment and census based assessment because of the potential for any given block group to hit or miss the zone.

1.4.1 Valuation, contents, and infrastructure

Tax records normally under value property. We assumed that properties were valued at 80% fair market value. Contents and additional property such as automobiles and boats were estimated according to use type, in keeping with practices used in the insurance industry. An additional 15% that is not normally tracked by tax assessors such as signage, roads, etc.

For Census based estimates, the following method was used: housing values were obtained from the STF-3 files. Contents were estimated as with tax parcel based system. Infrastructure, commercial exposures, and government/institutional exposures were estimated from the satellite derived land cover. For technical details on these methods, see the publications appendix.

1.5 Production Notes

This project was conducted by Kinetic Analysis Corporation and the University of Central Florida Department of Statistics for the Florida Department of Community Affairs under contract number 04HS-L+12-00-22-267.

This maps and tables in these reports were generated by The Arbiter of Storms (TAOS) Version 11 automatic report generation system outputs and data from the US Geological Survey, the National Weather Service, and other sources.

Category 1 Hurricane

Countywide Category 1 Impact Summary
Peak winds 94.mph, peak water depth 6.5ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$822.83 Million
DOR based Flood Damage:	$82.61 Million
DOR Structures in Flood Zone:	3916
Census based Wind Damage:	$913.61 Million
Census based Flood .Damage:	$37.64 Million
Uninhabitable Housing Units:	1183 0.7% of total HU.

Countywide Population at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	344765	344765	180459	0	5228
Minority	22158	22158	12085	0	164
Over 65	92481	92481	46588	0	1720
Disabled	158004	158004	81692	0	2528
Poverty	36201	36201	19253	0	406
Lang Iso	28191	28191	18805	0	610
Sing Pnt	17965	17965	9672	0	282

Countywide Structures at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res Mob	97839	97839	56366	0	2410
Home MF	27346	27346	12843	0	186
Res	14051	14051	8643	0	1167
Commercial	5427	5427	3144	0	133
Agriculture	3909	3909	2013	0	2
Gov/Instit	1322	1322	816	0	18

Countywide Loss by DOR Use for Category 1 Maxima

	Exposure	Loss	Percent Loss
SF Res	$27.05 Billion	$444.86 Million	1.6%
Mob Home	$2.52 Billion	$180.36 Million	7.2%
MF Res	$2.89 Billion	$46.89 Million	1.6%
Commercial	$3.47 Billion	$56.80 Million	1.6%
Agriculture	$2.61 Billion	$38.98 Million	1.5%
Gov/Instit	$3.55 Billion	$54.95 Million	1.5%

Impact Summary for Unincorporated Areas Category 1

Maxima Damage Summary:

Tax Parcel based Wind Damage:	$388.44 Million
DOR based Flood Damage:	$73.49 Million
DOR Structures in Flood Zone:	3082
Census based Wind Damage:	$482.98 Million
Census based Flood .Damage:	$37.64 Million
Uninhabitable Housing Units:	586 0.9% of total HU.

Unincorporated County Population at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	137698	137698	82610	0	0
Minority	7455	7455	4686	0	0
Over 65	33531	33531	20056	0	0
Disabled	59616	59616	35983	0	0
Poverty	12888	12888	7904	0	0
Lang Iso	13585	13585	11255	0	0
Sing Pnt	6501	6501	4137	0	0

Unincorporated County Structures at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	33903	33903	20298	0	1987
Mob Home	14172	14172	6058	0	150
MF Res	5706	5706	3509	0	846
Commercial	1894	1894	1105	0	84
Agriculture	3175	3175	1628	0	2
Gov/Instit	392	392	222	0	13

Unincorporated County Loss by DOR Use for Category 1

	Exposure	Loss	Percent Loss
SF Res	$11.30 Billion	$192.70 Million	1.7%
Mob Home	$1.38 Billion	$96.37 Million	7.0%
MF Res	$1.06 Billion	$17.45 Million	1.7%
Commercial	$1.15 Billion	$18.58 Million	1.6%
Agriculture	$1.02 Billion	$16.68 Million	1.6%
Gov/Instit	$2.97 Billion	$46.66 Million	1.6%

Dade City Category 1 Impact Summary

Peak winds 78.mph, peak water depth 0.0ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$9.34 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$7.10 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	8	0.3% of total HU.

Population at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	6231	6231	4889	0	0
Minority	2334	2334	1804	0	0
Over 65	1149	1149	865	0	0
Disabled	2896	2896	2406	0	0
Poverty	944	944	643	0	0
Lang Iso	137	137	60	0	0
Sing Pnt	484	484	365	0	0

Structures at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	1568	1568	809	0	0
Mob Home	122	122	34	0	0
MF Res	148	148	88	0	0
Commercial	309	309	198	0	0
Agriculture	71	71	48	0	0
Gov/Instit	112	112	42	0	0

Loss by DOR Use for Category 1

	Exposure	Loss	Percent Loss
SF Res	$288.37 Million	$4.04 Million	1.4%
Mob Home	$7.55 Million	$484.04 Thousand	6.4%
MF Res	$46.35 Million	$639.80 Thousand	1.4%
Commercial	$110.21 Million	$1.49 Million	1.4%
Agriculture	$146.60 Million	$1.93 Million	1.3%
Gov/Instit	$46.64 Million	$761.14 Thousand	1.6%

New Port Richey Category 1 Impact Summary

Peak winds 86.mph, peak water depth 4.3ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$30.69 Million	
DOR based Flood Damage:	$269.58 Thousand	
DOR Structures in Flood Zone:	59	
Census based Wind Damage:	$30.28 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	44	0.5% of total HU.

Population at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	15685	15685	9843	0	0
Minority	805	805	441	0	0
Over 65	4555	4555	2809	0	0
Disabled	7978	7978	4882	0	0
Poverty	2486	2486	1564	0	0
Lang Iso	8075	8075	4424	0	0
Sing Pnt	1086	1086	668	0	0

Structures at risk for Category 1

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	4405	4405	2723	0	6
Mob Home	510	510	378	0	26
MF Res	1242	1242	767	0	25
Commercial	498	498	356	0	2
Agriculture	3	3	2	0	0
Gov/Instit	118	118	92	0	0

Loss by DOR Use for Category 1

	Exposure	Loss	Percent Loss
SF Res	$900.43 Million	$14.38 Million	1.6%
Mob Home	$24.16 Million	$2.02 Million	8.4%
MF Res	$228.56 Million	$3.67 Million	1.6%
Commercial	$337.27 Million	$6.18 Million	1.8%
Agriculture	$250.05 Million	$4.40 Million	1.8%
Gov/Instit	$2.21 Million	$32.93 Thousand	1.5%

Port Richey Category 1 Impact Summary

Peak winds 94.mph, peak water depth 4.9ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$11.26 Million	
DOR based Flood Damage:	$8.54 Million	
DOR Structures in Flood Zone:	714	
Census based Wind Damage:	$5.15 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	7	0.4% of total HU.

Population at risk for Category 1 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	2986	2986	520	0	0
Minority	105	105	0	0	0
Over 65	718	718	210	0	0
Disabled	1955	1955	362	0	0
Poverty	482	482	36	0	0
Lang Iso	472	472	417	0	0
Sing Pnt	125	125	6	0	0

Structures at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	979	979	802	0	365
Mob Home	62	62	50	0	5
MF Res	433	433	353	0	293
Commercial	192	192	151	0	46
Agriculture	0	0	0	0	0
Gov/Instit	23	23	20	0	5

Loss by DOR Use for Category 1 Maxima

	Exposure	Loss	Percent Loss
SF Res	$263.40 Million	$6.41 Million	2.4%
Mob Home	$3.54 Million	$349.77 Thousand	9.9%
MF Res	$94.97 Million	$2.34 Million	2.5%
Commercial	$77.06 Million	$1.70 Million	2.2%
Agriculture	$23.64 Million	$470.35 Thousand	2.0%
Gov/Instit	$0.00 dollars	$0.00 dollars	NaN %

Town of St. Leo Category 1 Impact Summary
Peak winds 82.mph, peak water depth 0.0ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$1.01 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$354.76 Thousand	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	0	0.0% of total HU.

Population at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	609	609	0	0	0
Minority	85	85	0	0	0
Over 65	38	38	0	0	0
Disabled	137	137	0	0	0
Poverty	28	28	0	0	0
Lang Iso	158	158	97	0	0
Sing Pnt	4	4	0	0	0

Structures at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	31	31	23	0	0
Mob Home	7	7	0	0	0
MF Res	2	2	1	0	0
Commercial	8	8	4	0	0
Agriculture	17	17	7	0	0
Gov/Instit	7	7	3	0	0

Loss by DOR Use for Category 1 Maxima

	Exposure	Loss	Percent Loss
SF Res	$9.63 Million	$183.79 Thousand	1.9%
Mob Home	$726.29 Thousand	$43.10 Thousand	5.9%
MF Res	$3.58 Million	$32.23 Thousand	0.9%
Commercial	$2.57 Million	$29.08 Thousand	1.1%
Agriculture	$41.63 Million	$601.41 Thousand	1.4%
Gov/Instit	$10.71 Million	$119.73 Thousand	1.1%

San Antonio Category 1 Impact Summary

Peak winds 88.mph, peak water depth 0.0ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$1.51 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$2.68 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	2	0.7% of total HU.

Population at risk for Category 1 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	615	615	615	0	0
Minority	26	26	26	0	0
Over 65	48	48	48	0	0
Disabled	275	275	275	0	0
Poverty	62	62	62	0	0
Lang Iso	98	98	98	0	0
Sing Pnt	27	27	27	0	0

Structures at risk for Category 1 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	204	204	168	0	0
Mob Home	6	6	4	0	0
MF Res	17	17	14	0	0
Commercial	32	32	27	0	0
Agriculture	41	41	31	0	0
Gov/Instit	11	11	8	0	0

Loss by DOR Use for Category 1 Maxima

	Exposure	Loss	Percent Loss
SF Res	$46.59 Million	$952.03 Thousand	2.0%
Mob Home	$405.79 Thousand	$39.02 Thousand	9.6%
MF Res	$3.02 Million	$58.71 Thousand	1.9%
Commercial	$6.20 Million	$134.15 Thousand	2.2%
Agriculture	$5.47 Million	$128.93 Thousand	2.4%
Gov/Instit	$11.69 Million	$200.60 Thousand	1.7%

Zephyrhills Category 1 Impact Summary

Peak winds 76.mph, peak water depth 0.0ft.

Category 1 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$17.33 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$14.83 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	21	0.3% of total HU.

Population at risk for Category 1 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	10690	10690	3294	0	0
Minority	939	939	338	0	0
Over 65	3462	3462	1244	0	0
Disabled	5103	5103	1449	0	0
Poverty	1232	1232	335	0	0
Lang Iso	838	838	141	0	0
Sing Pnt	634	634	153	0	0

Structures at risk for Category1Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	2454	2454	843	0	0
Mob Home	1237	1237	375	0	0
MF Res	434	434	146	0	0
Commercial	487	487	99	0	0
Agriculture	22	22	7	0	0
Gov/Instit	107	107	14	0	0

Loss by DOR Use for Category1Maxima

	Exposure	Loss	Percent Loss
SF Res	$479.34 Million	$5.54 Million	1.2%
Mob Home	$110.90 Million	$6.72 Million	6.1%
MF Res	$69.06 Million	$848.53 Thousand	1.2%
Commercial	$218.63 Million	$2.52 Million	1.2%
Agriculture	$192.06 Million	$1.60 Million	0.8%
Gov/Instit	$10.03 Million	$112.86 Thousand	1.1%

Category 2 Hurricanes

Hazards for Pasco Impact Summary
Peak winds 115.mph, peak water depth 9.5ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$2.50 Billion	
DOR based Flood Damage:	$409.46 Million	
DOR Structures in Flood Zone:	9720	
Census based Wind Damage:	$2.64 Billion	
Census based Flood .Damage:	$225.26 Million	
Uninhabitable Housing Units:	3658	2.1% of total HU.

Countywide Population at risk for Category 2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	344765	344765	344710	0	15163
Minority	22158	22158	22127	0	459
Over 65	92481	92481	92481	0	4860
Disabled	158004	158004	157983	0	8716
Poverty	36201	36201	36177	0	1772
Lang Iso	28191	28191	28191	0	2696
Sing Pnt	17965	17965	17958	0	753

Countywide Structures at risk for Category 2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	97839	97839	97812	0	6107
Mob Home	27346	27346	27344	0	1002
MF Res	14051	14051	14051	0	2180
Commercial	5427	5427	5427	0	379
Agriculture	3909	3909	3904	0	6
Gov/Instit	1322	1322	1322	0	46

Countywide Loss by DOR Use for Category 2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$27.05 Billion	$1.41 Billion	5.2%
Mob Home	$2.52 Billion	$467.76 Million	18.6%
MF Res	$2.89 Billion	$150.26 Million	5.2%
Commercial	$3.47 Billion	$180.27 Million	5.2%
Agriculture	$2.61 Billion	$125.55 Million	4.8%
Gov/Instit	$3.55 Billion	$167.89 Million	4.7%

Impact Summary for Unincorporated Areas Category 2

Maxima Damage Summary:

Tax Parcel based Wind Damage:	$1.16 Billion	
DOR based Flood Damage:	$287.00 Million	
DOR Structures in Flood Zone:	5476	
Census based Wind Damage:	$1.35 Billion	
Census based Flood Damage:	$161.55 Million	
Uninhabitable Housing Units:	1717	2.6% of total HU.

Unincorporated County Population at risk for Category2Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	137698	137698	137643	0	3275
Minority	7455	7455	7424	0	82
Over 65	33531	33531	33531	0	1154
Disabled	59616	59616	59595	0	1921
Poverty	12888	12888	12864	0	338
Lang Iso	13585	13585	13585	0	49
Sing Pnt	6501	6501	6494	0	124

Unincorporated County Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	33903	33903	33876	0	3509
Mob Home	14172	14172	14170	0	386
MF Res	5706	5706	5706	0	1389
Commercial	1894	1894	1894	0	164
Agriculture	3175	3175	3170	0	2
Gov/Instit	392	392	392	0	26

Unincorporated County Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$11.30 Billion	$601.95 Million	5.3%
Mob Home	$1.38 Billion	$248.24 Million	18.0%
MF Res	$1.06 Billion	$56.09 Million	5.3%
Commercial	$1.15 Billion	$59.66 Million	5.2%
Agriculture	$1.02 Billion	$52.25 Million	5.1%
Gov/Instit	$2.97 Billion	$142.76 Million	4.8%

Dade City Category 2 Impact Summary

Peak winds 95.mph, peak water depth 0.0ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$25.58 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$19.09 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	27	1.0% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	6231	6231	6231	0	0
Minority	2334	2334	2334	0	0
Over 65	1149	1149	1149	0	0
Disabled	2896	2896	2896	0	0
Poverty	944	944	944	0	0
Lang Iso	137	137	137	0	0
Sing Pnt	484	484	484	0	0

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	1568	1568	1568	0	0
Mob Home	122	122	122	0	0
MF Res	148	148	148	0	0
Commercial	309	309	309	0	0
Agriculture	71	71	71	0	0
Gov/Instit	112	112	112	0	0

Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$288.37 Million	$10.99 Million	3.8%
Mob Home	$7.55 Million	$1.22 Million	16.1%
MF Res	$46.35 Million	$1.82 Million	3.9%
Commercial	$110.21 Million	$4.14 Million	3.8%
Agriculture	$146.60 Million	$5.50 Million	3.8%
Gov/Instit	$46.64 Million	$1.92 Million	4.1%

New Port Richey Category 2 Impact Summary

Peak winds 106.mph, peak water depth 7.9ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$98.93 Million	
DOR based Flood Damage:	$5.19 Million	
DOR Structures in Flood Zone:	271	
Census based Wind Damage:	$95.52 Million	
Census based Flood .Damage:	$4.11 Million	
Uninhabitable Housing Units:	159	1.9% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	15685	15685	15685	0	699
Minority	805	805	805	0	19
Over 65	4555	4555	4555	0	122
Disabled	7978	7978	7978	0	357
Poverty	2486	2486	2486	0	236
Lang Iso	8075	8075	8075	0	1889
Sing Pnt	1086	1086	1086	0	84

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	4405	4405	4405	0	122
Mob Home	510	510	510	0	46
MF Res	1242	1242	1242	0	81
Commercial	498	498	498	0	22
Agriculture	3	3	3	0	0
Gov/Instit	118	118	118	0	0

Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$900.43 Million	$47.36 Million	5.3%
Mob Home	$24.16 Million	$5.33 Million	22.1%
MF Res	$228.56 Million	$11.99 Million	5.2%
Commercial	$337.27 Million	$19.88 Million	5.9%
Agriculture	$250.05 Million	$14.24 Million	5.7%
Gov/Instit	$2.21 Million	$119.50 Thousand	5.4%

Port Richey Category 2 Impact Summary

Peak winds 115.mph, peak water depth 8.3ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$34.02 Million	
DOR based Flood Damage:	$59.12 Million	
DOR Structures in Flood Zone:	1134	
Census based Wind Damage:	$17.09 Million	
Census based Flood .Damage:	$28.76 Million	
Uninhabitable Housing Units:	24	1.4% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	2986	2986	2986	0	2582
Minority	105	105	105	0	105
Over 65	718	718	718	0	537
Disabled	1955	1955	1955	0	1655
Poverty	482	482	482	0	456
Lang Iso	472	472	472	0	110
Sing Pnt	125	125	125	0	119

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	979	979	974	0	611
Mob Home	62	62	61	0	40
MF Res	433	433	432	0	369
Commercial	192	192	191	0	103
Agriculture	0	0	0	0	0
Gov/Instit	23	23	23	0	11

Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$263.40 Million	$19.34 Million	7.3%
Mob Home	$3.54 Million	$912.71 Thousand	25.8%
MF Res	$94.97 Million	$7.05 Million	7.4%
Commercial	$77.06 Million	$5.19 Million	6.7%
Agriculture	$23.64 Million	$1.53 Million	6.5%
Gov/Instit	$0.00 dollars	$0.00 dollars	NaN %

Town of St. Leo Category 2 Impact Summary

Peak winds 95.mph, peak water depth 0.0ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$2.73 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$1.02 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	0	0.0% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	609	609	609	0	0
Minority	85	85	85	0	0
Over 65	38	38	38	0	0
Disabled	137	137	137	0	0
Poverty	28	28	28	0	0
Lang Iso	158	158	158	0	0
Sing Pnt	4	4	4	0	0

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	31	31	31	0	0
Mob Home	7	7	7	0	0
MF Res	2	2	2	0	0
Commercial	8	8	8	0	0
Agriculture	17	17	17	0	0
Gov/Instit	7	7	7	0	0

Loss by DOR Use for Category2Maxima

	Exposure	Loss	Percent Loss
SF Res	$9.63 Million	$468.13 Thousand	4.9%
Mob Home	$726.29 Thousand	$98.91 Thousand	13.6%
MF Res	$3.58 Million	$101.48 Thousand	2.8%
Commercial	$2.57 Million	$84.40 Thousand	3.3%
Agriculture	$41.63 Million	$1.64 Million	4.0%
Gov/Instit	$10.71 Million	$334.39 Thousand	3.1%

San Antonio Category 2 Impact Summary
Peak winds 104.mph, peak water depth 0.0ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$3.88 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$6.50 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	6	2.1% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	615	615	615	0	0
Minority	26	26	26	0	0
Over 65	48	48	48	0	0
Disabled	275	275	275	0	0
Poverty	62	62	62	0	0
Lang Iso	98	98	98	0	0
Sing Pnt	27	27	27	0	0

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	204	204	204	0	0
Mob Home	6	6	6	0	0
MF Res	17	17	17	0	0
Commercial	32	32	32	0	0
Agriculture	41	41	41	0	0
Gov/Instit	11	11	11	0	0

Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$46.59 Million	$2.46 Million	5.3%
Mob Home	$405.79 Thousand	$85.21 Thousand	21.0%
MF Res	$3.02 Million	$152.18 Thousand	5.0%
Commercial	$6.20 Million	$343.84 Thousand	5.5%
Agriculture	$5.47 Million	$310.31 Thousand	5.7%
Gov/Instit	$11.69 Million	$531.10 Thousand	4.5%

Zephyrhills Category 2 Impact Summary

Peak winds 93.mph, peak water depth 0.0ft.

Category 2 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$53.31 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$45.39 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	85	1.4% of total HU.

Population at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	10690	10690	10690	0	0
Minority	939	939	939	0	0
Over 65	3462	3462	3462	0	0
Disabled	5103	5103	5103	0	0
Poverty	1232	1232	1232	0	0
Lang Iso	838	838	838	0	0
Sing Pnt	634	634	634	0	0

Structures at risk for Category2 Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	2454	2454	2454	0	0
Mob Home	1237	1237	1237	0	0
MF Res	434	434	434	0	0
Commercial	487	487	487	0	0
Agriculture	22	22	22	0	0
Gov/Instit	107	107	107	0	0

Loss by DOR Use for Category2 Maxima

	Exposure	Loss	Percent Loss
SF Res	$479.34 Million	$18.38 Million	3.8%
Mob Home	$110.90 Million	$17.61 Million	15.9%
MF Res	$69.06 Million	$2.78 Million	4.0%
Commercial	$218.63 Million	$8.30 Million	3.8%
Agriculture	$192.06 Million	$5.87 Million	3.1%
Gov/Instit	$10.03 Million	$361.32 Thousand	3.6%

Category 3 Hurricane

Pasco Category 3 Impact Summary
Peak winds 137.mph, peak water depth 13.8ft.

Category 3 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$5.91 Billion	
DOR based Flood Damage:	$1.09 Billion	
DOR Structures in Flood Zone:	15991	
Census based Wind Damage:	$6.15 Billion	
Census based Flood .Damage:	$637.97 Million	
Uninhabitable Housing Units:	8623	5.0% of total HU.

Countywide Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	344765	344765	344765	87474	24638
Minority	22158	22158	22158	3995	870
Over 65	92481	92481	92481	24428	7947
Disabled	158004	158004	158004	39186	14340
Poverty	36201	36201	36201	9108	3197
Lang Iso	28191	28191	28191	11849	11075
Sing Pnt	17965	17965	17965	4649	1240

Countywide Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	97839	97839	97839	22051	9903
Mob Home	27346	27346	27346	3586	2094
MF Res	14051	14051	14051	3721	3048
Commercial	5427	5427	5427	1156	828
Agriculture	3909	3909	3909	446	11
Gov/Instit	1322	1322	1322	165	107

Countywide Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$27.05 Billion	$3.38 Billion	12.5%
Mob Home	$2.52 Billion	$1.01 Billion	40.3%
MF Res	$2.89 Billion	$368.83 Million	12.8%
Commercial	$3.47 Billion	$440.43 Million	12.7%
Agriculture	$2.61 Billion	$302.46 Million	11.6%
Gov/Instit	$3.55 Billion	$400.73 Million	11.3%

Category 3 Impact Summary for Unincorporated Areas

Category 3 Maxima Damage Summary:

Tax Parcel based Wind Damage:	$2.69 Billion
DOR based Flood Damage:	$691.59 Million
DOR Structures in Flood Zone:	7503
Census based Wind Damage:	$3.03 Billion
Census based Flood .Damage:	$420.11 Million
Uninhabitable Housing Units:	3920 5.9% of total HU.

Unincorporated County Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	137698	137698	137698	52584	6717
Minority	7455	7455	7455	2331	230
Over 65	33531	33531	33531	14111	2125
Disabled	59616	59616	59616	22209	4103
Poverty	12888	12888	12888	4644	792
Lang Iso	13585	13585	13585	7046	77
Sing Pnt	6501	6501	6501	2564	353

Unincorporated County Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	33903	33903	33903	7733	4482
Mob Home	14172	14172	14172	1467	912
MF Res	5706	5706	5706	1469	1797
Commercial	1894	1894	1894	377	270
Agriculture	3175	3175	3175	367	5
Gov/Instit	392	392	392	60	37

Unincorporated County Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$11.30 Billion	$1.41 Billion	12.5%
Mob Home	$1.38 Billion	$540.66 Million	39.3%
MF Res	$1.06 Billion	$135.64 Million	12.9%
Commercial	$1.15 Billion	$142.77 Million	12.4%
Agriculture	$1.02 Billion	$124.10 Million	12.2%
Gov/Instit	$2.97 Billion	$338.13 Million	11.4%

Dade City Category 3 Impact Summary

Peak winds 113.mph, peak water depth 0.0ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$65.70 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$48.24 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	79	2.8% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	6231	6231	6231	0	0
Minority	2334	2334	2334	0	0
Over 65	1149	1149	1149	0	0
Disabled	2896	2896	2896	0	0
Poverty	944	944	944	0	0
Lang Iso	137	137	137	0	0
Sing Pnt	484	484	484	0	0

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	1568	1568	1568	2	0
Mob Home	122	122	122	1	0
MF Res	148	148	148	0	0
Commercial	309	309	309	1	0
Agriculture	71	71	71	0	0
Gov/Instit	112	112	112	0	0

Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$288.37 Million	$28.39 Million	9.8%
Mob Home	$7.55 Million	$2.71 Million	35.9%
MF Res	$46.35 Million	$4.59 Million	9.9%
Commercial	$110.21 Million	$10.70 Million	9.7%
Agriculture	$146.60 Million	$14.39 Million	9.8%
Gov/Instit	$46.64 Million	$4.91 Million	10.5%

New Port Richey Category 3 Impact Summary

Peak winds 125.mph, peak water depth 13.0ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$245.85 Million	
DOR based Flood Damage:	$39.93 Million	
DOR Structures in Flood Zone:	1336	
Census based Wind Damage:	$227.60 Million	
Census based Flood .Damage:	$24.63 Million	
Uninhabitable Housing Units:	387	4.6% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	15685	15685	15685	7165	3871
Minority	805	805	805	300	200
Over 65	4555	4555	4555	1905	1040
Disabled	7978	7978	7978	3479	2191
Poverty	2486	2486	2486	1195	701
Lang Iso	8075	8075	8075	3861	6614
Sing Pnt	1086	1086	1086	504	276

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	4405	4405	4405	1470	776
Mob Home	510	510	510	157	159
MF Res	1242	1242	1242	330	227
Commercial	498	498	498	185	153
Agriculture	3	3	3	0	1
Gov/Instit	118	118	118	26	20

Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$900.43 Million	$119.70 Million	13.3%
Mob Home	$24.16 Million	$11.63 Million	48.2%
MF Res	$228.56 Million	$30.13 Million	13.2%
Commercial	$337.27 Million	$49.05 Million	14.5%
Agriculture	$250.05 Million	$35.06 Million	14.0%
Gov/Instit	$2.21 Million	$284.72 Thousand	12.9%

Port Richey Category 3 Impact Summary
Peak winds 137.mph, peak water depth 13.1ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$80.52 Million	
DOR based Flood Damage:	$136.00 Million	
DOR Structures in Flood Zone:	1578	
Census based Wind Damage:	$42.77 Million	
Census based Flood .Damage:	$72.33 Million	
Uninhabitable Housing Units:	63	3.6% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	2986	2986	2986	116	2986
Minority	105	105	105	0	105
Over 65	718	718	718	29	718
Disabled	1955	1955	1955	62	1955
Poverty	482	482	482	10	482
Lang Iso	472	472	472	55	472
Sing Pnt	125	125	125	0	125

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	979	979	979	518	906
Mob Home	62	62	62	29	56
MF Res	433	433	433	278	416
Commercial	192	192	192	99	177
Agriculture	0	0	0	0	0
Gov/Instit	23	23	23	14	23

Loss by DOR Use for Category3Maxima

	Loss	Percent Loss
SF Res	$45.90 Million	17.4%
Mob Home	$1.94 Million	54.8%
MF Res	$16.74 Million	17.6%
Commercial	$12.49 Million	16.2%
Agriculture	$3.46 Million	14.6%
Gov/Instit	$0.00 dollars	NaN %

St. Leo Category 3 Impact Summary
Peak winds 111.mph, peak water depth 0.0ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$6.03 Million
DOR based Flood Damage:	$0.00 dollars
DOR Structures in Flood Zone:	0
Census based Wind Damage:	$2.17 Million
Census based Flood .Damage:	$0.00 dollars
Uninhabitable Housing Units:	0 0.0% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	609	609	609	0	0
Minority	85	85	85	0	0
Over 65	38	38	38	0	0
Disabled	137	137	137	0	0
Poverty	28	28	28	0	0
Lang Iso	158	158	158	0	0
Sing Pnt	4	4	4	0	0

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	31	31	31	1	0
Mob Home	7	7	7	0	0
MF Res	2	2	2	0	0
Commercial	8	8	8	0	0
Agriculture	17	17	17	2	0
Gov/Instit	7	7	7	0	0

Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$9.63 Million	$1.04 Million	10.8%
Mob Home	$726.29 Thousand	$199.43 Thousand	27.5%
MF Res	$3.58 Million	$224.60 Thousand	6.3%
Commercial	$2.57 Million	$186.92 Thousand	7.3%
Agriculture	$41.63 Million	$3.61 Million	8.7%
Gov/Instit	$10.71 Million	$780.20 Thousand	7.3%

San Antonio Category 3 Impact Summary
Peak winds 123.mph, peak water depth 0.0ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$8.86 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$13.97 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	14	4.9% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	615	615	615	615	0
Minority	26	26	26	26	0
Over 65	48	48	48	48	0
Disabled	275	275	275	275	0
Poverty	62	62	62	62	0
Lang Iso	98	98	98	29	0
Sing Pnt	27	27	27	27	0

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	204	204	204	22	0
Mob Home	6	6	6	0	0
MF Res	17	17	17	1	0
Commercial	32	32	32	5	0
Agriculture	41	41	41	2	0
Gov/Instit	11	11	11	3	0

Loss by DOR Use for Category3 Maxima

	Exposure	Loss	Percent Loss
SF Res	$46.59 Million	$5.62 Million	12.1%
Mob Home	$405.79 Thousand	$171.49 Thousand	42.3%
MF Res	$3.02 Million	$353.42 Thousand	11.7%
Commercial	$6.20 Million	$786.48 Thousand	12.7%
Agriculture	$5.47 Million	$696.80 Thousand	12.7%
Gov/Instit	$11.69 Million	$1.23 Million	10.6%

Zephyrhills Category 3 Impact Summary
Peak winds 111.mph, peak water depth 0.0ft.

Category 3 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$131.54 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$113.83 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	222	3.6% of total HU.

Population at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	10690	10690	10690	0	0
Minority	939	939	939	0	0
Over 65	3462	3462	3462	0	0
Disabled	5103	5103	5103	0	0
Poverty	1232	1232	1232	0	0
Lang Iso	838	838	838	0	0
Sing Pnt	634	634	634	0	0

Structures at risk for Category3Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	2454	2454	2454	8	0
Mob Home	1237	1237	1237	2	0
MF Res	434	434	434	6	0
Commercial	487	487	487	0	0
Agriculture	22	22	22	0	0
Gov/Instit	107	107	107	0	0

Loss by DOR Use for Category3Maxima

	Exposure	Loss	Percent Loss
SF Res	$479.34 Million	$47.31 Million	9.9%
Mob Home	$110.90 Million	$39.03 Million	35.2%
MF Res	$69.06 Million	$7.09 Million	10.3%
Commercial	$218.63 Million	$21.80 Million	10.0%
Agriculture	$192.06 Million	$15.35 Million	8.0%
Gov/Instit	$10.03 Million	$956.40 Thousand	9.5%

Category 4 Hurricane

Pasco Category 4 Impact Summary
Peak winds 163.mph, peak water depth 21.0ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$13.43 Billion	
DOR based Flood Damage:	$3.11 Billion	
DOR Structures in Flood Zone:	32471	
Census based Wind Damage:	$13.57 Billion	
Census based Flood .Damage:	$1.49 Billion	
Uninhabitable Housing Units:	19448	11.2% of total HU.

Countywide Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	344765	344765	344765	338269	65317
Minority	22158	22158	22158	21184	2827
Over 65	92481	92481	92481	91371	22548
Disabled	158004	158004	158004	154844	37637
Poverty	36201	36201	36201	35458	7558
Lang Iso	28191	28191	28191	27952	12108
Sing Pnt	17965	17965	17965	17545	3336

Countywide Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	97839	97839	97839	95728	21980
Mob Home	27346	27346	27346	26525	4054
MF Res	14051	14051	14051	13774	4754
Commercial	5427	5427	5427	5283	1395
Agriculture	3909	3909	3909	3738	24
Gov/Instit	1322	1322	1322	1295	264

Countywide Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$27.05 Billion	$7.82 Billion	28.9%
Mob Home	$2.52 Billion	$2.09 Billion	83.0%
MF Res	$2.89 Billion	$843.52 Million	29.2%
Commercial	$3.47 Billion	$1.02 Billion	29.4%
Agriculture	$2.61 Billion	$712.49 Million	27.3%
Gov/Instit	$3.55 Billion	$943.54 Million	26.6%

Category 4 Impact Summary for Unincorporated Areas

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$6.16 Billion	
DOR based Flood Damage:	$1.47 Billion	
DOR Structures in Flood Zone:	8916	
Census based Wind Damage:	$6.66 Billion	
Census based Flood .Damage:	$647.00 Million	
Uninhabitable Housing Units:	8761	13.2% of total HU.

Unincorporated County Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	137698	137698	137698	133646	42811
Minority	7455	7455	7455	7109	1893
Over 65	33531	33531	33531	32932	15701
Disabled	59616	59616	59616	57588	25273
Poverty	12888	12888	12888	12546	4707
Lang Iso	13585	13585	13585	13585	761
Sing Pnt	6501	6501	6501	6272	2155

Unincorporated County Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	33903	33903	33903	33006	5539
Mob Home	14172	14172	14172	13635	1034
MF Res	5706	5706	5706	5482	1927
Commercial	1894	1894	1894	1818	352
Agriculture	3175	3175	3175	3046	16
Gov/Instit	392	392	392	377	48

Unincorporated County Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$11.30 Billion	$3.31 Billion	29.3%
Mob Home	$1.38 Billion	$1.12 Billion	81.2%
MF Res	$1.06 Billion	$312.69 Million	29.6%
Commercial	$1.15 Billion	$333.62 Million	29.1%
Agriculture	$1.02 Billion	$292.21 Million	28.7%
Gov/Instit	$2.97 Billion	$796.69 Million	26.8%

Dade City Category 4 Impact Summary

Peak winds 137.mph, peak water depth 0.0ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$159.49 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$117.66 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	198	7.0% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	6231	6231	6231	5779	0
Minority	2334	2334	2334	1890	0
Over 65	1149	1149	1149	1077	0
Disabled	2896	2896	2896	2592	0
Poverty	944	944	944	759	0
Lang Iso	137	137	137	87	0
Sing Pnt	484	484	484	399	0

Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	1568	1568	1568	1558	0
Mob Home	122	122	122	121	0
MF Res	148	148	148	148	0
Commercial	309	309	309	300	0
Agriculture	71	71	71	71	0
Gov/Instit	112	112	112	111	0

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$288.37 Million	$69.63 Million	24.1%
Mob Home	$7.55 Million	$6.00 Million	79.4%
MF Res	$46.35 Million	$11.10 Million	24.0%
Commercial	$110.21 Million	$26.12 Million	23.7%
Agriculture	$146.60 Million	$34.70 Million	23.7%
Gov/Instit	$46.64 Million	$11.94 Million	25.6%

New Port Richey Category 4 Impact Summary

Peak winds 149.mph, peak water depth 20.3ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$552.54 Million	
DOR based Flood Damage:	$212.26 Million	
DOR Structures in Flood Zone:	2668	
Census based Wind Damage:	$505.67 Million	
Census based Flood .Damage:	$102.19 Million	
Uninhabitable Housing Units:	874	10.4% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	15685	15685	15685	15685	5564
Minority	805	805	805	805	312
Over 65	4555	4555	4555	4555	1476
Disabled	7978	7978	7978	7978	3153
Poverty	2486	2486	2486	2486	956
Lang Iso	8075	8075	8075	8075	6761
Sing Pnt	1086	1086	1086	1086	373

Structures at risk for Category4Maxima

	Total	Hur Wind	Ext Wind	Flooded
SF Res	4405	4405	4405	1546
Mob Home	510	510	510	236
MF Res	1242	1242	1242	481
Commercial	498	498	498	315
Agriculture	3	3	3	1
Gov/Instit	118	118	118	89

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$900.43 Million	$269.68 Million	30.0%
Mob Home	$24.16 Million	$22.43 Million	92.9%
MF Res	$228.56 Million	$68.47 Million	30.0%
Commercial	$337.27 Million	$111.59 Million	33.1%
Agriculture	$250.05 Million	$79.70 Million	31.9%
Gov/Instit	$2.21 Million	$675.07 Thousand	30.5%

Port Richey Category 4 Impact Summary

Peak winds 163.mph, peak water depth 20.2ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$171.13 Million	
DOR based Flood Damage:	$271.05 Million	
DOR Structures in Flood Zone:	1614	
Census based Wind Damage:	$95.78 Million	
Census based Flood .Damage:	$108.14 Million	
Uninhabitable Housing Units:	140	8.0% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	2986	2986	2986	2986	2986
Minority	105	105	105	105	105
Over 65	718	718	718	718	718
Disabled	1955	1955	1955	1955	1955
Poverty	482	482	482	482	482
Lang Iso	472	472	472	472	472
Sing Pnt	125	125	125	125	125

Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	979	979	979	954	928
Mob Home	62	62	62	61	57
MF Res	433	433	433	430	422
Commercial	192	192	192	185	184
Agriculture	0	0	0	0	0
Gov/Instit	23	23	23	23	23

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$263.40 Million	$97.63 Million	37.1%
Mob Home	$3.54 Million	$3.29 Million	92.9%
MF Res	$94.97 Million	$35.28 Million	37.1%
Commercial	$77.06 Million	$27.18 Million	35.3%
Agriculture	$23.64 Million	$7.76 Million	32.8%
Gov/Instit	$0.00 dollars	$0.00 dollars	NaN %

Town of St. Leo Category 4 Impact Summary

Peak winds 136.mph, peak water depth 0.0ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$14.53 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$5.33 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	1	2.3% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	609	609	609	603	0
Minority	85	85	85	85	0
Over 65	38	38	38	38	0
Disabled	137	137	137	133	0
Poverty	28	28	28	28	0
Lang Iso	158	158	158	131	0
Sing Pnt	4	4	4	2	0

Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	31	31	31	24	0
Mob Home	7	7	7	5	0
MF Res	2	2	2	1	0
Commercial	8	8	8	5	0
Agriculture	17	17	17	9	0
Gov/Instit	7	7	7	5	0

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$9.63 Million	$2.41 Million	25.0%
Mob Home	$726.29 Thousand	$438.45 Thousand	60.4%
MF Res	$3.58 Million	$567.20 Thousand	15.9%
Commercial	$2.57 Million	$456.15 Thousand	17.7%
Agriculture	$41.63 Million	$8.73 Million	21.0%
Gov/Instit	$10.71 Million	$1.93 Million	18.1%

San Antonio Category 4 Impact Summary
Peak winds 147.mph, peak water depth 0.0ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$19.70 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$29.71 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	31	10.8% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	615	615	615	615	0
Minority	26	26	26	26	0
Over 65	48	48	48	48	0
Disabled	275	275	275	275	0
Poverty	62	62	62	62	0
Lang Iso	98	98	98	98	0
Sing Pnt	27	27	27	27	0

Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	204	204	204	196	0
Mob Home	6	6	6	5	0
MF Res	17	17	17	17	0
Commercial	32	32	32	32	0
Agriculture	41	41	41	39	0
Gov/Instit	11	11	11	11	0

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$46.59 Million	$12.49 Million	26.8%
Mob Home	$405.79 Thousand	$343.59 Thousand	84.7%
MF Res	$3.02 Million	$787.57 Thousand	26.1%
Commercial	$6.20 Million	$1.75 Million	28.3%
Agriculture	$5.47 Million	$1.55 Million	28.4%
Gov/Instit	$11.69 Million	$2.77 Million	23.7%

Zephyrhills Category 4 Impact Summary

Peak winds 136.mph, peak water depth 0.0ft.

Category 4 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$313.78 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$276.46 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	543	8.8% of total HU.

Population at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	10690	10690	10690	10070	0
Minority	939	939	939	914	0
Over 65	3462	3462	3462	3227	0
Disabled	5103	5103	5103	4816	0
Poverty	1232	1232	1232	1159	0
Lang Iso	838	838	838	736	0
Sing Pnt	634	634	634	619	0

Structures at risk for Category4Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	2454	2454	2454	2354	0
Mob Home	1237	1237	1237	1180	0
MF Res	434	434	434	423	0
Commercial	487	487	487	471	0
Agriculture	22	22	22	19	0
Gov/Instit	107	107	107	105	0

Loss by DOR Use for Category4Maxima

	Exposure	Loss	Percent Loss
SF Res	$479.34 Million	$116.94 Million	24.4%
Mob Home	$110.90 Million	$86.78 Million	78.3%
MF Res	$69.06 Million	$17.41 Million	25.2%
Commercial	$218.63 Million	$52.60 Million	24.1%
Agriculture	$192.06 Million	$37.68 Million	19.6%
Gov/Instit	$10.03 Million	$2.36 Million	23.6%

Pasco County Category 5 Impact Summary
Peak winds 190.mph, peak water depth 21.8ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$23.21 Billion
DOR based Flood Damage:	$3.39 Billion
DOR Structures in Flood Zone:	34443
Census based Wind Damage:	$22.00 Billion
Census based Flood .Damage:	$1.57 Billion
Uninhabitable Housing Units:	34753 20.0% of total HU.

Countywide Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	344765	344765	344765	344765	68049
Minority	22158	22158	22158	22158	2970
Over 65	92481	92481	92481	92481	23062
Disabled	158004	158004	158004	158004	38636
Poverty	36201	36201	36201	36201	7865
Lang Iso	28191	28191	28191	28191	12165
Sing Pnt	17965	17965	17965	17965	3546

Countywide Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	97839	97839	97839	97839	23492
Mob Home	27346	27346	27346	27346	4241
MF Res	14051	14051	14051	14051	4940
Commercial	5427	5427	5427	5427	1476
Agriculture	3909	3909	3909	3909	27
Gov/Instit	1322	1322	1322	1322	267

Countywide Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$27.05 Billion	$14.28 Billion	52.8%
Mob Home	$2.52 Billion	$2.51 Billion	99.6%
MF Res	$2.89 Billion	$1.54 Billion	53.5%
Commercial	$3.47 Billion	$1.87 Billion	53.9%
Agriculture	$2.61 Billion	$1.31 Billion	50.3%
Gov/Instit	$3.55 Billion	$1.70 Billion	48.0%

Impact Summary for Unincorporated Areas

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$10.56 Billion	
DOR based Flood Damage:	$1.55 Billion	
DOR Structures in Flood Zone:	9115	
Census based Wind Damage:	$10.59 Billion	
Census based Flood .Damage:	$647.91 Million	
Uninhabitable Housing Units:	15591	23.4% of total HU.

Unincorporated County Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	137698	137698	137698	137698	44236
Minority	7455	7455	7455	7455	1976
Over 65	33531	33531	33531	33531	16121
Disabled	59616	59616	59616	59616	25845
Poverty	12888	12888	12888	12888	4816
Lang Iso	13585	13585	13585	13585	778
Sing Pnt	6501	6501	6501	6501	2231

Unincorporated County Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	33903	33903	33903	33903	5717
Mob Home	14172	14172	14172	14172	1039
MF Res	5706	5706	5706	5706	1938
Commercial	1894	1894	1894	1894	354
Agriculture	3175	3175	3175	3175	19
Gov/Instit	392	392	392	392	48

Unincorporated County Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$11.30 Billion	$6.05 Billion	53.5%
Mob Home	$1.38 Billion	$1.37 Billion	99.4%
MF Res	$1.06 Billion	$565.98 Million	53.6%
Commercial	$1.15 Billion	$612.00 Million	53.3%
Agriculture	$1.02 Billion	$524.28 Million	51.5%
Gov/Instit	$2.97 Billion	$1.44 Billion	48.4%

Dade City Category 5 Impact Summary

Peak winds 157.mph, peak water depth 0.0ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$298.16 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$221.16 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	379	13.4% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	6231	6231	6231	6231	0
Minority	2334	2334	2334	2334	0
Over 65	1149	1149	1149	1149	0
Disabled	2896	2896	2896	2896	0
Poverty	944	944	944	944	0
Lang Iso	137	137	137	137	0
Sing Pnt	484	484	484	484	0

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	1568	1568	1568	1568	0
Mob Home	122	122	122	122	0
MF Res	148	148	148	148	0
Commercial	309	309	309	309	0
Agriculture	71	71	71	71	0
Gov/Instit	112	112	112	112	0

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$288.37 Million	$132.49 Million	45.9%
Mob Home	$7.55 Million	$7.55 Million	100.0%
MF Res	$46.35 Million	$21.11 Million	45.5%
Commercial	$110.21 Million	$49.30 Million	44.7%
Agriculture	$146.60 Million	$64.78 Million	44.2%
Gov/Instit	$46.64 Million	$22.93 Million	49.2%

New Port Richey Category 5 Impact Summary

Peak winds 176.mph, peak water depth 21.3ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$1.01 Billion	
DOR based Flood Damage:	$241.08 Million	
DOR Structures in Flood Zone:	2905	
Census based Wind Damage:	$882.97 Million	
Census based Flood .Damage:	$112.56 Million	
Uninhabitable Housing Units:	1584	18.8% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	15685	15685	15685	15685	6871
Minority	805	805	805 4555	805 4555	372
Over 65	4555	4555	7978	7978	1570
Disabled	7978	7978	2486	2486	3580
Poverty	2486	2486	8075	8075	1154
Lang Iso	8075	8075	1086	1086	6801
Sing Pnt	1086	1086			507

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	4405	4405	4405	4405	1694
Mob Home	510	510	510	510	251
MF Res	1242	1242	1242	1242	527
Commercial	498	498	498	498	342
Agriculture	3	3	3	3	1
Gov/Instit	118	118	118	118	90

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$900.43 Million	$499.58 Million	55.5%
Mob Home	$24.16 Million	$24.16 Million	100.0%
MF Res	$228.56 Million	$127.40 Million	55.7%
Commercial	$337.27 Million	$207.71 Million	61.6%
Agriculture	$250.05 Million	$145.01 Million	58.0%
Gov/Instit	$2.21 Million	$1.25 Million	56.3%

Port Richey Category 5 Impact Summary
Peak winds 190.mph, peak water depth 20.8ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$318.25 Million	
DOR based Flood Damage:	$283.31 Million	
DOR Structures in Flood Zone:	1614	
Census based Wind Damage:	$182.09 Million	
Census based Flood .Damage:	$108.14 Million	
Uninhabitable Housing Units:	272	15.6% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	2986	2986	2986	2986	2986
Minority	105	105	105	105	105
Over 65	718	718	718	718	718
Disabled	1955	1955	1955	1955	1955
Poverty	482	482	482	482	482
Lang Iso	472	472	472	472	472
Sing Pnt	125	125	125	125	125

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	979	979	979	979	928
Mob Home	62	62	62	62	57
MF Res	433	433	433	433	422
Commercial	192	192	192	192	184
Agriculture	0	0	0	0	0
Gov/Instit	23	23	23	23	23

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$263.40 Million	$183.01 Million	69.5%
Mob Home	$3.54 Million	$3.51 Million	99.2%
MF Res	$94.97 Million	$66.20 Million	69.7%
Commercial	$77.06 Million	$50.75 Million	65.9%
Agriculture	$23.64 Million	$14.77 Million	62.5%
Gov/Instit	$0.00 dollars	$0.00 dollars	NaN %

Town of St. Leo Category 5 Impact Summary
Peak winds 163.mph, peak water depth 0.0ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$28.77 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$9.91 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	3	6.8% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	609	609	609	609	0
Minority	85	85	85	85	0
Over 65	38	38	38	38	0
Disabled	137	137	137	137	0
Poverty	28	28	28	28	0
Lang Iso	158	158	158	158	0
Sing Pnt	4	4	4	4	0

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	31	31	31	31	0
Mob Home	7	7	7	7	0
MF Res	2	2	2	2	0
Commercial	8	8	8	8	0
Agriculture	17	17	17	17	0
Gov/Instit	7	7	7	7	0

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$9.63 Million	$4.72 Million	49.0%
Mob Home	$726.29 Thousand	$707.59 Thousand	97.4%
MF Res	$3.58 Million	$1.08 Million	30.1%
Commercial	$2.57 Million	$876.29 Thousand	34.1%
Agriculture	$41.63 Million	$17.59 Million	42.2%
Gov/Instit	$10.71 Million	$3.80 Million	35.5%

San Antonio Category 5 Impact Summary
Peak winds 170.mph, peak water depth 0.0ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$37.33 Million
DOR based Flood Damage:	$0.00 dollars
DOR Structures in Flood Zone:	0
Census based Wind Damage:	$52.91 Million
Census based Flood .Damage:	$0.00 dollars
Uninhabitable Housing Units:	56 19.6% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	615	615	615	615	0
Minority	26	26	26	26	0
Over 65	48	48	48	48	0
Disabled	275	275	275	275	0
Poverty	62	62	62	62	0
Lang Iso	98	98	98	98	0
Sing Pnt	27	27	27	27	0

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	204	204	204	204	0
Mob Home	6	6	6	6	0
MF Res	17	17	17	17	0
Commercial	32	32	32	32	0
Agriculture	41	41	41	41	0
Gov/Instit	11	11	11	11	0

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$46.59 Million	$23.78 Million	51.0%
Mob Home	$405.79 Thousand	$402.34 Thousand	99.1%
MF Res	$3.02 Million	$1.49 Million	49.3%
Commercial	$6.20 Million	$3.31 Million	53.3%
Agriculture	$5.47 Million	$3.02 Million	55.3%
Gov/Instit	$11.69 Million	$5.33 Million	45.5%

Zephyrhills Category 5 Impact Summary

Peak winds 157.mph, peak water depth 0.0ft.

Category 5 MaximaDamage Summary:

Tax Parcel based Wind Damage:	$536.25 Million	
DOR based Flood Damage:	$0.00 dollars	
DOR Structures in Flood Zone:	0	
Census based Wind Damage:	$480.56 Million	
Census based Flood .Damage:	$0.00 dollars	
Uninhabitable Housing Units:	990	16.1% of total HU.

Population at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
Total	10690	10690	10690	10690	0
Minority	939	939	939	939	0
Over 65	3462	3462	3462	3462	0
Disabled	5103	5103	5103	5103	0
Poverty	1232	1232	1232	1232	0
Lang Iso	838	838	838	838	0
Sing Pnt	634	634	634	634	0

Structures at risk for Category5Maxima

	Total	TS Wind	Hur Wind	Ext Wind	Flooded
SF Res	2454	2454	2454	2454	0
Mob Home	1237	1237	1237	1237	0
MF Res	434	434	434	434	0
Commercial	487	487	487	487	0
Agriculture	22	22	22	22	0
Gov/Instit	107	107	107	107	0

Loss by DOR Use for Category5Maxima

	Exposure	Loss	Percent Loss
SF Res	$479.34 Million	$215.16 Million	44.9%
Mob Home	$110.90 Million	$110.34 Million	99.5%
MF Res	$69.06 Million	$32.39 Million	46.9%
Commercial	$218.63 Million	$99.81 Million	45.7%
Agriculture	$192.06 Million	$74.13 Million	38.6%
Gov/Instit	$10.03 Million	$4.41 Million	44.0%

Pasco USGS 50 Year Earthquake Impact Summary

The USGS 50 year 10 earthquake risk peak ground acceleration (PGA) value was used to create four zones:

0.01g Almost none
0.01g Minimal
0.02gVery low
0.03g Low

Population at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	263433	12878	70206	121589	26564	23369	13761
very low	81332	9280	22275	36415	9637	4822	4204
Low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Structures at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	117172	83883	15086	12597	3658	900	1048
very low	32722	13956	12260	1454	1769	422	2861
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$33.30 BI	$23.37 BI	$1.26 BI	$2.58 BI	$2.66 BI	$1.98 BI	$1.45 BI
very low	$8.91 BI	$3.68 BI	$1.26 BI	$305.66 MI	$801.67 MI	$756.89 MI	$2.10 BI
low	$1.86 BI	$0.00	$0.00	$0.00	$1.86 BI	$0.00	$0.00
medium	$38.93 TH	$0.00	$0.00	$0.00	$38.93 TH	$0.00	$0.00

Pasco Unincorporated Areas Impact Summary USGS 50 Year Earthquake

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	244762	11968	64933	111656	23596	14822	12550
very low	63187	5896	17578	28004	7371	3591	3055
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	108733	78523	14512	10926	2972	757	1043
very low	25483	9837	10933	872	935	196	2710
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$30.99 BI	$22.22 BI	$1.23 BI	$2.26 BI	$2.25 BI	$1.60 BI	$1.43 BI
very low	$7.04 BI	$2.88 BI	$1.14 BI	$185.64 MI	$466.08 MI	$349.85 MI	$2.02 BI
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Dade City USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	0	0	0	0	0	0	0
very low	6231	2334	1149	2896	944	137	484
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	0	0	0	0	0	0	0
very low	2330	1568	122	148	309	112	71
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
very low	$645.71 MI	$288.37 MI	$7.55 MI	$46.35 MI	$110.21 MI	$146.60 MI	$46.64 MI
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

New Port Richey USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	15685	805	4555	7978	2486	8075	1086
very low	0	0	0	0	0	0	0
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	6776	4405	510	1242	498	118	3
very low	0	0	0	0	0	0	0
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$1.74 BI	$900.43 MI	$24.16 MI	$228.56 MI	$337.27 MI	$250.05 MI	$2.21 MI
very low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Port Richey USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	2986	105	718	1955	482	472	125
very low	0	0	0	0	0	0	0
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	1627	935	60	424	185	23	0
very low	62	44	2	9	7	0	0
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$448.65 MI	$254.33 MI	$3.35 MI	$93.01 MI	$74.32 MI	$23.64 MI	$0.00
very low	$13.97 MI	$9.07 MI	$189.97 TH	$1.96 MI	$2.75 MI	$0.00	$0.00
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Town of St. Leo USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	0	0	0	0	0	0	0
very low	609	85	38	137	28	158	4
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	0	0	0	0	0	0	0
very low	72	31	7	2	8	7	17
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
very low	$68.85 MI	$9.63 MI	$726.29 TH	$3.58 MI	$2.57 MI	$41.63 MI	$10.71 MI
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

San Antonio USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	0	0	0	0	0	0	0
very low	615	26	48	275	62	98	27
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	0	0	0	0	0	0	0
very low	311	204	6	17	32	11	41
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
very low	$73.37 MI	$46.59 MI	$405.79 TH	$3.02 MI	$6.20 MI	$5.47 MI	$11.69 MI
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Zephyrhills USGS 50 Year Earthquake Impact Summary

Structures at risk for USGS 50 Year Earthquake

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
ext. low	0	0	0	0	0	0	0
very low	10690	939	3462	5103	1232	838	634
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Population at risk for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	0	0	0	0	0	0	0
very low	4741	2454	1237	434	487	107	22
low	0	0	0	0	0	0	0
medium	0	0	0	0	0	0	0

Value of Structures by DOR Use for USGS 50 Year Earthquake

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
ext. low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
very low	$1.08 BI	$479.34 MI	$110.90 MI	$69.06 MI	$218.63 MI	$192.06 MI	$10.03 MI
low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
medium	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Sinkholes

Data Notes for KAC Sinkhole Risks

This variable contains a general assessment of the potential of the site for sinkhole development. Sinkhole potential was computed as follows. Sinkhole potential was determined according to points assigned to each 90m grid cell in the state. Three classes of points were assigned, for distance to historic sinkholes, geology, and soils:

2 points if cell was within 2000m of an existing sinkhole;

1point if cell between 2000m and 5000m of an existing sinkhole;

1point if the cell was in the same USGS surface geologic unit as an existing sinkhole;

1point if the cell was in the same NRCS soil unit as an existing sinkhole.

Thus, each cell received an ultimate value from 0 to 4:

0: Very Low risk

1: low risk

2: moderate risk

3: high risk 4very high risk. This chapter contains notes on the data sources, how the population is segmented in the reports, and some basic notes on how loss estimates were calculated.

1.1 Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3: Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. The relevant hazard data such as wind and water levels were extracted from the TAOS output files and processed by the automatic report generator.

KAC Sinkhole Risks Hazards for Pasco

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	168356	11513	39776	73565	16511	15662	8313
High	83667	4873	25115	40426	9203	6620	4302
Very High	45518	2809	14174	22137	5256	888	2604
Extreme	38441	2305	12004	18469	4493	1058	2385
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	329	143	120	5	1	4	56
Medium	68363	39575	15522	6794	2463	817	3192
High	35231	23903	5659	3733	1409	274	253
Very High	25186	18414	3503	2130	879	120	140
Extreme	15649	12632	1661	761	450	72	73
Adjacent	711	588	72	34	14	1	2

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$213.72 MI	$47.12 MI	$16.55 MI	$18.01 TH	$37.50 TH	$101.76 MI	$48.24 MI
Medium	$21.47 BI	$12.84 BI	$1.50 BI	$1.38 BI	$1.34 BI	$1.46 BI	$2.95 BI
High	$11.20 BI	$6.23 BI	$472.29 MI	$823.89 MI	$2.75 BI	$739.79 MI	$184.01 MI
Very High	$5.91 BI	$4.23 BI	$299.29 MI	$437.62 MI	$583.55 MI	$238.75 MI	$116.54 MI
Extreme	$4.55 BI	$2.78 BI	$145.05 MI	$145.96 MI	$1.29 BI	$107.82 MI	$89.49 MI
Adjacent	$268.53 MI	$113.29 MI	$6.99 MI	$4.76 MI	$141.37 MI	$54.37 TH	$2.06 MI

KAC Sinkhole Risks for PASCO Unincorporated Areas

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	150919	9650	34429	63941	14009	7769	7324
High	71067	3749	22011	34469	7480	5253	3428
Very High	42079	1703	13281	20610	4713	765	2374
Extreme	35101	2104	11378	17233	4027	844	2118
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	329	143	120	5	1	4	56
Medium	60523	35117	14349	5747	1636	589	3085
High	30815	21222	5102	3120	967	165	239
Very High	22787	16683	3389	1798	716	96	105
Extreme	15168	12298	1626	694	409	68	73
Adjacent	707	587	71	33	13	1	2

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$113.64 MI	$47.12 MI	$16.55 MI	$18.01 TH	$37.50 TH	$1.68 MI	$48.24 MI
Medium	$19.46 BI	$11.91 BI	$1.41 BI	$1.19 BI	$981.01 MI	$1.09 BI	$2.88 BI
High	$8.29 BI	$5.71 BI	$426.94 MI	$704.15 MI	$718.96 MI	$545.14 MI	$179.40 MI
Very High	$5.21 BI	$3.87 BI	$292.23 MI	$364.78 MI	$445.43 MI	$145.39 MI	$89.88 MI
Extreme	$3.62 BI	$2.71 BI	$143.14 MI	$123.44 MI	$464.81 MI	$87.30 MI	$89.49 MI
Adjacent	$133.80 MI	$113.18 MI	$6.97 MI	$4.49 MI	$7.04 MI	$54.37 TH	$2.06 MI

KAC Sinkhole Risks for Dade City

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	1313	724	414	1005	271	137	148
High	3337	547	638	1150	365	0	159
Very High	1581	1063	97	741	308	0	177
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	215	138	45	19	2	11	0
Medium	1053	659	54	57	180	74	29
High	694	506	17	46	95	20	10
Very High	316	225	5	21	28	5	32
Extreme	52	40	1	5	4	2	0
Adjacent	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$34.72 MI	$20.12 MI	$2.60 MI	$1.98 MI	$2.02 MI	$7.99 MI	$0.00
Medium	$268.66 MI	$106.15 MI	$3.56 MI	$10.83 MI	$56.30 MI	$74.18 MI	$17.63 MI
High	$182.13 MI	$95.80 MI	$1.15 MI	$26.85 MI	$30.31 MI	$24.91 MI	$3.11 MI
Very High	$140.63 MI	$56.72 MI	$169.59 TH	$5.42 MI	$21.14 MI	$31.27 MI	$25.91 MI
Extreme	$19.57 MI	$9.56 MI	$69.80 TH	$1.27 MI	$437.19 TH	$8.24 MI	$0.00
Adjacent	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Sinkhole Risks for New Port Richey

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	3365	107	1282	2205	649	6736	232
High	7122	454	1851	3751	1136	1002	534
Very High	1858	43	796	786	235	123	53
Extreme	3340	201	626	1236	466	214	267
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	1497	874	130	351	119	22	1
High	2830	1759	270	513	209	77	2
Very High	1898	1393	80	290	119	16	0
Extreme	381	258	26	62	33	2	0
Adjacent	4	1	1	1	1	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium	$317.70 MI	$185.04 MI	$4.92 MI	$53.20 MI	$55.20 MI	$17.56 MI	$1.78 MI
High	$713.96 MI	$351.06 MI	$13.73 MI	$85.07 MI	$102.91 MI	$160.74 MI	$434.38 TH
Very High	$523.74 MI	$284.22 MI	$4.14 MI	$63.62 MI	$112.30 MI	$59.47 MI	$0.00
Extreme	$132.57 MI	$47.55 MI	$1.19 MI	$21.26 MI	$50.30 MI	$12.28 MI	$0.00
Adjacent	$406.22 TH	$106.04 TH	$20.77 TH	$270.11 TH	$9.29 TH	$0.00	$0.00

KAC Sinkhole Risks for Port Richey

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	2986	105	718	1955	482	291	125
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	62	44	2	9	7	0	0
Medium	979	578	38	255	97	11	0
High	202	117	8	17	52	8	0
Very High	79	61	5	5	7	1	0
Extreme	26	26	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$13.97 MI	$9.07 MI	$189.97 TH	$1.96 MI	$2.75 MI	$0.00	$0.00
Medium	$267.04 MI	$156.71 MI	$2.05 MI	$55.20 MI	$40.64 MI	$12.43 MI	$0.00
High	$57.47 MI	$28.14 MI	$318.40 TH	$2.49 MI	$20.71 MI	$5.81 MI	$0.00
Very High	$15.78 MI	$11.37 MI	$443.95 TH	$907.68 TH	$2.32 MI	$739.96 TH	$0.00
Extreme	$7.03 MI	$7.03 MI	$0.00	$0.00	$0.00	$0.00	$0.00
Adjacent	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Sinkhole Risks for Town of St. Leo

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	609	85	38	137	28	158	4
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	72	31	7	2	8	7	17
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium	$68.85 MI	$9.63 MI	$726.29 TH	$3.58 MI	$2.57 MI	$41.63 MI	$10.71 MI
High	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Very High	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Extreme	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Adjacent	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Sinkhole Risks for San Antonio

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	615	26	48	275	62	98	27
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	311	204	6	17	32	11	41
High	0	0	0	0	0	0	0
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium	$73.37 MI	$46.59 MI	$405.79 TH	$3.02 MI	$6.20 MI	$5.47 MI	$11.69 MI
High	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Very High	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Extreme	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Adjacent	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Sinkhole Risks for Zephyrhills

Population at risk for KAC Sinkhole Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low	0	0	0	0	0	0	0
Medium	8549	816	2847	4047	1010	473	453
High	2141	123	615	1056	222	365	181
Very High	0	0	0	0	0	0	0
Extreme	0	0	0	0	0	0	0
Adjacent	0	0	0	0	0	0	0

Structures at risk for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	0	0	0	0	0	0	0
Medium	3895	2094	934	360	388	102	17
High	688	298	262	37	86	3	2
Very High	106	52	24	16	9	2	3
Extreme	22	10	8	0	4	0	0
Adjacent	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Sinkhole Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium	$957.96 MI	$426.87 MI	$76.99 MI	$60.70 MI	$198.20 MI	$186.99 MI	$8.21 MI
High	$100.30 MI	$42.94 MI	$30.15 MI	$5.32 MI	$17.63 MI	$3.19 MI	$1.07 MI
Very High	$18.21 MI	$8.07 MI	$2.30 MI	$2.89 MI	$2.32 MI	$1.88 MI	$750.17 TH
Extreme	$2.58 MI	$1.46 MI	$642.05 TH	$0.00	$478.74 TH	$0.00	$0.00
Adjacent	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe Storm Risks

Data Notes for Severe Storm Risks

The National Weather Service is able to determine whether damage was caused by a tornado or straight line winds from a severe storm. Therefore, Severe storms and Tornados were separated in this Appendix. This volume describes the threat of damage from severe storms, also referred to as thunderstorms. The threat is defined in terms of the chances that a thunderstorm or lightning will cause economic damage or loss over $50. This probability is in five categories: 1in 25 1in 50 1in 100 1in 200 1in 500

1.1 Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3: Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. The relevant hazard data such as wind and water levels were extracted from the TAOS output files.

1.2 Department of Revenue Tax Record notes

The 2000 Department of Revenue Tax Records were used to create an exposure database for use in these analyses.

1.2.1 Georeferencing

A three stage process was used for georeferencing the tax data. Stage one attempted an address match against the Census TIGER file road network. Stage one georeferencing was successful in 70%of cases. Stage two attempted a partial address match, using both zip code and the Public Land Survey System (PLSS) as supplemental data. Stage two georeferencing matched an additional 15% of locations. Stage three, which
Matched the final 15%of primarily rural locations, used the PLSS data, zip code, and satellite derived and cover to allocate these remaining locations to built locations in the designated Township/Range/Section grid cell. In urban counties the percentage of address matches (Stages one and two) was 90% or better; in a few rural areas the match rate was as low as 60%.

Census Designated Places (CDP) were used for sub-county regions to insure consistency with other Census based products.

Severe Storm Risks Hazards for Pasco

KAC Severe Storm Damage Risk

Population at risk for KAC Severe Storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	344765	22158	92481	158004	36201	28191	17965
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	149893	97838	27346	14051	5427	1322	3909
Medium (100)	1	1	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$100.08 MI	$0.00	$0.00	$0.00	$0.00	$100.08 MI	$0.00
High (50)	$42.11 BI	$27.05 BI	$2.52 BI	$2.89 BI	$3.47 BI	$2.64 BI	$3.55 BI
Medium (100)	$1.86 BI	$105.14 TH	$0.00	$0.00	$1.86 BI	$0.00	$0.00
Low (200)	$38.93 TH	$0.00	$0.00	$0.00	$38.93 TH	$0.00	$0.00
V. Low (500)	$772.78 MI	$0.00	$0.00	$0.00	$772.78 MI	$0.00	$0.00

Severe storm Risks Hazards for Pasco Unincorporated Areas

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	307949	17864	82511	139660	30967	18413	15605
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	134215	88359	25445	11798	3907	953	3753
Medium (100)	1	1	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$38.03 BI	$25.09 BI	$2.37 BI	$2.45 BI	$2.72 BI	$1.95 BI	$3.45 BI
Medium (100)	$105.14 TH	$105.14 TH	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for Dade City

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	6231	2334	1149	2896	944	137	484
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	2330	1568	122	148	309	112	71
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$645.71 MI	$288.37 MI	$7.55 MI	$46.35 MI	$110.21 MI	$146.60 MI	$46.64 MI
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for New Port Richey

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	15685	805	4555	7978	2486	8075	1086
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	6776	4405	510	1242	498	118	3
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$1.74 BI	$900.43 MI	$24.16 MI	$228.56 MI	$337.27 MI	$250.05 MI	$2.21 MI
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for Port Richey

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	2986	105	718	1955	482	472	125
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	1689	979	62	433	192	23	0
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$462.62 MI	$263.40 MI	$3.54 MI	$94.97 MI	$77.06 MI	$23.64 MI	$0.00
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for Town of St. Leo

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	609	85	38	137	28	158	4
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	72	31	7	2	8	7	17
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$68.85 MI	$9.63 MI	$726.29 TH	$3.58 MI	$2.57 MI	$41.63 MI	$10.71 MI
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for San Antonio

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	615	26	48	275	62	98	27
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	311	204	6	17	32	11	41
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$73.37 MI	$46.59 MI	$405.79 TH	$3.02 MI	$6.20 MI	$5.47 MI	$11.69 MI
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Severe storm Risks Hazards for Zephyrhills

KAC Severe storm Damage Risk

Population at risk for KAC Severe storm Damage Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
V. High (25)	0	0	0	0	0	0	0
High (50)	10690	939	3462	5103	1232	838	634
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Structures at risk for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	0	0	0	0	0	0	0
High (50)	4741	2454	1237	434	487	107	22
Medium (100)	0	0	0	0	0	0	0
Low (200)	0	0	0	0	0	0	0
V. Low (500)	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Severe storm Damage Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
V. High (25)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (50)	$1.08 BI	$479.34 MI	$110.90 MI	$69.06 MI	$218.63 MI	$192.06 MI	$10.03 MI
Medium (100)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Low (200)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
V. Low (500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Tornado

Data Notes for KAC Tornado Risks

This volume describes the threat of damage from tornados, based on an analysis of National Severe Storms Forecast Center data from 1950-2003.

This chapter contains notes on the data sources, how the population is segmented in the reports, and some basic notes on how loss estimates were calculated.

1.1 Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3: Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. The relevant hazard data such as wind and water levels were extracted from the TAOS output files.

1.2 Department of Revenue Tax Record notes

The 2000 Department of Revenue Tax Records were used to create an exposure database for use in these analyses.

1.2.1 Georeferencing

A three stage process was used for georeferencing the tax data. Stage one attempted an address match against the Census TIGER file road network. Stage one georeferencing was successful in 70%of cases. Stage two attempted a partial address match, using both zip code and the Public Land Survey System (PLSS) as supplemental data. Stage two georeferencing matched an additional 15% of locations. Stage three, which matched the final15%of primarily rural locations, used the PLSS data, zipcode, and satellite derived land cover to allocate these remaining locations to built locations in the designated Township/Range/Section grid cell. In urban counties the percentage of address matches (Stages one and two) was 90% or better; in a few rural areas the match rate was as low as 60%.

Census Designated Places (CDP) were used for sub-county regions to insure consistency with other Census based products.

KAC Tornado Risks Hazards for Pasco

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	331774	20941	89026	152078	34923	26920	17178
Very High (1 in 50))	12991	1217	3455	5926	1278	1271	787

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	2	0	2	0	0	0	0
High (1 in 100)	145190	95327	26045	13756	5187	1216	3659
Very High (1 in 50))	4702	2512	1299	295	240	106	250

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$100.08 MI	$0.00	$0.00	$0.00	$0.00	$100.08 MI	$0.00
Medium (1 in 250)	$29.35 MI	$0.00	$82.22 TH	$0.00	$0.00	$29.26 MI	$0.00
High (1 in 100)	$42.92 BI	$26.55 BI	$2.37 BI	$2.86 BI	$5.23 BI	$2.49 BI	$3.42 BI
Very High (1 in 50))	$1.02 BI	$503.27 MI	$145.45 MI	$31.76 MI	$92.73 MI	$118.42 MI	$131.04 MI

KAC Tornado Risks Hazards for Pasco Unincorporated Areas

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	300309	17265	80413	136254	30192	17513	15216
Very High (1 in 50))	7640	599	2098	3406	775	900	389

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	2	0	2	0	0	0	0
High (1 in 100)	131516	87154	24374	11722	3830	923	3513
Very High (1 in 50))	2698	1206	1069	76	77	30	240

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$82.22 TH	$0.00	$82.22 TH	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$37.38 BI	$24.82 BI	$2.25 BI	$2.44 BI	$2.68 BI	$1.87 BI	$3.32 BI
Very High (1 in 50))	$655.16 MI	$273.91 MI	$123.99 MI	$6.95 MI	$39.93 MI	$82.50 MI	$127.88 MI

KAC Tornado Risks Hazards for Dade City

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	6231	2334	1149	2896	944	137	484
Very High (1 in 50))	0	0	0	0	0	0	0

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	215	138	45	19	2	11	0
High (1 in 100)	2115	1430	77	129	307	101	71
Very High (1 in 50))	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$34.72 MI	$20.12 MI	$2.60 MI	$1.98 MI	$2.02 MI	$7.99 MI	$0.00
High (1 in 100)	$610.99 MI	$268.24 MI	$4.95 MI	$44.37 MI	$108.19 MI	$138.60 MI	$46.64 MI
Very High (1 in 50))	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tornado Risks Hazards for New Port Richey

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	15685	805	4555	7978	2486	8075	1086
Very High (1 in 50))	0	0	0	0	0	0	0

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	6776	4405	510	1242	498	118	3
Very High (1 in 50))	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$1.74 BI	$900.43 MI	$24.16 MI	$228.56 MI	$337.27 MI	$250.05 MI	$2.21 MI
Very High (1 in 50))	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tornado Risks Hazards for Port Richey

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	2986	105	718	1955	482	472	125
Very High (1 in 50))	0	0	0	0	0	0	0

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	1689	979	62	433	192	23	0
Very High (1 in 50))	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$462.62 MI	$263.40 MI	$3.54 MI	$94.97 MI	$77.06 MI	$23.64 MI	$0.00
Very High (1 in 50))	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tornado Risks Hazards for Town of St. Leo

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	609	85	38	137	28	158	4
Very High (1 in 50))	0	0	0	0	0	0	0

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	72	31	7	2	8	7	17
Very High (1 in 50))	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$68.85 MI	$9.63 MI	$726.29 TH	$3.58 MI	$2.57 MI	$41.63 MI	$10.71 MI
Very High (1 in 50))	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tornado Risks Hazards for San Antonio

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	615	26	48	275	62	98	27
Very High (1 in 50))	0	0	0	0	0	0	0

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	311	204	6	17	32	11	41
Very High (1 in 50))	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$73.37 MI	$46.59 MI	$405.79 TH	$3.02 MI	$6.20 MI	$5.47 MI	$11.69 MI
Very High (1 in 50))	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tornado Risks Hazards for Zephyrhills

Population at risk for KAC Tornado Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	5339	321	2105	2583	729	467	236
Very High (1 in 50))	5351	618	1357	2520	503	371	398

Structures at risk for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	0	0	0	0	0	0	0
Medium (1 in 250)	0	0	0	0	0	0	0
High (1 in 100)	2737	1148	1007	215	324	31	12
Very High (1 in 50))	2004	1306	230	219	163	76	10

Value of Structures by DOR Use for KAC Tornado Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Low (1 in 500)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Medium (1 in 250)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
High (1 in 100)	$712.55 MI	$249.98 MI	$89.43 MI	$44.26 MI	$165.87 MI	$156.14 MI	$6.88 MI
Very High (1 in 50))	$367.48 MI	$229.36 MI	$21.47 MI	$24.81 MI	$52.76 MI	$35.93 MI	$3.15 MI

Tsunami

Data Notes for KAC Tsunami Risks

Tsunami risk in Florida is difficult to assess, as there are no reliable historical records and few publications on the subject. Therefore, simulation techniques were used. Three types of events were simulated: Caribbean volcanic events, Caribbean and Central American earthquakes, and East Atlantic (the Cumbre Vieja volcano, on the island of La Palma, in the Canary Islands) volcanic events. In general, on the Gulf Coast of Florida, these events produced at worst a 4 meter wave, while in some parts of the Atlantic coast this value grew to 6 to7 meters. Expert Opinion suggests that these would be approximately1 in 500 year events. Note that these areas are mostly in the Category 5 hurricane zone, which is probably an event of comparable frequency in North Florida. However, a tsunami wave from the worst case La Palma event would more than likely inundate the entire Atlantic coastline, as opposed to only a few dozen miles of coastline in the case of a hurricane. The potential and magnitude of such an event is highly controversial, with a minority of researchers suggesting waves as high as 40 meters, with most estimates in the 5 meter range.

This section contains notes on the data sources, how the population is segmented in the reports, and some basic notes on how loss estimates were calculated.

1.1 Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3: Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. The relevant hazard data such as wind and water levels were extracted from the TAOS output files.

1.2 Department of Revenue Tax Record notes

The 2000 Department of Revenue Tax Records were used to create an exposure database for use in these analyses.

1.2.1 Georeferencing

A three stage process was used for georeferencing the tax data. Stage one attempted an address match against the Census TIGER file road network. Stage one georeferencing was successful in 70%of cases. Stage two attempted a partial address match, using both zip code and the Public Land Survey System (PLSS) as supplemental data. Stage two georeferencing matched an additional 15% of locations. Stage three, which matched the final 15%of primarily rural locations, used the PLSS data, zip code, and satellite derived land cover to allocate these remaining locations to built locations in the designated Township/Range/Section grid cell. In urban counties the percentage of address matches (Stages one and two) was 90% or better; in a few rural areas the match rate was as low as 60%.

Census Designated Places (CDP) were used for sub-county regions to insure consistency with other Census based products.

KAC Tsunami Risks Hazards for Pasco

Population at risk for KAC Tsunami Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Out of Zone	139154	6082	44748	71220	15680	17314	7726
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Structures at risk for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	68603	50343	7377	7717	2424	647	95
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	$17.61 BI	$12.48 BI	$513.07 MI	$1.54 BI	$1.65 BI	$1.28 BI	$153.79 MI
500 yr Tsunami	$29.26 MI	$0.00	$0.00	$0.00	$0.00	$29.26 MI	$0.00
	$1.86 BI	$0.00	$0.00	$0.00	$1.86 BI	$0.00	$0.00

Note: There is no Tsunami risk for City of Dade City, City of Zephyrhills, Town of St. Leo, or City of San Antonio as all are located on the East side of Pasco County.

KAC Tsunami Risks Hazards for Unincorporated Pasco

Population at risk for KAC Tsunami Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Out of Zone	125569	5414	40637	63550	13490	9263	6930
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Structures at risk for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	61530	46069	6843	6236	1778	513	91
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	$15.57 BI	$11.53 BI	$487.39 MI	$1.25 BI	$1.25 BI	$919.56 MI	$133.47 MI
500 yr Tsunami	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tsunami Risks Hazards for New Port Richey

Population at risk for KAC Tsunami Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Out of Zone	10599	563	3393	5715	1708	7579	671
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Structures at risk for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	5414	3320	471	1053	458	110	2
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	$1.46 BI	$691.38 MI	$22.18 MI	$197.99 MI	$317.06 MI	$231.17 MI	$2.03 MI
500 yr Tsunami	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

KAC Tsunami Risks Hazards for Port Richey

Population at risk for KAC Tsunami Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Out of Zone	2986	105	718	1955	482	472	125
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Structures at risk for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	1627	935	60	424	185	23	0
500 yr Tsunami	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

Value of Structures by DOR Use for KAC Tsunami Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Out of Zone	$448.65 MI	$254.33 MI	$3.35 MI	$93.01 MI	$74.32 MI	$23.64 MI	$0.00
500 yr Tsunami	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Wildland Fire

Data Notes for FDOF Wildland Fire Levels of Concern

Note: This is the official wildland fire level of concern (LOC) layer from the Division of Forestry. For a variety of production reasons, we were unable to use this layer for the calculation of loss costs. This layer will be added to the on-line mapping system as soon as it is available.

The Level of Concern is an integer scaled from 0 to 9 indicating the relative risk of Wildland Fire, and is an output of the Florida Division of Forestry Fire Risk Assessment System (FRAS). More information on FRAS and the LOC value is available at:

http://flame.fl-dof.com/fras1/FRAS User Guide.pdf

This data set is courtesy of the Florida Division of Forestry, and comes with the following disclaimer:

The user assumes the entire risk related to their use of the FRAS published maps. The Florida Department of Agriculture and Consumer Services is providing these data as is and disclaims any and all warranties, whether expressed or implied, including (without limitation) any implied warranties of merchantability or fitness for any particular purpose. In no event will the Florida Department of Agriculture and Consumer Services be liable to you or to any third party for any direct, indirect, incidental, consequential, special, or exemplary damages or lost profit resulting from any use of misuse of this data.

This chapter contains notes on the data sources, how the population is segmented in the reports, and some basic notes on how loss estimates were calculated.

1.1 Data Sources

This document presents population at risk, housing, and damage estimates based on Census 2000 (U.S. Census Bureau, 2000 Census of Population and Housing, Summary File3:Technical Documentation, 2002.) Tax records from the same time frame (2000) were obtained from the Florida Department of Revenue. All other data (topography, land cover, historical hurricane activity) is from Spring 2004. The analysis is at the level of the census block group (BG). Each BG is treated as a point. There levant hazard data such as wind and water levels were extracted from the TAOS output files and processed by the automatic report generator.

1.2 Department of Revenue Tax Record notes

The 2000 Department of Revenue Tax Records were used to create an exposure data base for use in these analyses.

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1.2.1 Georeferencing

A three stage process was used for georeferencing the tax data. Stage one attempted an address match against the Census TIGER fileroad network. Stage one georeferencing was successful in 70%of cases. Stage two attempted a partial address match, using both zip code and the Public Land Survey System (PLSS) as supplemental data. Stage two georeferencing matched an additional 15% of locations.

Stage three, which matched the final15%of primarily rural locations, used the PLSS data, zip code, and satellite derived land cover to allocate these remaining locations to built locations in the designated Township/Range/Section grid cell. In urban counties the percentage of address matches (Stages one and two) was 90% or better; in a few rural areas the match rate was as low as 60%.
Census Designated Places (CDP) were used for sub-county regions to insure consistency with other Census based products.

FDOF Wildland Fire Levels of Concern Hazards for Pasco

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	14067	1391	1825	5339	1384	414	813
Level 2	13066	779	4039	5511	975	639	567
Level 3	32494	1535	9299	16046	3470	1069	1604
Level 4	8725	607	2345	4787	934	970	469
Level 5(medium)	39890	4505	8372	16862	4596	4930	2098
Level 6	24217	906	7950	10991	2069	890	1097
Level 7	38246	3161	7898	15808	3985	4760	1858
Level 8	13702	864	2284	6005	1449	695	780
Level 9(high)	9844	479	1749	4825	1604	476	700

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	23064	1360	13734	4280	2601	743	346
Level 2	17263	6019	6302	3177	945	295	525
Level 3	13251	5413	4577	1766	716	242	537
Level 4	3418	2175	638	194	112	31	268
Level 5(medium)	14067	7999	3466	1083	775	133	611
Level 6	7790	3873	2386	856	277	91	307
Level 7	22346	13734	4280	2601	743	346	642
Level 8	11340	6302	3177	945	295	525	96
Level 9(high)	7867	4577	1766	716	242	537	29

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level (low)	$6.83 BI	$396.79 MI	$4.18 BI	$448.91 MI	$584.66 MI	$544.11 MI	$671.87 MI
Level	$5.29 BI	$2.07 BI	$1.60 BI	$357.55 MI	$310.08 MI	$467.65 MI	$491.63 MI
Level	$4.27 BI	$1.67 BI	$867.86 MI	$224.53 MI	$698.05 MI	$213.94 MI	$597.00 MI
Level	$1.18 BI	$683.13 MI	$57.52 MI	$68.58 MI	$59.28 MI	$29.47 MI	$285.56 MI
Level (medium)	$4.03 BI	$2.25 BI	$315.77 MI	$197.24 MI	$524.79 MI	$174.33 MI	$575.02 MI
Level	$2.19 BI	$1.21 BI	$255.60 MI	$175.10 MI	$213.98 MI	$66.02 MI	$267.28 MI
Level	$6.99 BI	$4.18 BI	$448.91 MI	$584.66 MI	$544.11 MI	$671.87 MI	$558.69 MI
Level	$3.29 BI	$1.60 BI	$357.55 MI	$310.08 MI	$467.65 MI	$491.63 MI	$62.11 MI
Level (high)	$2.63 BI	$867.86 MI	$224.53 MI	$698.05 MI	$213.94 MI	$597.00 MI	$23.97 MI

FDOF Wildland Fire Levels of Concern Hazards for Unincorporated Pasco

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	12669	1023	1394	4418	1165	360	687
Level 2	11199	589	3309	4669	870	283	521
Level 3	32494	1535	9299	16046	3470	1069	1604
Level 4	5923	425	1881	3317	533	612	244
Level 5(medium)	29384	2789	5538	11604	2910	1141	1376
Level 6	22127	629	7478	10211	1835	815	988
Level 7	33118	2364	7113	13289	3124	4527	1505
Level 8	13702	864	2284	6005	1449	695	780
Level 9(high)	9731	471	1741	4806	1560	378	668

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	21045	904	12848	4129	2242	600	322
Level 2	16081	5315	6136	3035	815	268	512
Level 3	12278	4844	4451	1661	566	225	531
Level 4	3233	2068	602	175	99	27	262
Level 5(medium)	10286	5760	2782	727	400	71	546
Level 6	7118	3493	2321	780	189	34	301
Level 7	20761	12848	4129	2242	600	322	620
Level 8	10862	6136	3035	815	268	512	96
Level 9(high)	7463	4451	1661	566	225	531	29

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level (low)	$6.23 BI	$304.62 MI	$4.00 BI	$430.79 MI	$512.41 MI	$429.47 MI	$557.60 MI
Level	$4.90 BI	$1.93 BI	$1.58 BI	$331.20 MI	$255.24 MI	$313.65 MI	$484.85 MI
Level	$3.59 BI	$1.54 BI	$857.58 MI	$198.88 MI	$196.83 MI	$206.97 MI	$587.83 MI
Level	$1.14 BI	$663.59 MI	$55.23 MI	$61.64 MI	$55.11 MI	$18.11 MI	$284.78 MI
Level (medium)	$3.04 BI	$1.81 BI	$263.01 MI	$127.58 MI	$221.32 MI	$86.41 MI	$536.68 MI
Level	$1.98 BI	$1.13 BI	$250.72 MI	$158.54 MI	$145.45 MI	$35.62 MI	$262.80 MI
Level	$6.48 BI	$4.00 BI	$430.79 MI	$512.41 MI	$429.47 MI	$557.60 MI	$551.46 MI
Level	$3.02 BI	$1.58 BI	$331.20 MI	$255.24 MI	$313.65 MI	$484.85 MI	$62.11 MI
Level (high)	$2.07 BI	$857.58 MI	$198.88 MI	$196.83 MI	$206.97 MI	$587.83 MI	$23.97 MI

FDOF Wildland Fire Levels of Concern Hazards for Dade City

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	838	280	342	692	86	14	63
Level 2	707	180	153	249	56	19	17
Level 3	0	0	0	0	0	0	0
Level 4	30	0	0	8	4	0	0
Level 5(medium)	2115	1168	172	946	340	27	228
Level 6	1494	248	233	622	184	0	84
Level 7	440	432	72	274	173	50	79
Level 8	0	0	0	0	0	0	0
Level 9(high)	0	0	0	0	0	0	0

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	632	257	243	29	50	43	10
Level 2	193	144	6	8	21	9	5
Level 3	349	185	51	33	63	9	8
Level 4	35	16	2	6	7	2	2
Level 5(medium)	589	399	22	37	74	21	36
Level 6	73	47	2	4	15	4	1
Level 7	390	243	29	50	43	10	15
Level 8	49	6	8	21	9	5	0
Level 9(high)	164	51	33	63	9	8	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$138.90 MI	$50.74 MI	$37.72 MI	$6.46 MI	$10.24 MI	$31.44 MI	$2.30 MI
Level 2	$75.81 MI	$23.66 MI	$400.29 TH	$2.18 MI	$8.75 MI	$37.15 MI	$3.67 MI
Level 3	$69.69 MI	$34.38 MI	$7.00 MI	$4.60 MI	$12.60 MI	$3.32 MI	$7.79 MI
Level 4	$12.47 MI	$2.51 MI	$143.94 TH	$836.08 TH	$1.05 MI	$7.64 MI	$286.25 TH
Level 5(medium)	$180.21 MI	$86.33 MI	$984.16 TH	$12.81 MI	$32.66 MI	$18.38 MI	$29.04 MI
Level 6	$16.30 MI	$8.27 MI	$161.79 TH	$424.14 TH	$2.41 MI	$4.61 MI	$428.49 TH
Level 7	$93.25 MI	$37.72 MI	$6.46 MI	$10.24 MI	$31.44 MI	$2.30 MI	$5.09 MI
Level 8	$52.15 MI	$400.29 TH	$2.18 MI	$8.75 MI	$37.15 MI	$3.67 MI	$0.00
Level 9(high)	$35.31 MI	$7.00 MI	$4.60 MI	$12.60 MI	$3.32 MI	$7.79 MI	$0.00

FDOF Wildland Fire Levels of Concern Hazards for New Port Richey

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	0	0	0	0	0	0	0
Level 2	539	10	289	316	36	156	29
Level 3	0	0	0	0	0	0	0
Level 4	2766	182	464	1458	397	234	223
Level 5(medium)	2238	109	692	1272	470	3239	190
Level 6	0	0	0	0	0	0	0
Level 7	1307	60	94	427	198	40	134
Level 8	0	0	0	0	0	0	0
Level 9(high)	113	8	8	19	44	98	32

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	659	24	338	52	185	58	2
Level 2	474	313	63	52	40	6	0
Level 3	203	110	28	38	25	2	0
Level 4	71	39	22	8	2	0	0
Level 5(medium)	376	274	32	38	22	10	0
Level 6	426	233	24	59	60	49	1
Level 7	635	338	52	185	58	2	0
Level 8	161	63	52	40	6	0	0
Level 9(high)	93	28	38	25	2	0	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$231.08 MI	$5.98 MI	$65.62 MI	$4.24 MI	$34.53 MI	$41.13 MI	$79.58 MI
Level 2	$95.02 MI	$56.11 MI	$4.78 MI	$6.80 MI	$22.62 MI	$4.70 MI	$0.00
Level 3	$46.40 MI	$25.61 MI	$1.16 MI	$9.42 MI	$9.91 MI	$310.31 TH	$0.00
Level 4	$16.05 MI	$6.83 MI	$1.36 MI	$5.59 MI	$2.26 MI	$0.00	$0.00
Level 5(medium)	$87.19 MI	$60.83 MI	$1.17 MI	$8.00 MI	$10.60 MI	$6.59 MI	$0.00
Level 6	$124.77 MI	$53.46 MI	$942.17 TH	$15.28 MI	$28.92 MI	$24.38 MI	$1.78 MI
Level 7	$225.10 MI	$65.62 MI	$4.24 MI	$34.53 MI	$41.13 MI	$79.58 MI	$0.00
Level 8	$38.90 MI	$4.78 MI	$6.80 MI	$22.62 MI	$4.70 MI	$0.00	$0.00
Level 9(high)	$20.79 MI	$1.16 MI	$9.42 MI	$9.91 MI	$310.31 TH	$0.00	$0.00

FDOF Wildland Fire Levels of Concern Hazards for Port Richey

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	181	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5(medium)	53	0	29	22	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	2466	105	508	1593	446	55	119
Level 8	0	0	0	0	0	0	0
Level 9(high)	0	0	0	0	0	0	0

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	274	0	159	5	86	23	1
Level 2	231	112	51	17	44	7	0
Level 3	169	95	5	36	27	6	0
Level 4	40	30	4	3	2	1	0
Level 5(medium)	146	104	2	26	11	3	0
Level 6	75	49	9	4	10	3	0
Level 7	274	159	5	86	23	1	0
Level 8	119	51	17	44	7	0	0
Level 9(high)	74	5	36	27	6	0	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$69.40 MI	$0.00	$36.45 MI	$481.90 TH	$20.07 MI	$12.36 MI	$40.89 TH
Level 2	$56.60 MI	$25.02 MI	$12.60 MI	$2.07 MI	$12.99 MI	$3.93 MI	$0.00
Level 3	$46.49 MI	$23.04 MI	$609.69 TH	$10.74 MI	$8.77 MI	$3.33 MI	$0.00
Level 4	$10.53 MI	$5.85 MI	$275.63 TH	$391.14 TH	$384.65 TH	$3.63 MI	$0.00
Level 5(medium)	$37.89 MI	$22.56 MI	$100.32 TH	$5.06 MI	$9.68 MI	$494.66 TH	$0.00
Level 6	$13.76 MI	$9.66 MI	$353.96 TH	$756.21 TH	$2.26 MI	$735.29 TH	$0.00
Level 7	$69.40 MI	$36.45 MI	$481.90 TH	$20.07 MI	$12.36 MI	$40.89 TH	$0.00
Level 8	$31.59 MI	$12.60 MI	$2.07 MI	$12.99 MI	$3.93 MI	$0.00	$0.00
Level 9(high)	$23.45 MI	$609.69 TH	$10.74 MI	$8.77 MI	$3.33 MI	$0.00	$0.00

FDOF Wildland Fire Levels of Concern Hazards for Town of St. Leo

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	0	0	0	0	0	0	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	6	0	0	4	0	124	2
Level 5(medium)	0	0	0	0	0	0	0
Level 6	0	0	0	0	0	0	0
Level 7	603	85	38	133	28	34	2
Level 8	0	0	0	0	0	0	0
Level 9(high)	0	0	0	0	0	0	0

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	21	2	13	1	1	2	2
Level 2	13	4	1	1	1	1	5
Level 3	4	2	0	0	2	0	0
Level 4	5	2	1	0	0	1	1
Level 5(medium)	2	1	0	0	0	1	0
Level 6	7	2	2	0	1	0	2
Level 7	19	13	1	1	2	2	0
Level 8	9	1	1	1	1	5	0
Level 9(high)	2	0	0	2	0	0	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$36.21 MI	$1.10 MI	$3.96 MI	$50.40 TH	$182.77 TH	$310.15 TH	$30.60 MI
Level 2	$9.97 MI	$521.17 TH	$19.06 TH	$3.39 MI	$593.21 TH	$3.13 MI	$2.32 MI
Level 3	$1.19 MI	$720.68 TH	$0.00	$0.00	$467.42 TH	$0.00	$0.00
Level 4	$1.10 MI	$583.05 TH	$71.80 TH	$0.00	$0.00	$91.86 TH	$349.78 TH
Level 5(medium)	$5.74 MI	$1.16 MI	$0.00	$0.00	$0.00	$4.58 MI	$0.00
Level 6	$1.86 MI	$371.29 TH	$367.64 TH	$0.00	$4.05 TH	$0.00	$1.12 MI
Level 7	$35.10 MI	$3.96 MI	$50.40 TH	$182.77 TH	$310.15 TH	$30.60 MI	$0.00
Level 8	$9.45 MI	$19.06 TH	$3.39 MI	$593.21 TH	$3.13 MI	$2.32 MI	$0.00
Level 9(high)	$467.42 TH	$0.00	$0.00	$467.42 TH	$0.00	$0.00	$0.00

FDOF Wildland Fire Levels of Concern Hazards for San Antonio

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	0	0	0	0	0	40	0
Level 2	0	0	0	0	0	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5(medium)	615	26	48	275	62	58	27
Level 6	0	0	0	0	0	0	0
Level 7	0	0	0	0	0	0	0
Level 8	0	0	0	0	0	0	0
Level 9(high)	0	0	0	0	0	0	0

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	58	31	10	2	6	2	7
Level 2	38	29	1	1	3	1	3
Level 3	14	10	0	1	3	0	0
Level 4	4	1	0	0	1	0	2
Level 5(medium)	135	88	3	7	12	4	21
Level 6	2	1	0	0	0	0	1
Level 7	29	10	2	6	2	7	2
Level 8	9	1	1	3	1	3	0
Level 9(high)	4	0	1	3	0	0	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$11.80 MI	$6.66 MI	$1.73 MI	$219.27 TH	$1.49 MI	$122.10 TH	$1.58 MI
Level 2	$7.98 MI	$6.18 MI	$28.11 TH	$385.18 TH	$553.90 TH	$36.64 TH	$802.38 TH
Level 3	$2.56 MI	$1.64 MI	$0.00	$182.45 TH	$731.14 TH	$0.00	$0.00
Level 4	$498.37 TH	$173.22 TH	$0.00	$0.00	$238.62 TH	$0.00	$86.53 TH
Level 5(medium)	$37.65 MI	$22.83 MI	$250.06 TH	$1.26 MI	$2.55 MI	$4.72 MI	$6.05 MI
Level 6	$386.48 TH	$84.94 TH	$0.00	$0.00	$0.00	$0.00	$301.53 TH
Level 7	$5.95 MI	$1.73 MI	$219.27 TH	$1.49 MI	$122.10 TH	$1.58 MI	$811.21 TH
Level 8	$1.81 MI	$28.11 TH	$385.18 TH	$553.90 TH	$36.64 TH	$802.38 TH	$0.00
Level 9(high)	$913.59 TH	$0.00	$182.45 TH	$731.14 TH	$0.00	$0.00	$0.00

FDOF Wildland Fire Levels of Concern Hazards for Zephyhills

Population at risk for FDOF Fire Risk

Zone	Total	Minority	Over 65	Disabled	Poverty	Lang Iso	Sing Pnt
Level 1(low)	560	88	89	229	133	0	63
Level 2	621	0	288	277	13	0	0
Level 3	0	0	0	0	0	0	0
Level 4	0	0	0	0	0	0	0
Level 5(medium)	5485	413	1893	2743	814	465	277
Level 6	596	29	239	158	50	75	25
Level 7	312	115	73	92	16	54	19
Level 8	0	0	0	0	0	0	0
Level 9(high)	0	0	0	0	0	0	0

Structures at risk for FDOF Fire Risk LOC

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	407	142	148	63	36	16	2
Level 2	251	110	47	64	27	3	0
Level 3	317	178	85	18	34	0	2
Level 4	33	21	8	2	1	0	1
Level 5(medium)	2564	1393	627	251	255	30	8
Level 6	90	49	28	9	2	1	1
Level 7	270	148	63	36	16	2	5
Level 8	141	47	64	27	3	0	0
Level 9(high)	139	85	18	34	0	2	0

Value of Structures by DOR Use for FDOF Fire Risk

Zone	Total	SF Res	Mob Home	MF Res	Commercial	Agriculture	Gov/Instit
Level 1(low)	$110.25 MI	$27.68 MI	$46.10 MI	$6.76 MI	$6.96 MI	$22.57 MI	$169.50 TH
Level 2	$140.58 MI	$22.97 MI	$3.61 MI	$11.52 MI	$11.96 MI	$90.51 MI	$0.00
Level 3	$98.24 MI	$41.15 MI	$7.98 MI	$2.12 MI	$43.04 MI	$0.00	$3.94 MI
Level 4	$4.84 MI	$3.88 MI	$540.75 TH	$129.65 TH	$232.80 TH	$0.00	$55.35 TH
Level 5(medium)	$472.91 MI	$250.64 MI	$50.37 MI	$43.20 MI	$66.86 MI	$58.59 MI	$3.25 MI
Level 6	$22.21 MI	$15.59 MI	$3.05 MI	$102.95 TH	$1.93 MI	$677.16 TH	$855.12 TH
Level 7	$83.89 MI	$46.10 MI	$6.76 MI	$6.96 MI	$22.57 MI	$169.50 TH	$1.32 MI
Level 8	$117.61 MI	$3.61 MI	$11.52 MI	$11.96 MI	$90.51 MI	$0.00	$0.00
Level 9(high)	$57.08 MI	$7.98 MI	$2.12 MI	$43.04 MI	$0.00	$3.94 MI	$0.00

Appendix I

Tampa Bay Times Article about “Sinkhole Alley”

Appendix I: Tampa Bay Times Article on "Sinkhole Alley"

URL: http://tbo.com/news/politics/map-predicting-sinkhole-prone-areas-closer-to-reality-20140709/

Map predicting sinkhole-prone areas closer to reality

By JAMES L. ROSICA

Tribune/Scripps Capital Bureau
tribune file photo

A sinkhole did this in Hudson in 2012. Pasco, Hillsborough and Hernando counties have been dubbed "Sinkhole Alley." The good news: A pilot study has proved 93 percent successful in predicting whether sinkholes will form.

TALLAHASSEE — State geologists are well on their way to creating a statewide map showing where sinkholes are most likely to form.

Last year, Florida got more than $1 million in federal funding for a three-year study. A pilot in Columbia, Hamilton and Suwannee counties ended in May.

Professionals with the Florida Geological Survey visited about 230 locations, sampling and studying the land.

Their fieldwork contributed to a "relative vulnerability" map that so far has proved 93 percent successful in the pilot area in predicting that sinkholes will form, geologist Clint Kromhout said.

That figure was reverse-engineered by comparing the pilot's sinkhole predictions to where "subsidence events" actually did occur.

The predictions were at a countywide scale; science can't predict where and when an individual sinkhole will occur.

The Florida Geological Survey and Florida Department of Emergency Management are collaborating on the study. Alan Baker, another state geologist, said the map will put another tool in the toolbox of emergency planners, especially after a big storm, when sinkholes often develop.

"They're prepared for floods. They're prepared for downed power lines," Baker said. But the sinkhole vulnerability map will provide even more preparation, this time for ground collapse.

The study next moves to the statewide phase. Kromhout and Baker plan to hire additional geologists and reach out to local governments, they said. he ultimate desire is to have a statewide map to reduce the risk of loss of life and property," Kromhout said.

The goal for the scale of the state map is at least the county level, but Kromhout said he hopes they will be able to get to a neighborhood-by-neighborhood detail.

Tropical Storm Debby was the inspiration for the study. Heavy rains from the 2012 storm caused dozens of sinkholes, especially in Hernando County.

Sinkholes are a particular threat for many T***ampa Bay residents. Hillsborough, Pasco and Hernando counties are known as "Sinkhole Alley."*** For example, of all sinkhole damage reported in the state from 2006 through 2010, ***two-thirds came from Hernando, Hillsborough and Pasco counties, according to the Florida Office of Insurance Regulation.***

Not every hole in the ground is a "sinkhole," however. St. Petersburg police said a hole in a roadway late last month was caused by a problem with a stormwater line.

In May, Winter Haven police and geologists were investigating a possible 30-foot-wide, 5-foot-deep sinkhole in the parking lot of a Publix shopping center.

Other voids fit the description.

Sinkholes are common in Florida because of porous rock underground such as limestone that holds water. Over time, acid in the water dissolves the rock, creating a void. When the earth above the limestone gets too heavy, it can cave in, forming a sinkhole.

In April, a sinkhole between two residences at The Villages was filled in, then appeared to start opening again. In November, a sinkhole swallowed parts of two Dunedin houses and forced several other homes to be evacuated.

In August, part of a three-story villa at Summer Bay Resort in Clermont, west of Orlando, was swallowed by a 100-foot sinkhole. No one was reported hurt.

And in February 2013, a Seffner man died when a sinkhole opened under his bedroom as he slept. The body of 37-year-old Jeff Bush was not recovered.

The most famous sinkhole recently was not in Florida but in Kentucky.

In February, a 60-foot-deep sinkhole opened under the National Corvette Museum in Bowling Green, collapsing the floor and swallowing eight of the vehicles, ***including one donated by a Pasco County man.***

The museum was closed at the time and no one was injured, but the value of the cars alone was estimated at $1 million. The museum's board has decided to preserve part of the sinkhole as an attraction because news of the collapse boosted attendance by 60 percent.

This legislative session, a measure failed that would have created a sinkhole repair program for policyholders of Citizens Property Insurance Corp. Its purpose: Ensure that sinkhole damage is fixed properly and within a reasonable time. Citizens, a nonprofit government corporation, is the insurer of last resort for Florida homes in sinkhole-prone areas.

Lawmakers were concerned over homeowners getting a payout for a sinkhole but not using the money to repair the damage. Sinkhole claims also have stoked a number of lawsuits against the insurer by customers upset over bad repairs or ones that took too long.

Under the bill, sinkhole fixes would have had to be done by a contractor picked from a pool of bonded and insured repair companies approved by Citizens. A version passed the House but died in the Senate, where some lawmakers worried such a program wouldn't be effective.

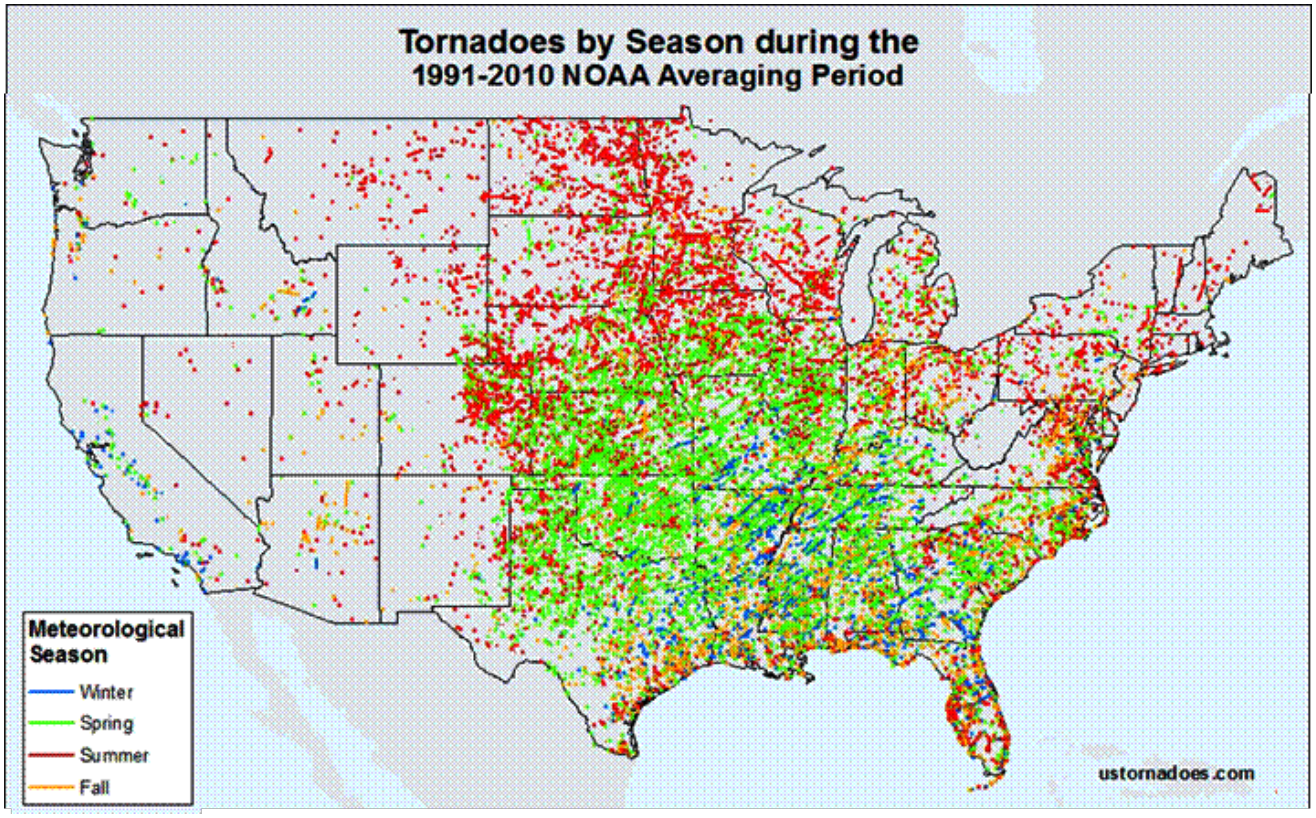
Appendix J

Monthly Tornado Average by State and Region

Appendix J: Monthly Tornado Average by State and Region

Monthly tornado averages by state and region

BY IAN LIVINGSTON ON MARCH 19, 2013



Map by Katie Wheatley. Track data via The Storm Prediction Center. Map data via ESRI.

"Tornado season," in common parlance, is usually thought of as spring into early summer. While it is true that the peak of most tornado years occurs in this period, the story is not quite that simple.

As the map above shows quite nicely, some parts of the country experience tornadoes almost exclusively during one season or another, while others may want to be on the lookout almost all year to some degree.

In this post, I've broken down the averages by state and by month, going further as to grouping states by regions. The regions are probably up for some debate, but I tried to match similar tornado states or known "alleys" such as *Dixie* and *Hoosier* together.

The oft-cited and most chased portions of *Tornado Alley* (i.e., much of the Plains) are simply broken up by north and south.

Author Livingston Discussing the Southeast

Much of the Southeast can expect to see at least random tornado touchdowns in the region most of the year. Once into the Carolinas, it's more typical for winter to bring quieter times as moisture has trouble reaching that far north. ***A state like Florida has fairly erratic but continual tornado activity throughout the year, with tropical season favored as a peak.*** In states to the north, Georgia and the Carolinas both have springtime peaks, but then some activity throughout the summer and enhancement by tropical systems.

Averages in this post are based off the same period (1991-2010) NOAA NCDC currently uses, and the numbers presented here come directly from that source. In most cases, these averages and peaks are fairly stable if we run a more recent 20 years, say 1993-2012.

US. Tordnadoes breaks down the average number of tornadoes by region of the country and, within this region, by state. The ranking of number of tornadoes per state belies what the reader would think given media weather coverage, which focuses on the number of frequent and deadly events taking place in the Midwestern "Tornado Alley." The figures below show that Texas, on average ranks first in the number of tornadoes recorded, followed by Kansas, but Florida is third in the ranking above other states in Tornado Alley (as aforementioned, considered to be much of the Great Plains).

West Coast

California	*11*	
Oregon	*3*	
Washington	*3*	

Intermountain West

Idaho	*5*	
Nevada	*2*	
Utah	*3*	
Arizona	*5*	

Southern to Central Plains

Texas	***155***	***#1***
New Mexico	*11*	
Oklahoma	*62*	
Kansas	***96***	***#2***
Colorado	*53*	

Northern to Central Plains

Montana	*10*	
North Dakota	*32*	
South Dakota	*36*	
Wyoming	*12*	
Nebraska	*57*	

Mid South

Arkansas	*39*	
Louisiana	*37*	
Tennessee	*26*	
Mississippi	*43*	
Alabama	*44*	

Western Midwest

Minnesota	*45*	
Iowa	*51*	
Missouri	*45*	

Lakes and Midwest

Michigan	*16*	
Wisconsin	*24*	
Illinois	*54*	
Indiana	*22*	
Ohio	*19*	
Kentucky	*21*	

Southeast

Florida	***66***	***#3***
Georgia	*30*	
South Carolina	*27*	
North Carolina	*31*	

Mid-Atlantic

Pennsylvania	*16*	
New Jersey	*2*	
Delaware	*1*	
Maryland	*10*	
Virginia	*18*	
West Virginia	*2*	

New York and New England

New York	*10*	
Vermont	*1*	
New Hampshire	*1*	
Maine	*2*	
Massachusetts	*1*	
Connecticut	*2*	
Rhode Island	*0*	

http://www.ustornadoes.com/2012/05/22/map-u-s-tornadoes-by-county-1950-2011/

Appendix K
Rising Storm Surge Risk

Appendix K: Rising Storm Surge Risk to Atlantic and Gulf Properties

U.S. News

Hurricane Storm-Surge Risks to Property Rise on Atlantic, Gulf Coasts, Study Finds

Report Shows Vulnerable Homes Represent $1.5 Trillion in Potential Reconstruction Costs

http://online.wsj.com/articles/hurricane-storm-surge-risks-to-property-rise-on-atlantic-gulf-coasts-study-finds-1404993602

By Valerie BauerleinJuly 10, 2014 8:00 a.m. ET

A photo from Nov. 15, 2012, shows a house in Sea Bright N.J., that was destroyed by Superstorm Sandy. Associated Press

More than 6.5 million homes along the Atlantic and Gulf coasts are at risk of hurricane storm-surge damage, with New York City having the most homes and value at risk, according to a new report released Thursday by a company that analyzes property values.

The study by CoreLogic found that the vulnerable homes represent $1.5 trillion in potential reconstruction costs, with nearly two-thirds—$986 billion—of that risk concentrated in 15 metro areas. The top four, in order of potential properties affected, are New York City, Miami, Tampa and Virginia Beach, Va.

The risks of damage and the potential losses are rising and will continue to rise as more houses are built along the coast and as property values continue to rise postrecession, said Thomas Jeffery, senior hazard scientist for CoreLogic Spatial Solutions. The insured value of homes and businesses in coastal areas from Texas to Maine—the U.S. states most vulnerable to hurricanes—was $10.6 trillion in 2012, up 48% from 2004, according to AIR Worldwide, which measures risk for insurers. Many homes at risk are in areas not designated as flood zones by the Federal Emergency Management Agency.

"It's important for people to understand that if they live near the coast, they will have a certain amount of risk," Dr. Jeffery said. Understanding that risk should prompt homeowners to make sure they are properly insured and ready to evacuate if necessary, he said.

Superstorm Sandy in 2012 prompted a flurry of interest in storm preparation and protection, but 2013 was unusually mild and last week's Hurricane Arthur did relatively little damage as it skirted the East Coast. "It's human nature, we don't like to dwell on the negative, but when you don't think about it for a while, you start to ignore the consequences," Dr. Jeffery said.

There were 63 catastrophes, such as hurricanes, tornadoes, wildfires or earthquakes, that each resulted in more than $1 billion in losses in the 10 years through 2012, the most recent year for which dollar figures are available, according to the National Oceanic and Atmospheric Administration and the U.S. Geological Survey. Those events caused a total of $485.2 billion in damages.

By contrast, there were only 38 such catastrophes that triggered more than $1 billion in losses between 1993 and 2002, adjusted for inflation, and those losses totaled $183.6 billion. From 1983 to 1992, there were 26 such catastrophes, with losses of $131.3 billion. (Loss figures are in 2013 dollars.)

The CoreLogic study also found that many cities have homes at risk of storm surge, but those homes aren't required to carry flood insurance because they aren't located in a floodplain designated by the Federal Emergency Management Agency. In the Virginia Beach, Va., metro area, 86% of the homes at risk of storm surge weren't designated in a FEMA flood zone. In the Philadelphia metro area, 85% of the homes at risk weren't in a designated floodplain and in Jacksonville, Fla., 76% of those at risk weren't in a floodplain, and wouldn't be required to carry flood insurance.

CoreLogic recently changed its methodology to include reconstruction-cost value, and said it wasn't possible to compare current estimates of the number of homes at risk and their reconstruction costs with estimates it has done in previous years.

Appendix L

LMS Working Group and Municipal Resolutions

Record of 2009 LMS Plan Review and 2014 Updates

At some point since the January 2014 Annual Meeting, a decision was made to reorganize the LMS document. Much of the excellent text, data and support documents previously included were not incorporated into this update. As such, this plan has been reworked to the degree possible while allowing Pasco County and its participating jurisdictions to remain compliant by updating its plan by June 2014, in anticipation of a need on the part of the State of Florida and FEMA to have time for review and feedback before the plan's absolute renewal deadline of August 27, 2014.

As an alternative to presenting a full discussion of the differences between the two plans, a more useful approach would be to identify salient updates and new sections. These include.

1. An updated list of Mitigation Strategies, included as Appendix C. The community continues its effort to manage stormwater projects and secure finding to raze or elevate properties that are in harm's way. Happily, Pasco County received word from the State that its 2013 HMGP application to buy out fifteen properties was approved. Updates on these properties are included as the first items listed in the strategy, which begins on p. 119.

2. Appendix B is a copy of the Special Needs Packet and Registration Form that residents can use to identify shelters that will focus on those who need, for example, refrigeration for insulin storage, electricity for use of a C-Pap machine, or need help walking and undergoing daily activities.

3. Documentation of the Mitigation Process and community participation is handled somewhat differently given an oversight that occurred in preparing for the Mitigation Committee annual meeting, at which the LMS is reviewed, and in the months thereafter. It was discovered that a public meeting announcement had not been sent to the media in advance of the meeting so there would be documentation of public participation. In the ensuing months, changes in leadership at the municipalities did not allow for the standard level of input than would normally be the case given Pasco County's longtime record of documenting strong professional and citizen input. In addition, the plan was not made available in draft form on the County web site or in paper form in local libraries, as would normally be the case, to allow for full disclosure of the process and public review.

To counter the impact of these less than optimal events, this update includes full documentation from all of the meetings held between 2010 and 2014, including meeting notices, minutes, and orders to the media for meeting notices to be listed in the two major newspapers. The only items missing are the requests to the media for publication of notices in advance of the January 2014 meeting. The plan, while in its final form at this point (before receiving State or FEMA feedback) will be uploaded to the County OEM web site and a notice sent to area media announcing its availability for review. In addition, the LMS chairs are considering how to expand the number of participants not affiliated with government entities so the document will clearly represent the interests of the entire community.

The following pages include two charts: a list of persons who served on the LMS Working Group, their affiliation, and their role in creating the LMS document; and a list of community members who attended meetings to comment on their areas of expertise.

Pasco County LMS Working Group

Name	Affiliation	Role
Jim D. Martin, succeeded by Annette Doying, LMS Chair	Director, Pasco County OEM	• Liaise between LMS/mitigation process and County leadership • Coordinate countywide OEM Activities
Cindy Jolly, P.E., CFM, LEEDS LMS Co-Chair	Project Manager, Pasco County Office of Stormwater Management	• Provide overall direction • Coordinates the efforts of bi-weekly Flood Task Force Meetings overseeing all county drainage projects. • Meets with the Thousand Oaks/Trinity Oaks Problem Solving Committee fielding resident concerns for rapidly growing section of the community. • Manages County NFIP and CRS activities.
Kalah Mueller Michael Bishop (through 04/2014) Barbara A. Spaulding (05/2014 to present)	Pasco County OEM Mitigation and Recovery Coordinator	• Coordinate day-to-day LMS and Mitigation Committee activities. • Plan and implement group meetings and annual LMS review. • Research and submit grant applications and resource development to support mitigation projects. • Identify and recommend group members and new participants.
Shirley Dresch Donna Rose	City of Port Richey, City Clerk	• Represent the interests of Port Richey, a coastal community
Ray Velboom Michael Sherman	City of Dade City Police Chief City of Dade City Planning	• Represent the interests of the City of Dade City (county seat) and eastern Pasco County
Todd Vandeburg	City of Zephyrhills Director of Development	• Represent the interests of the City of Zephyrhills and eastern Pasco County
Barbara Sessa	City of San Antonio City Clerk	• Represent the interests of the City of San Antonio, a small rural community located in north central Pasco County
Jerry Engle	City of New Port Richey Development Services Director	• Represent the interests of the City of New Port Riche, a coastal community and the largest city in Pasco County
Joan Miller	Town of St. Leo Town Clerk	• Represent the interests of the Town of St. Leo, a small rural community known for its institution of higher learning, St. Leo University
Michael German	City of New Port Richey Building Department	• Provided input on construction practices and code enforcement
Michael Sherman,	City of Dade City Building Official	• Provided input on construction practices and code enforcement
Ria Maris,	Pasco County Emergency Management	• Department Budget Manager, Oversees budget from County and management of grant funding and spending
Sgt. Tait Sanborn Lt. Troy Ferguson	Pasco County Sheriff's Office	• Planning and logistical issues

Community Members and Other Participants

The role of each invited participant or volunteer listed below was to bring to bear on the LMS process the benefit of their departmental or jurisdictional expertise, and to help ensure that the LMS included the needs of the particular agency or community from which they came.

Name	Affiliation
John Boucher	Pasco County School District
Ron Daniel	Pasco County Environmental Lands Acquisition & Management Program
Juanita Bernal	Pasco County Stormwater Management Division
Tommy Brown	Tampa Bay Water Company
Ken Burdzinski,	Pasco-Hernandez Community College
Maya Burke	Southwest FL Water Management District
Andrew Fossa	Pasco County Fire Rescue
Michael Garrett	Pasco County Office of Public Work
Dean Livermore	Pasco County Office of the Public Defender
Jack Mariano	Pasco County Board of County Commissioners
Andrea Mason	Pasco County Health Department
Lee Millard	Pasco County Office of Zoning and Compliance
Lennie M. Naeyert	City of Dade City
Bill Preslock	Baycare, Inc. (Community-based hospital system)
Patty Richter	City of San Antonio
Tim Powers	Pasco County Sheriff's Office
Vance Arnell	State of Florida, Office of the Attorney General
Terry Falke	Pasco County Facilities Department
James Walters	City of Dade City Police Department
Terence Falke	Pasco County Facilities Management
Kim Thome	Pasco County Community Development
Mike Garrett	Pasco County Public Works
Gordon Onderdonk	Dade City Public Works
Joe Menard	Bayonet Point Medical Center Plant Operations
Chris Owen	Tampa Bay Water Quality Assurance
Bill Preslock	Baycare Facility Operations
Michael Sherman	City of Dade City Planning Department
John Walsh	Pasco County Economic Development Council
Mark Clement	Clerk of the 6th District Court
Joann Jaquish	City of Port Richey
Jim Hircock	Pasco County Utilities Department (GIS and map specialist)
Emily Rood	University of South Florida (intern)
Rick Alley	City of San Antonio
Dirk Palmer	Morton Plant Mease Healthcare System
Dean Livermore,	Pasco County Office of the Public Defender's Office
Jim Johnson	HPH Hospice

PROPOSED RESOLUTIONS

The final step in the planning process will be the adoption of the plan by the legislative bodies of Pasco County and its municipalities. The next six pages include draft proposals acceptance of the LMS plan for use by the Pasco County Board of County Commissioners; the City of Dade City Board of City Commissioners; the City Council of the City of New Port Richey; the City Council of the City of Port Richey; the City of San Antonio City Commissioners; the Town of St. Leo Board of Town Commissioners; and the City Council of the City of Zephyrhills.

Each of these legislative bodies represents their communities by the authority of their corporate charter. As the popularly-elected officials of their community, they have the authority to support and carry out the recommendations put forth in the 2014 Pasco County Local Mitigating Strategy.

Draft Proposals for the six jurisdictions participating in the Pasco County Multi-hazard Community Planning Process.
Cities of Dade City, New Port Richey, Port Richey, San Antonio & Zephyrhills; Town of St. Leo; and Pasco County

These documents will be presented to the legislative authority of each jurisdictional participant following receipt of approval from Florida DOEM and FEMA.

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COMMISSION OF DADE CITY, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the City of Dade City is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the City supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes, and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage disasters; and

WHEREAS, by adopting the Pasco County August 2014 Revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County August 2014 Revision of the Local Mitigation Strategy is in compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 C.F.R., Part 201.

NOW, THEREFORE, be it resolved by the City Commission of Dade City, Pasco County, Florida, in regular session duly assembled that:

Section 1. The City Commission of the City of Dade City does hereby approve and adopt the Pasco County August 2014 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the City Charter.

DONE AND RESOLVED in open and regular meeting on the ___ day of _____, A.D. 2014.

DADE CITY, FLORIDA

_____

Camille Hernandez, Mayor

_____

Suzanne DeAugustino, City Clerk

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COMMISSION OF PORT RICHEY, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY MARCH 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the City Of Port Richey is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the City supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes, and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage disasters; and

WHEREAS, by adopting the Pasco County August 2014 Revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County August 2014 Revision of the Local Mitigation Strategy is in compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 C.F.R., Part 201.

NOW, THEREFORE, be it resolved by the City Commission of Port Richey, Pasco County, Florida, in regular session duly assembled that:

Section 1. The City Commission of the City Of Port Richey does hereby approve and adopt the Pasco County August 2014 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the City Charter.

DONE AND RESOLVED in open and regular meeting on the ___ day of _____, A.D. 2014.

PORT RICHEY FL

_____

Eloise Taylor, Mayor

ATTEST:

_____

Tammy Schuck, City Clerk

RESOLUTION NO. _____

A RESOLUTION TO THE CITY COUNCIL OF THE CITY OF NEW PORT RICHEY, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the City of New Port Richey is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the City supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes; and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage future disasters; and

WHEREAS, BY ADOPTING THE Pasco County August 2014 revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County August 2014 revision of the Local Mitigation Strategy is in compliance with the local Hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 CFR, Part 201.

NOW, THEREFORE, be is resolved by the City Council of New Port Richey, Pasco County, Florida, in a regular session duly assembled that:

Section 1. The City Council of the City of New Port Richey does hereby approve and adopt the Pasco County August 2014 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the City Charter.

Done and Resolved in an open and regular meeting on the ___ day of _____, A.D., 2014.

NEW PORT RICHEY, FLORIDA

_____

Bob Marlowe, Mayor

ATTEST:

_____

Doreen M. Summers, CAP-OM, CMC

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COMMISSION OF THE CITY OF SAN ANTONIO, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the City of San Antonio is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the City supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes, and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage disasters; and

WHEREAS, by adopting the Pasco County August 2014 Revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County August 2014 Revision of the Local Mitigation Strategy is in compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 C.F.R., Part 201.

NOW, THEREFORE, be it resolved by the City Commission of San Antonio, Pasco County, Florida, in regular session duly assembled that:

Section 1. The City Commission of the City of San Antonio does hereby approve and adopt the Pasco County August 2014 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the City Charter.

DONE AND RESOLVED in open and regular meeting on the ___ day of _____, A.D. 2014.

SAN ANTONIO, FLORIDA

_____

Timothy Newlon, Mayor

ATTEST:

_____

Barbara Sessa, City Clerk

RESOLUTION NO. _____

A RESOLUTION OF THE TOWN COMMISSION OF THE TOWN OF ST. LEO, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the Town Of St. Leo is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the Town supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes, and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage disasters; and

WHEREAS, by adopting the Pasco County August 2014 Revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County August 2014 Revision of the Local Mitigation Strategy is in compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 C.F.R., Part 201.

NOW, THEREFORE, be it resolved by the Town Commission of St. Leo, Pasco County, Florida, in regular session duly assembled that:

Section 1. The Town Commission of the Town of St. Leo does hereby approve and adopt the Pasco County August 2014 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the Town Charter.

DONE AND RESOLVED in open and regular meeting on the ___ day of _____, A.D. 2014.

TOWN OF ST. LEO, FLORIDA

_____

Richard Christmas, Mayor

ATTEST:

_____

Joan Miller, MMC, City Clerk

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ZEPHYRHILLS, FLORIDA SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY.

WHEREAS, the City Of Zephyrhills is located in an area that is vulnerable to natural and man-made disasters; and

WHEREAS, the City supports reasonable efforts to make the community better prepared for future disasters and better able to recover after disaster strikes, and

WHEREAS, the State of Florida has stipulated that a Local Mitigation Strategy is the first step in the process of making a community better prepared to manage disasters; and

WHEREAS, by adopting the Pasco County February 2009 Revision of the Local Mitigation Strategy, the framework for future mitigation efforts and post-disaster recovery may be made easier and faster; and

WHEREAS, the Pasco County February 2009 Revision of the Local Mitigation Strategy is in compliance with the local hazard mitigation requirements of Section 322 of the Disaster Mitigation Act of 2000 as implemented in 44 C.F.R., Part 201.

NOW, THEREFORE, be it resolved by the City Council of the City of Zephyrhills , Florida, in regular session duly assembled that:

Section 1. The City Council of the City Of Zephyrhills does hereby approve and adopt the Pasco County February 2009 Revision of the Local Mitigation Strategy and recommends it be adopted by the Pasco County Board of County Commissioners.

Section 2. That this resolution shall take effect as provided by the City Charter.

DONE AND RESOLVED in open and regular meeting on the ___ day of _____, A.D. 2014.

NOW, THEREFORE BE IT PASSED by the City Council of the City of Zephyrhills, Florida sitting in regular session this _____ day of _____, 2009.

CITY OF ZEPHYRHILLS, FLORIDA

_____

Gene Whitfield, Mayor

ATTEST:

_____

Linda D. Boan, City Clerk

THE BOARD OF COUNTY COMMISSIONERS RESOLUTION No. _____

A RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS OF PASCO COUNTY, FLORIDA, SUPPORTING AND ADOPTING THE PASCO COUNTY AUGUST 2014 REVISION OF THE LOCAL MITIGATION STRATEGY; PROVIDING AN EFFECTIVE DATE.

WHEREAS, Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5165, as amended by the Disaster Mitigation Act of 2000 (DMA2K) (P.L. 106-390) provides for States, Tribes, and local governments to undertake a risk-based approach to reducing risks to natural hazards through mitigation planning. The National Flood Insurance Act of 1968, as amended, 42 U.S. C. 4001 *et seq*, reinforced the need and requirement for mitigation plans, linking flood mitigation assistance programs to State, Tribal and Local Mitigation Strategy (LMS), and

WHEREAS, The Federal Emergency Management Agency (FEMA) has implemented various hazard mitigation planning provisions through regulation at 44 CFR Part 201.6 requiring local governments to have a FEMA approved LMS in order to apply for and/or receive project grants, and

WHEREAS, 44 CFR 201.6(d)(3) requires local jurisdictions to review and revise their LMS to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval within five (5) years in order to continue to be eligible for mitigation project grant funding, and

WHEREAS, the Pasco County Local Mitigation Strategy was updated, submitted to the Federal Emergency Management Agency, in 2014, and

WHEREAS, The Federal Emergency Management Agency's (FEMA) approval of the current Pasco County's Local Mitigation Strategy will expire on August 27, 2014, and

WHEREAS, the August 2014 LMS was transmitted to FEMA through the Florida Division of Emergency Management (FDEM) and found in compliance with the local mitigation requirements of Section 322 of the DMA2K as implemented in 44 C.F. R., Part 201.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Pasco County, Florida in regular session duly assembled this date, that:

1. The Local Mitigation Strategy, August 2014 Revision, for Pasco County is hereby adopted and authorized for implementation.

2. This resolution shall take effect immediately upon its adoption.

DONE AND RESOLVED THIS _____ DAY OF _____, _____.

(SEAL) ATTEST:

_____

JACK MARIANO, CHAIRMAN

BOARD OF COUNTY COMMISSIONERS OF PASCO COUNTY, FLORIDA

Appendix M
Community Wildfire Protection Plan

Pasco County
Community Wildfire Protection Plan

May 2011

PASCO COUNTY

NEW PORT RICHEY GOVERNMENT CENTER
7530 LITTLE ROAD
NEW PORT RICHEY, FL 34654

FLORIDA DIVISION OF FORESTRY

WITHLACOOCHEE FORESTRY CENTER
15019 BROAD STREET
BROOKSVILLE, FL 34601

Executive Summary

The Community Wildfire Protection Plan (CWPP) is a unique opportunity to address the challenges of fire protection in the wildland urban interface through locally-supported solutions. CWPPs are authorized by the Healthy Forests Restoration Act of 2003 and provide communities with a tremendous opportunity to influence: (1) where and how wildland fuel management projects are implemented on federally managed lands, and (2) how federal funds are distributed for fuel reduction projects on nonfederal lands. Having a CWPP gives the county priority status when applying for federal funding for wildfire mitigation projects.

The CWPP includes an assessment of the community's wildfire vulnerability, local organizations and resources available to assist with wildfire mitigation and response, and an action plan for reducing wildfire vulnerability in the county. Recommended actions to reduce wildfire vulnerability have been collaboratively developed for the following mitigation categories: 1) wildland fuel management, 2) community outreach and education, 3) Firewise building retrofit and landscaping, 4) policy and regulation recommendations, and 5) wildland fire response improvements. Details for implementing the actions, such as responsible agencies and funding considerations are included in the Plan.

The CWPP meets the minimum requirements of the Healthy Forests Restoration Act. The Plan was developed in a collaborative process with input from state and federal partners and other relevant stakeholders. It identifies and prioritizes areas for wildland fuel management, and includes actions that will inform residents of measures to reduce the ignitability of their homes and community. The CWPP also furthers the goals and mitigation strategies of the Local Mitigation Strategy (LMS) and is consistent with recommendations of the LMS Working Group.

Plan Approval

This Community Wildfire Protection Plan (CWPP) is a cooperative effort to improve wildfire protection and response. The individuals listed below comprise the core decision-making team responsibilities for the development of this plan and mutually agree on the plan contents.

Local Government Representative

Ann Hildebrand, Chairman
Pasco County Board of County Commissioners
7530 Little Road, New Port Richey, FL 34654

Signature: _____ Date: _____

Local Fire Services Representatives

Anthony Lopinto, Director of Emergency Services / Fire Chief
Pasco County Emergency Services and Fire Rescue
4111 Land O' Lakes Blvd, Suite 208, Land O' Lakes, FL 34639
(813) 929-2750

Signature: _____ Date: _____

Timothy Fussell, Fire Chief
City of Port Richey Fire
7824 Grand Blvd., Port Richey, Florida 34668
727-816-1929

Signature: _____ Date: _____

Alex Onishenko, Fire Chief
City of New Port Richey Fire
5919 Main Street, New Port Richey, FL 34652
727-853-1032
Signature: _____ Date: _____

Keith A. Williams, Fire Chief
City of Zephyrhills Fire
6907 Dairy Road, Zephyrhills, Florida 33542
813-780-0041

Signature: _____ Date: _____

Local Florida Division of Forestry Representative

Don Ruths, Wildfire Mitigation Specialist
Withlacoochee Forestry Center
15019 Broad Street, Brooksville, FL
352-754-6777 x119; ruthsd@doacs.state.fl.us

Signature: _____ Date: _____

Table of Contents

EXECUTIVE SUMMARY ..... **I**

PLAN APPROVAL ..... **II**

LOCAL GOVERNMENT REPRESENTATIVE II
LOCAL FIRE SERVICES REPRESENTATIVES II
LOCAL FLORIDA DIVISION OF FORESTRY REPRESENTATIVE III

TABLE OF CONTENTS ..... **IV**

1. COMMUNITY BACKGROUND AND EXISTING SITUATION **1**

DESCRIPTION OF COMMUNITY 1
WILDFIRE PROBLEM STATEMENT 2

2. PLANNING PROCESS **3**

3. VULNERABILITY ASSESSMENT **4**

WILDFIRE VULNERABILITY OVERVIEW 4
WILDFIRE HISTORY 13

4. LOCAL CAPACITY AND CURRENT WILDFIRE PROTECTION ACTIVITIES **15**

ORGANIZATIONS AND RESOURCES 15
WILDLAND FIRE RESPONSE CAPABILITIES 20
WILDLAND FUEL MANAGEMENT CAPABILITIES 20
EXPERIENCE IMPLEMENTING WILDFIRE PROTECTION PROGRAMS 21

5. GOALS AND OBJECTIVES **21**

6. IMPLEMENTATION AND PLAN MAINTENANCE **22**

POTENTIAL FUNDING SOURCES 22
PLAN MAINTENANCE AND EVALUATION 22

7. ACTION PLAN **23**

WILDLAND FUEL MANAGEMENT 23
COMMUNITY OUTREACH AND EDUCATION 24
FIREWISE BUILDING RETROFIT AND LANDSCAPING 25
POLICY AND REGULATION RECOMMENDATIONS 26
WILDLAND FIRE RESPONSE IMPROVEMENTS 26

8. SOURCES CITED **28**

APPENDIX A: PLANNING PROCESS MEETINGS **A-1**

APPENDIX B: WILDFIRE VULNERABILITY ASSESSMENT **B-1**

APPENDIX C: CWPP PROJECTS **C-1**

1. Community Background and Existing Situation

Description of Community

Pasco County is located on the west coast of Central Florida north of Tampa Bay in a region known as the "Nature Coast". It is bordered by Hernando County to the north, Polk and Sumter Counties to the east, and Pinellas and Hillsborough Counties to the south. Pasco County has a population of 464,697 with 91% of the residents living in the unincorporated area (U.S. Census Bureau, 2011). Within the unincorporated area, the population density is highest along the west coast of the county, particularly between U.S. 19 and Little Road. Other unincorporated population concentrations can be found along State Road 54 and U.S. 41 as well as along the Hillsborough County line into City of Zephyrhills. Growth patterns in Pasco County are expected to continue along the coastal and inland western areas of the County and population is expected to increase along the "54 Gateway" corridor. Northeast Pasco and the area between State Road 52 and Hernando County are expected to remain primarily rural despite some population growth (Pasco County Board of County Commissioners, 2011).

Community Statistics

Total Land Area

Pasco County has 744.85 square miles of land. Approximately 26% of the county's land area is held in conservation with the largest tracts being the Green Swamp, Starkey Wilderness Preserve, Cross Bar Ranch, and Cypress Creek Well Fields (see **Appendix B** for a map of publicly managed conservation lands in Pasco County).

County Jurisdictions' Population

Jurisdiction	2010 Census Population
Dade City	6,437
New Port Richey	14,911
Port Richey	2,671
San Antonio	1,138
St. Leo	1,340
Zephyrhills	13,288
Unincorporated Area	424,912
Total Pasco County	**464,697**

Source: U.S. Census Bureau American FactFinder, 2011.

Pasco County Demographics

Census People Quickfacts	Pasco County	Florida
Persons 65 years old and over, percent, 2009	20.7%	17.2%
Living in same house in 1995 and 2000, pct 5 yrs old & over	52.2%	48.9%
Language other than English spoken at home, pct age 5+, 2000	10.3%	23.1%
Persons with a disability, age 5+, 2000	87,787	3,274,566
Housing units, 2009	222,696	8,852,755
Homeownership rate, 2000	82.4%	70.1%
Median household income, 2008	$42,407	$47,802
Persons below poverty level, percent, 2008	13.2%	13.3%

Source: U.S. Census Bureau QuickFacts, 2010.

Wildfire Problem Statement

Pasco County was selected as one of 10 counties to receive assistance in developing a CWPP because of its high wildfire vulnerability relative to other counties within Florida. The Pasco County Local Mitigation Strategy (LMS) rates the County's vulnerability to wildfire as high due to the patterns and location of new development, probability of occurrence based on fuel types, and costs associated with wildfire events. The LMS also states that the probability of drought is high which can increase fire danger since the County has a significant amount of acreage designated as conservation, public lands, and agricultural land uses. Pasco County has experienced a number of prolonged dry periods in the past twenty years and this trend is expected to continue (Pasco County, 2009).

Florida's natural environment is adapted to fire and many forest ecosystems need regular cycles of fire to be healthy systems. Efforts to eliminate wildfires from the natural environment have served to make these events much more severe when they do occur due to accumulated vegetative fuels. This severity impacts the health of the ecosystem and puts neighboring developments in danger. Residents in Florida vary in their understanding and acceptance of the use of prescribed fire and mechanical fuel management methods. Much of the population has moved to Florida from regions where there was not an abundance of wildlands and fire dependant ecosystems (FDOF, 2010). The role of wildfires in the natural environment needs to be integrated into public education programs and planning for development within the wildland/urban interface.

Approximately one-third of Pasco County acreage is undeveloped, forested, or pastureland. As more development occurs adjacent to or intermixed within these areas, the vulnerability of wildfire impacts to people and improved property increase (Pasco County, 2009). Pasco County has experienced a large increase in population in recent decades and a majority of its housing stock has been built in unincorporated areas since 1980 (Pasco County, 2009). A map depicting the timing of development is included in **Appendix B**. Future growth in the Tampa Bay Region is projected to have a significant impact on Pasco County. The County is strategically located and is becoming a highly desirable location for new residents and businesses (Pasco County Board of County Commissioners, 2011). The Urban Land Institute (2008) projects that Pasco County will need approximately 36,000 more acres for single-family residences in the next 20 years with a majority of the demand for single-family homes being in the Central, East, and Southern regions of the county. This growth without consideration of Firewise development methods could result in an increase in population and homes vulnerable to wildfire.

Pasco County Single-Family Residential Demand over next 20 years

Region	Units	Acres
Coastal	5,400	1,800
Inland West	5,400	1,800
Central	32,400	10,800
East	10,800	3,600
South	54,000	18,000
Total	**108,000**	**36,000**

Source: Urban Land Institute, 2008

2. Planning Process

The CWPP planning process is a collaborative effort among local, regional, state, and federal government agencies with roles in protecting the community from wildfire, and residents. This plan was produced through a project led by the Florida Division of Forestry (FDOF) with funding from the American Recovery and Reinvestment Act of 2009. A kickoff meeting was held via web conference on September 13, 2010 for all counties participating in the FDOF project. Additional meetings were held on November 2, 2010, February 8, 2011, and March 8, 2011. Summaries of meetings to develop this plan are included in **Appendix A**. The following individuals participated in the planning process and provided input in the preparation of this CWPP.

CWPP Working Group Members

Representative	Name	Title/Department	Address	Phone	Email Address
DOF Local Representative	Don Ruths	WF Mitigation Specialist	15019 Broad Street, Brooksville, FL 34601	352-754-6777 x119	ruthsd@doacs.state.fl.us
DOF Local Representative	Dave Fogler	Pasco County Forest Area Supervisor (FAS)	36339 SR 52 Dade City FL 33525	352-523-5102	foglerd@doacs.state.fl.us
LMS Coordinator	Kalah Mueller	LMS Coordinator	7530 Little Road, New Port Richey, FL 34654	727-847-8137	kmueller@pascocountyfl.net
Emergency Management Representative	Jim Martin	Emergency Management Director	7530 Little Road, New Port Richey, FL 34654	727-847-8137	jmartin@pascocountyfl.net
Fire Services Representative	Donald Campbell	Fire Marshall, Pasco County Emergency Services Department	4111 Land O' Lakes Blvd., Suite 208, Land O' Lakes, FL 34639	813-929-2750	dcampbell@pascocountyfl.net
Fire Services Representative	Glenn Clegg	Admin Chief, Zephyrhills Fire Department	6907 Dairy Rd. Zephyrhills, FL 33542	813-780-0041	gclegg@fire.zephyrhills.fl.us
Fire Services Representative	Alex Onishenko	Chief, New Port Richey Fire Department	5919 Main Street, New Port Richey, FL 34652	727-853-1032	onishenkoa@cityofnewportrichey.org

Fire Services Representative	Tim Exline	Captain, New Port Richey Fire Department	5919 Main Street, New Port Richey, FL 34652	727-853-1016	exlinet@cityofnewportrichey.org
Fire Services Representative	Timothy Fussell	Fire Chief, City of Port Richey Fire	7824 Grand Blvd. Port Richey, Florida 34668	727-816-1929	t.fussell@cityofportrichey.com
Growth Management Representative	Carol B. Clarke	Executive Planner, Pasco County Planning and Growth Management	West Pasco Government Center, 7530 Little Road, Suite 320, New Port Richey, FL 34654.5598	727-847-8193 x8419	cclarke@pascocountyfl.net
Growth Management Representative	Quanlin Hu	Planner II	West Pasco Government Center, 7530 Little Road, Suite 320, New Port Richey, FL 34654.5598	727-847-8193 x7891	qhu@pascocountyfl.net
Additional Participant	Chris Reed	Sr. Land Management Specialist, Southwest Florida Water Management District	2379 Broad Street Brooksville, FL 34604	352-796-7211 X4466	Chris.Reed@watermatters.org
Additional Participant	Keith Wiley	County Environmental Lands	4444 Grand Boulevard, New Port Richey, FL 34652	727- 834-3670	kWiley@pascocountyfl.net

3. Vulnerability Assessment

Wildfire Vulnerability Overview

The Florida Fire Risk Assessment System (FL FRAS), updated in 2011, provides a spatial analysis of wildfire vulnerability across the state. The primary output of the risk assessment is the Level of Concern map discussed in the next section. The LOC rates areas based on their susceptibility to wildfire occurrence and estimated impact. **Appendix B** contains FL FRAS methodology, maps, and charts of wildfire vulnerability.

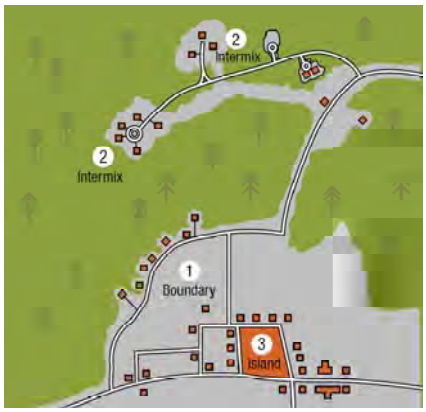
In addition to the countywide FL FRAS outputs, field assessments of the county are also included in **Appendix B**. A Wildfire Risk Assessment Checklist was completed for three county regions by the Withlacoochee Forestry Center's Wildfire Mitigation Specialist and reviewed by the Pasco County Forest Area Supervisor. The County was divided into three regions based on ecosystem type (see **Predominant Wildland Fuel Types** discussion) and major transportation corridors: 1) western region from the coast to Florida 589/Suncoast Parkway, 2) central region between Florida 589 and Interstate 75, and 3) eastern region from Interstate 75 east to the Green Swamp. Representative communities were assessed in each of these regions and averaged for a regional summary of risk. The western region received a rating of 76 out of 120 while the central region had a rating of 73, classifying both regions as moderate to high

risk for wildfire impacts. The eastern region had a much higher rating of 98 indicating it to be a clear high hazard region for wildfire. These findings are not entirely consistent with the LOC map due to the generalization of the assessment for an entire region of the county. The checklist may be more accurately applied at the neighborhood level.

Estimated Wildland/Urban Interface (WUI) Area

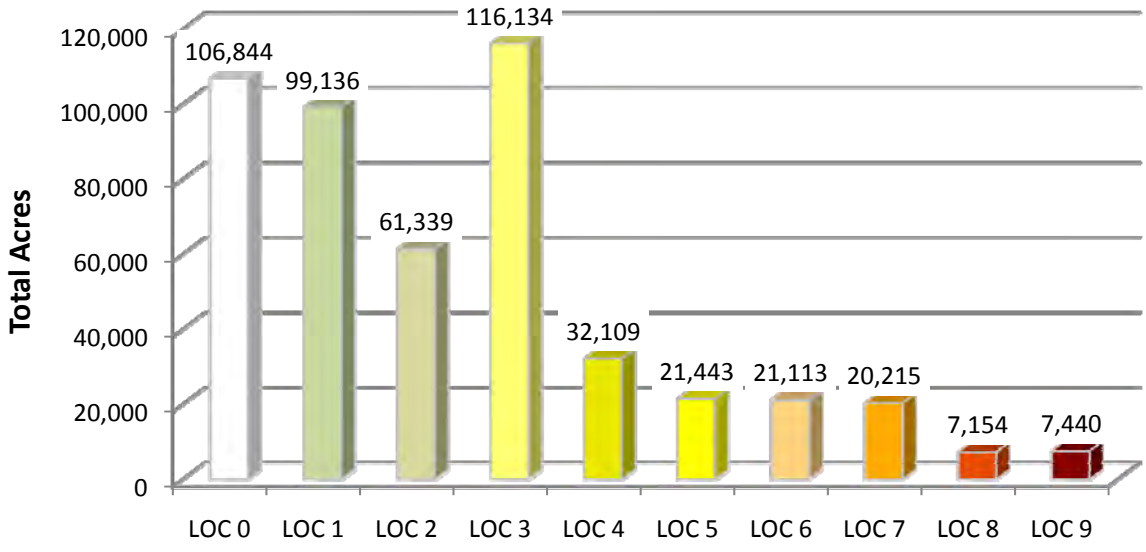
The wildland/urban interface (WUI) is defined in the National Fire Plan as the area where houses and wildland vegetation coincide. There are three types of WUI:

1) Boundary – areas where development is adjacent to public or private wildlands
2) Intermix – structures are scattered and interspersed among wildland areas
3) Island or occluded – area of wildland surrounded by development, i.e. a subdivision preserve

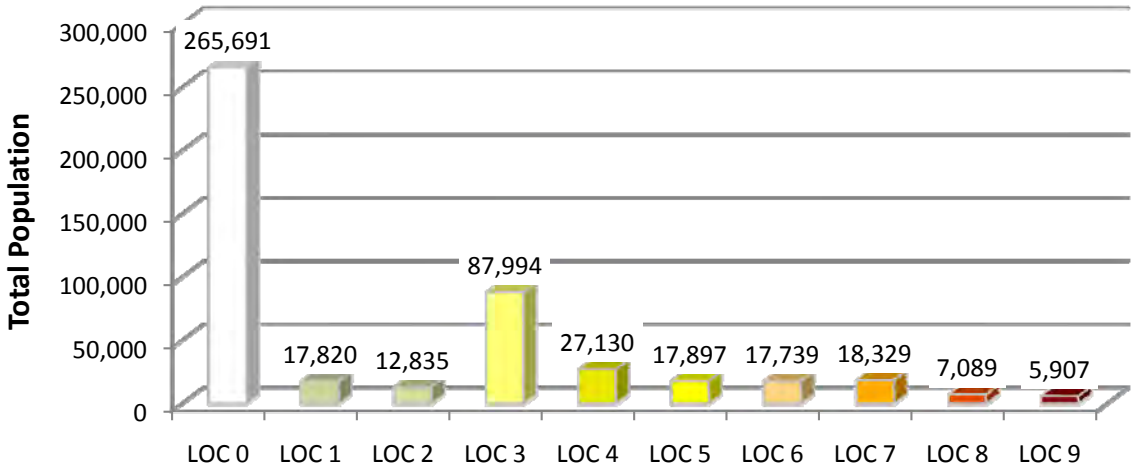


Appendix B includes a map of wildfire risk in Pasco County presented as nine Levels of Concern (LOC). Levels 4 through 9 are considered medium to very high risk and can be used to approximate the WUI area of the county. Twenty-two percent of the land within the county is within LOC 4 through 9 and approximately 19.7% of the population resides in these medium to high risk areas. Approximately 24% of the total value of structures within the county lies within areas classified as LOC 4 through 9.

Countywide Total Acres by Wildfire Risk

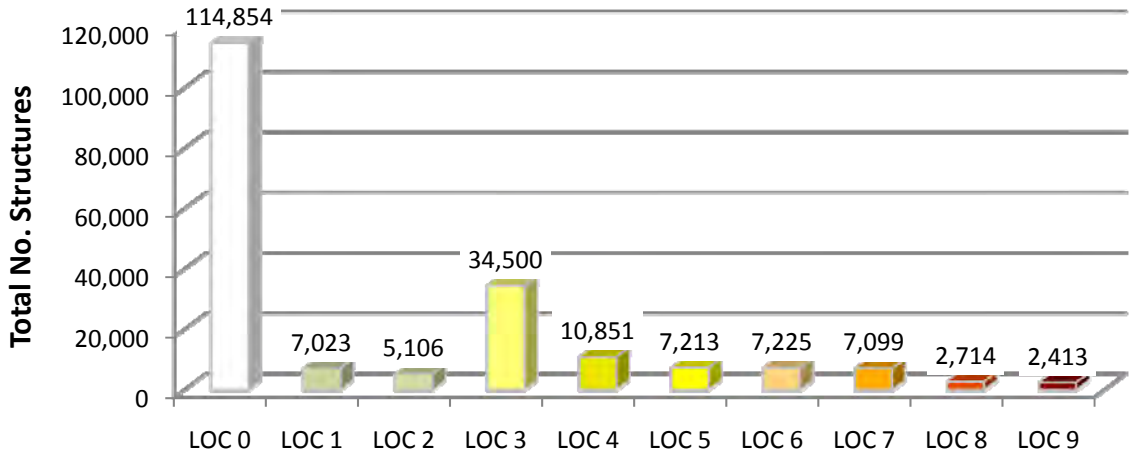


Countywide Total Population by Wildfire Risk



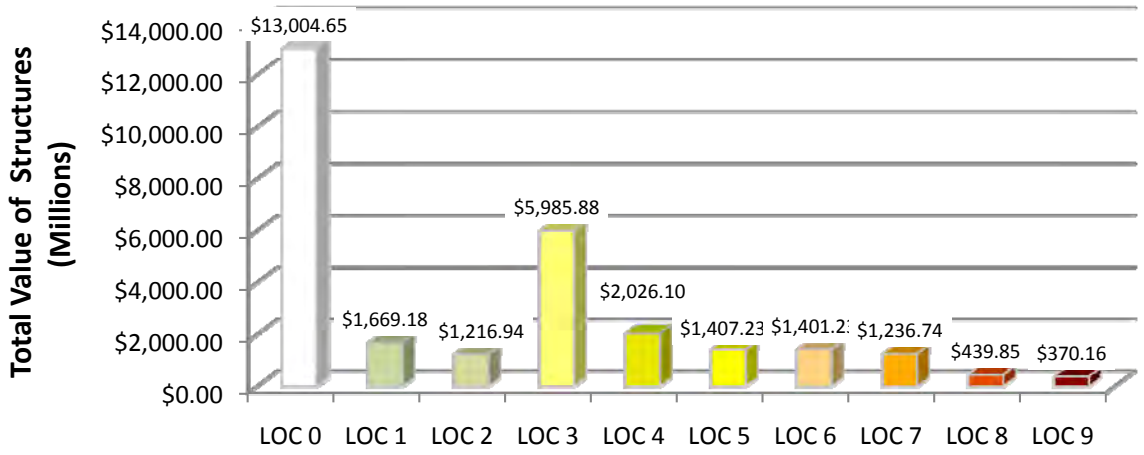
Source Data: 2010 Florida Assessor Data, 2000 Census Persons per Household Statistics, 2010 Florida Dept of Revenue Parcel Data

Countywide Total Structures by Wildfire Risk



Source Data: 2010 Florida Assessor Data, 2010 Florida Dept of Revenue Parcel Data

Countywide Value of Structures (millions) by Wildfire Risk



Source Data: 2010 Florida Assessor Data, 2010 Florida Dept of Revenue Parcel Data

Wildfire Vulnerability by Land Use

The 2011 Wildfire Mitigation Annex to the State of Florida Hazard Mitigation Plan includes an analysis of wildfire vulnerability by land use for each county. The Level of Concern map was used in conjunction with 2010 Florida Assessor and Florida Department of Revenue Parcel data to develop the following estimates of vulnerable population, structures, and structure value. More details on the methodology can be found in **Appendix B**.

Approximately 69% of the population within medium to high risk wildfire areas (LOC 4-9) lives in single-family residences. Sixty-eight percent of all structures countywide within Levels 4 through 9 are single-family residences. Of the 2,413 structures within Level 9, or very high risk areas, 56% are single-family residences. Approximately 92% of the total housing stock within Pasco County is located in the unincorporated areas, so while these statistics do not show risk by jurisdiction, it can be assumed that a majority of the at-risk single-family residences are in unincorporated Pasco County (Pasco County, 2009).

Single-family residential structures account for 51.6% of all structures' value within LOC 4 through 9. Institutional and government structures account for $737 million, or 10.7%, of the total structure value at medium to high risk from wildfire. In addition to structure value at risk, other economic assets in the county, such as agriculture, are also at risk from wildfire damage.

Countywide Population by Wildfire Risk and Land Use

	Risk	Total Pop	%	Single Family Residential	Multi-Family Residential	Mobile Homes
Low	**LOC 0**	**265,691**	**55.5%**	193,398	32,811	39,483
	LOC 1	**17,820**	**3.7%**	13,936	2,316	1,568
	LOC 2	**12,835**	**2.7%**	9,759	1,519	1,556
	LOC 3	**87,994**	**18.4%**	61,533	15,785	10,676
	Subtotal	**384,340**	**80.3%**	**278,626**	**52,430**	**53,284**
Medium	**LOC 4**	**27,130**	**5.7%**	19,645	4,227	3,258
	LOC 5	**17,897**	**3.7%**	13,030	2,442	2,425
	LOC 6	**17,739**	**3.7%**	13,178	1,889	2,671
	Subtotal	**62,766**	**13.1%**	**45,853**	**8,558**	**8,354**
High	**LOC 7**	**18,329**	**3.8%**	11,552	3,144	3,633
	LOC 8	**7,089**	**1.5%**	4,270	1,335	1,484
	LOC 9	**5,907**	**1.2%**	3,471	852	1,584
	Subtotal	**31,326**	**6.5%**	**19,294**	**5,332**	**6,701**
	TOTAL	**478,432**	**100.0%**	**343,773**	**66,320**	**68,339**

Source Data: 2010 Florida Assessor Data, 2000 Census Persons per Household Statistics, 2010 Florida Dept of Revenue Parcel Data

Countywide Structures by Wildfire Risk and Land Use

	Risk	No. Structures	%	Single Family Residential	Multi-Family Residential	Mobile Homes	Vacant Residential
Low	LOC 0	114,854	57.7%	84,195	3,324	17,725	83
	LOC 1	7,023	3.5%	5,677	314	654	6
	LOC 2	5,106	2.6%	3,930	248	638	4
	LOC 3	34,500	17.3%	24,659	2,026	4,514	49
	Subtotal	161,482	81.1%	118,461	5,911	23,531	143
Medium	LOC 4	10,851	5.5%	7,759	558	1,334	23
	LOC 5	7,213	3.6%	5,160	355	985	5
	LOC 6	7,225	3.6%	5,183	346	1,056	7
	Subtotal	25,289	12.7%	18,102	1,260	3,374	36
High	LOC 7	7,099	3.6%	4,558	517	1,399	6
	LOC 8	2,714	1.4%	1,673	246	572	2
	LOC 9	2,413	1.2%	1,354	267	602	0
	Subtotal	12,226	6.1%	7,585	1,030	2,574	9
	TOTAL	198,998	100.0%	144,147	8,201	29,479	187

	Risk	Agricultural	Commercial	Institutional/ Government	Industrial	Vacant Commercial/ Industrial/ Institutional	Misc/ Undefined
Low	LOC 0	436	6,704	1,358	1,004	8	17
	LOC 1	240	59	63	10	0	0
	LOC 2	169	55	46	17	0	0
	LOC 3	430	1,996	519	302	2	3
	Subtotal	1,274	8,814	1,986	1,332	9	21
Medium	LOC 4	182	684	234	72	2	2
	LOC 5	128	316	198	63	1	1
	LOC 6	124	326	125	56	2	1
	Subtotal	434	1,326	557	192	5	4
High	LOC 7	112	345	129	32	0	0
	LOC 8	30	110	40	41	0	0
	LOC 9	24	103	37	26	1	0
	Subtotal	166	558	206	98	1	0
	TOTAL	1,875	10,698	2,749	1,622	15	26

Source Data: 2010 Florida Assessor Data, 2010 Florida Dept of Revenue Parcel Data

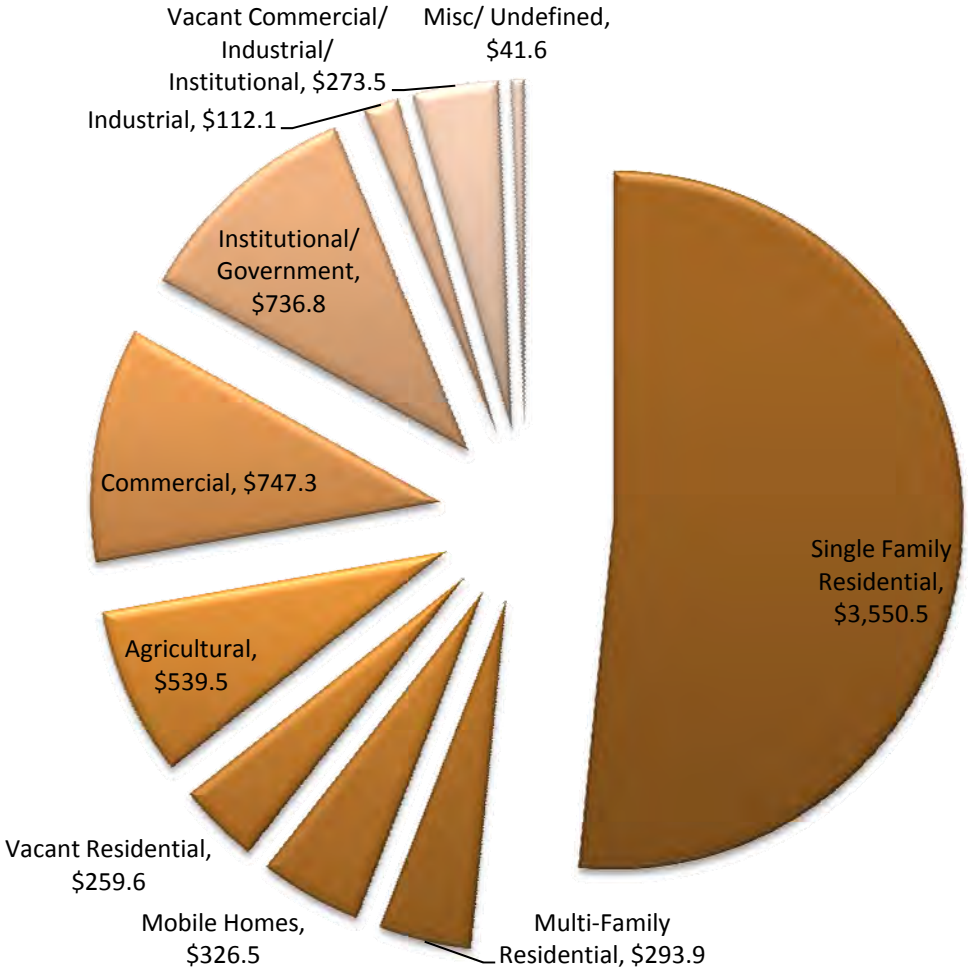
Countywide Structure Value (millions) by Wildfire Risk and Land Use

	Risk	Millions	%	Single Family Residential	Multi-Family Residential	Mobile Homes	Vacant Residential
Low	LOC 0	$13,004.65	45.2%	$8,266.83	$726.91	$714.30	$184.85
	LOC 1	$1,669.18	5.8%	$916.81	$77.37	$43.16	$48.32
	LOC 2	$1,216.94	4.2%	$639.04	$56.22	$41.38	$47.12
	LOC 3	$5,985.88	20.8%	$3,467.45	$407.17	$231.05	$171.40
	Subtotal	$21,876.65	76.1%	$13,290.13	$1,267.68	$1,029.88	$451.69
Medium	LOC 4	$2,026.10	7.0%	$1,081.65	$98.14	$70.80	$55.56
	LOC 5	$1,407.23	4.9%	$724.04	$52.77	$51.97	$52.10
	LOC 6	$1,401.23	4.9%	$745.89	$39.88	$55.93	$61.24
	Subtotal	$4,834.56	16.8%	$2,551.57	$190.78	$178.70	$168.91
High	LOC 7	$1,236.74	4.3%	$625.61	$62.95	$78.58	$51.85
	LOC 8	$439.85	1.5%	$208.82	$25.07	$32.96	$19.34
	LOC 9	$370.16	1.3%	$164.53	$15.14	$36.21	$19.49
	Subtotal	$2,046.74	7.1%	$998.96	$103.16	$147.76	$90.68
	TOTAL	$28,757.95	100.0%	$16,840.66	$1,561.62	$1,356.34	$711.28

	Risk	Agricultural	Commercial	Institutional/ Government	Industrial	Vacant Commercial/ Industrial/ Institutional	Misc/ Undefined
Low	LOC 0	$366.64	$1,516.01	$769.40	$254.80	$186.42	$18.50
	LOC 1	$365.23	$18.79	$181.98	$2.48	$2.74	$12.32
	LOC 2	$272.63	$18.65	$119.25	$5.46	$5.18	$11.99
	LOC 3	$452.75	$497.10	$492.07	$109.92	$130.36	$26.61
	Subtotal	$1,457.24	$2,050.55	$1,562.71	$372.66	$324.69	$69.41
Medium	LOC 4	$175.78	$251.28	$180.34	$31.89	$68.04	$12.61
	LOC 5	$107.53	$124.65	$199.36	$34.03	$52.12	$8.68
	LOC 6	$115.77	$141.88	$150.28	$20.59	$61.17	$8.61
	Subtotal	$399.07	$517.81	$529.98	$86.51	$181.33	$29.90
High	LOC 7	$95.76	$121.31	$129.81	$9.37	$55.33	$6.15
	LOC 8	$26.20	$58.13	$41.89	$10.74	$14.19	$2.51
	LOC 9	$18.49	$50.01	$35.09	$5.50	$22.68	$3.02
	Subtotal	$140.45	$229.46	$206.79	$25.61	$92.20	$11.68
	TOTAL	$1,996.76	$2,797.82	$2,299.48	$484.78	$598.22	$111.00

Source Data: 2010 Florida Assessor Data, 2010 Florida Dept of Revenue Parcel Data

Countywide Structure Value (millions) by Land Use for LOC 4-9



Communities at Risk

The Healthy Forests Restoration Act of 2003 defined at-risk communities as interface communities within the vicinity of Federal lands that are at high risk from wildfire. These communities were intended to prepare CWPPs and would then receive priority for Federal funding to implement hazardous fuel reduction projects as described in the Act. The concept of at-risk communities has been expanded since the passage of the Act to include vulnerable communities that are not adjacent to Federal lands and the responsibility to identify at-risk communities has been given to the States. The FDOF maintains a list of Communities at Risk (CAR) that is based on vulnerability information from the FL FRAS. The communities located within Pasco County are provided in the table below.

Pasco County Communities at Risk, 2009

Community at Risk	Rank	Community at Risk	Rank
Forest Hills	High	Holiday	Low
Quail Hollow	High	Jessamine	Low
Bayonet Point	Medium	Lake Pasadena Heights	Low
Clay Sink	Medium	Land O' Lakes	Low
Dade City	Medium	New Port Richey	Low
Ehren	Medium	New Port Richey East	Low
Hudson	Medium	Odessa	Low
Jasmine Estates	Medium	Pasadena Shores	Low
Lacoochee	Medium	Richland	Low
Wesley Chapel	Medium	Saint Joseph	Low
Beacon Lakes	Low	San Antonio	Low
Beacon Square	Low	Seven Springs	Low
Blanton	Low	South Clinton Heights	Low
Clinton Heights	Low	St. Leo	Low
Crystal Springs	Low	Trilby	Low
Dade City North	Low	Trilcoochee	Low
Darby	Low	Zephyrhills	Low
Elfers	Low	Zephyrhills North	Low
Gowers Corner	Low	Zephyrhills South	Low
Gulf Pine	Low	Zephyrhills West	Low

Source: FDOF

Critical Facilities Vulnerability

The Pasco County Office of Emergency Management works cooperatively with local law enforcement and GIS professionals on the development and maintenance of a protected asset inventory which reflects facilities and infrastructure of significant value to the community. Emergency Management staff may want to determine which of those assets are within high-risk wildfire areas according to the latest LOC map included in this plan. That analysis could not be accomplished within this planning period due to the timing of the FL FRAS being completed. Prior to being the basis of a wildfire mitigation project, any critical facilities targeted should be cross checked against the recently updated FL FRAS or assessed in the field by a fire official.

Predominant Wildland Fuel Types

FDOF maintains a Fire Activity Report database that includes information on all wildfires that FDOF responded to dating back to 1980. It does not include brush fires that were suppressed by local firefighters without FDOF assistance. According to these records, 55% of the total acres that have burned in Pasco County have been associated with palmetto-galberry fuels which are typical of Florida Scrub ecosystems. The largest number of fires has been in grass wildlands although these fires resulted in less total acreage burned.

Fires by Fuel Type, 1980-2010

Fuel Type	Fires	Acres
Palmetto-Galberry	795	21,759.10
Grass	927	12,499.60
Dense Pine	290	5,216.60
Swamp	219	4,842.80
Blowy Leaf	305	2,118.70
Muck	32	838.5
Other	103	488.4
Unspecified	9	60.1
Total	**2,680**	**47,823.80**

Source: FDOF

Appendix B includes a map of surface fuels from the FL FRAS. The County can be divided into three basic regions: the coastal swamps and lowlands, the Brooksville Ridge and Western Valley, and the Tsla Apopka Plain and Green Swamp region.

The coastal swamp area is characterized by tidal marshes and maritime hammocks that transition to coastal lowlands where extensive grassland and parcels of undeveloped land and hardwood hammocks are the predominant fuel types. The region contains two moderate-sized conservation areas, the southern portion of the coastal Weeki Wachee Preserve and the Werner Boyce Salt Springs State Preserve.

The coastal lowlands transition eastward to the Brooksville ridge and the Western Valley. The predominant fuels types within this region are pine flatwoods with palmetto and galberry understory. The region also contains many large agriculture and ranch land holdings where the fuel type is improved pasture grasslands. The region also includes well field preserves that are heavily forested with slash and long leaf pine interspersed with cypress ponds and marsh.

Eastward from the Western Valley the geography transitions to the Tsla Apopka Plain, the Green Swamp and the southern portion of the Richloam tract of the Withlacoochee State Forest. The principal ecosystem within this region is pine flatwoods with heavy palmetto understory. The Tsla Apopka Plain contains the Withlacoochee River basin of hardwoods that continue into the Richloam tract where cypress stands and hardwood marshes are abundant. The area of the Green Swamp within the County's borders contains large stands of pine flatwoods with moderate to heavy brush understories.

Wildfire History

In the past 30 years there have been 47,824 acres burned from wildfires in Pasco County. This amount does not include brush fires that were suppressed by local firefighters without FDOF assistance. A majority of the fires have been relatively small in size, under 9 acres. Within the last five years (2005-2010), which are representative of worst case wildfire risk due to a prolonged drought and increased freeze occurrences, there have been 365 wildfires. Of these, 95% were less than 100 acres. The highest occurrence locations included Starkey Wilderness Preserve (1,468 acres), Cross Bar Ranch (666 acres),

Cypress Creek Preserve (615 acres), Green Swamp Wilderness Preserve West Tract (1,000 acres), and Withlacoochee State Forest Richloam Tract (1,065 acres). The most acres burned occurred in Eastern Pasco County.

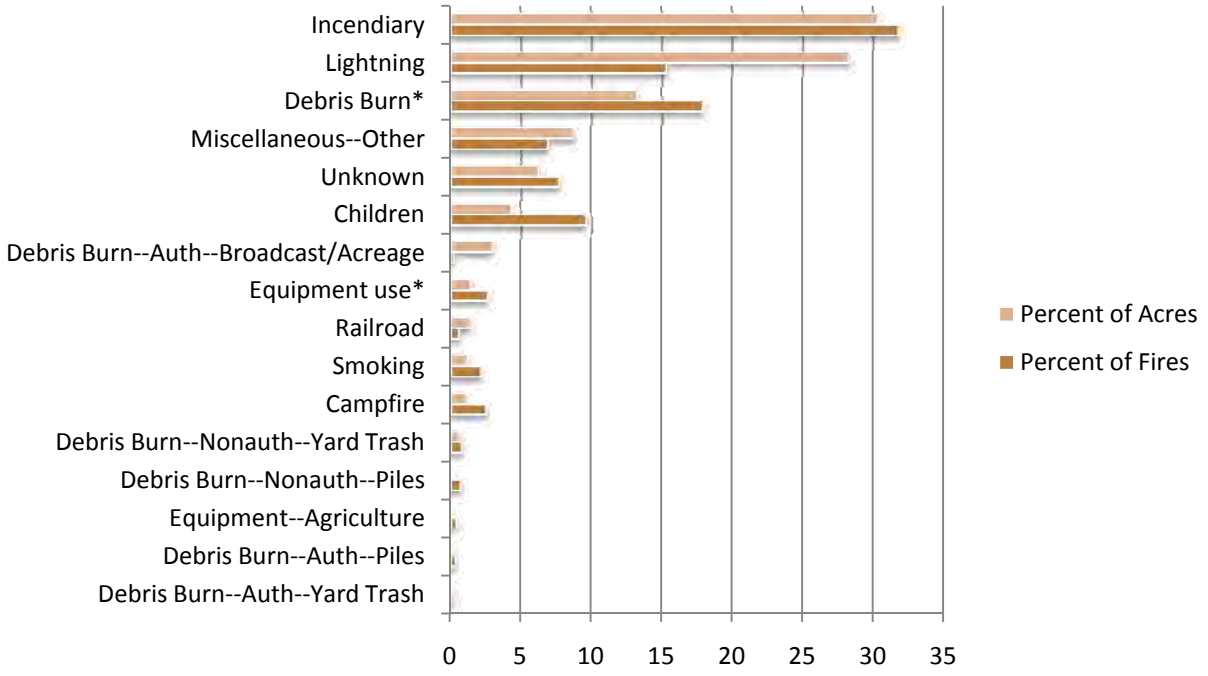
The leading cause of fires in Pasco over the past 30 years has been incendiary – arson or carelessness. While those are preventable, the next leading cause is lightning and these fires often burn a larger amount of acres due to remoteness. Between 2005 and 2010, 72% of wildfires have been human-caused. The western region of the county experienced the highest arson rates, however these resulted in less acres burned than the eastern region of the county where lightning and escaped controlled debris burns were a major cause of wildfires. The eastern region of the county had 29 wildfires over 5 years that were caused by escaped debris burns.

Fires Classified by Fire Size, 1980-2010

Fire size	Fires	Acres
0.1- 1.2 acres	334	39.8
0.3- 9 acres	1,570	4,528.00
10-99 acres	672	18,727.60
100-299 acres	82	12,906.90
300-999 acres	20	9,334.50
1000-4999 acres	2	2,287.00
5000 and greater acres	0	0
Total	**2,680**	**47,824**

Source: FDOF

Fires by Causes, 1980-2010



* Fire cause no longer used
Source: FDOF

4. Local Capacity and Current Wildfire Protection Activities

Organizations and Resources

Local Emergency Management

The Pasco County Emergency Management Department is responsible for countywide emergency management including preparedness, mitigation, response, and recovery. The Emergency Management staff maintains the Pasco County All-Hazards Comprehensive Emergency Management Plan (CEMP) as well as the LMS.

The Pasco County Emergency Operations Center (EOC) serves as the primary multi-agency coordination center for emergency response. The Pasco County Emergency Services Department will staff the EOC on a 24-hour basis during full EOC activation; municipal fire service, FDOF, and Florida Fire Chiefs Association (FFCA) representatives may co-locate with the County Emergency Services Department at the Pasco County EOC if it is determined that multi-agency coordination would be enhanced. Municipal fire service representatives may choose to perform multi-agency coordination out of a facility within their own jurisdiction. (Pasco County, 2010).

Pasco County Emergency Operations Center

7530 Little Road
New Port Richey, FL 34654
727-847-8959

Local disaster support agencies may be needed in the event of a major wildfire that impacts developed areas of the county. These agencies would conduct services as designated in the CEMP, Emergency Support Function (ESF) 6 Mass Care, such as sheltering, providing volunteers for mass care operations, and distributing donations to wildfire victims. In addition, Community Emergency Response Teams (CERTs) might also be a resource for assisting wildfire victims.

Local Disaster Support Agencies

Agency	Address	Phone
American Red Cross, Tampa Bay Chapter	3310 W. Main Street Tampa, FL 33607	813-348-4820

Local Fire Services

Local fire services are the responsibility of Pasco County Fire Rescue, New Port Richey Fire Department, Port Richey Fire Department, and Zephyrhills Fire Department. A map of fire station locations is included in **Appendix B**.

An inventory of vehicles and equipment that will be available for firefighting activities including the last date of revision is maintained by each agency and is housed at the respective administrative offices/headquarters (Pasco County, 2010).

Pasco County Emergency Services and Fire Rescue

4111 Land O' Lakes Blvd, Suite 208
Land O' Lakes, FL 34639
813-929-2750

Career Fire Stations

Fire Station	Address	City
CITY OF PORT RICHEY FIRE RESCUE	7824 GRAND BOULEVARD	PORT RICHEY
NEW PORT RICHEY FIRE AND EMERGENCY SERVICES STATION 1	6333 MADISON STREET	NEW PORT RICHEY
NEW PORT RICHEY FIRE AND EMERGENCY SERVICES STATION 2	6121 HIGH STREET	NEW PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 10	7918 RHODES ROAD	HUDSON
PASCO COUNTY FIRE RESCUE STATION 11	6700 RIELLY COURT	PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 12	4602 MILE STRETCH DRIVE	HOLIDAY
PASCO COUNTY FIRE RESCUE STATION 13	27329 DAYFLOWER BOULEVARD	WESLEY CHAPEL
PASCO COUNTY FIRE RESCUE STATION 14	7800 RIVER RIDGE BOULEVARD	NEW PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 15	11538 Trinity Blvd	Trinity
PASCO COUNTY FIRE RESCUE STATION 16	34335 CHANCEY ROAD	ZEPHYRHILLS
PASCO COUNTY FIRE RESCUE STATION 17	2951 SEVEN SPRINGS BOULEVARD	NEW PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 18	39731 BAY AVENUE	ZEPHYRHILLS
PASCO COUNTY FIRE RESCUE STATION 19	5025 CROSS BAYOU BOULEVARD	NEW PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 20	15900 LITTLE RANCH ROAD	BROOKSVILLE
PASCO COUNTY FIRE RESCUE STATION 21	10417 FRIERSON LAKE DRIVE	HUDSON
PASCO COUNTY FIRE RESCUE STATION 22	9930 LAND O LAKES BOULEVARD	LAND O LAKES
PASCO COUNTY FIRE RESCUE STATION 23	21300 STATE ROAD 54	LUTZ
PASCO COUNTY FIRE RESCUE STATION 24	14317 4TH STREET	DADE CITY
PASCO COUNTY FIRE RESCUE STATION 26	28229 ARONWOOD BOULEVARD	WESLEY CHAPEL
PASCO COUNTY FIRE RESCUE STATION 27	32829 PENNSYLVANIA AVENUE	SAN ANTONIO
PASCO COUNTY FIRE RESCUE STATION 29	7800 MASSACHUSETTS AVENUE	NEW PORT RICHEY
PASCO COUNTY FIRE RESCUE STATION 32	38223 CENTENNIAL ROAD	DADE CITY
PASCO COUNTY FIRE RESCUE STATION 34	38316 TRILBY ROAD	DADE CITY
PASCO COUNTY FIRE RESCUE STATION 36	34516 BLANTON ROAD	DADE CITY
PASCO COUNTY FIRE RESCUE STATION 37	18015 STATE ROUTE 54	LUTZ
PASCO COUNTY FIRE RESCUE STATION 39	11630 COUNTY LINE ROAD	HUDSON
ZEPHYRHILLS FIRE AND RESCUE STATION 1	6907 DAIRY ROAD	ZEPHYRHILLS
ZEPHYRHILLS FIRE AND RESCUE STATION 2	38410 6TH AVENUE	ZEPHYRHILLS

Volunteer Fire Stations

Fire Station	Address	City
PASCO COUNTY FIRE RESCUE STATION 28	21709 HALE ROAD	LAND O'LAKES
PASCO COUNTY FIRE RESCUE STATION 33	29129 JOHNSTON ROAD	DADE CITY
PASCO COUNTY FIRE RESCUE STATION 35	9506 CRABTREE LANE	PORT RICHEY

Florida Division of Forestry

FDOF provides wildfire prevention/mitigation and response services in collaboration with local fire services. The Wildfire Mitigation Specialist for the Withlacoochee Forestry Center is a resource for Firewise education and planning assistance as well as coordinating and implementing fuel management

needs. See **Wildland Fuel Management Capabilities** section for more details on FDOF fuel reduction projects.

The Pasco County Forest Area Supervisor directs FDOF fire suppression activities. More details on FDOF and local wildfire suppression are discussed in the **Wildland Fire Response Capabilities** section.

FDOF also has direct land management responsibilities for the Withlacoochee State Forest.

FDOF Work Stations

Work Station	Address	Phone
Withlacoochee Forestry Center	15019 Broad Street, Brooksville, FL 34601	352-754-6777
Dade City Forestry Station	36339 SR 52, Dade City FL 33525	352-523-5100

Planning and Growth Management

Each jurisdiction within Pasco County has a comprehensive plan detailing future land uses and land development codes that are enforced for new development. These tools can also be used to mitigate wildfire impacts for future development. The Pasco County Fire Marshall participates in the development review process using NFPA standards 1141, 1144, and 1142 to guide requirements for developments regarding location of ingress/egress and water supply. This has not been formalized in the Land Development Code (LDC) but has been suggested for consideration in the current update. Developments are not currently reviewed for Firewise layout of the subdivision.

A review of the Pasco County Comprehensive Plan found some policies that support wildfire mitigation as well as some that could conflict. The Conservation Element of the County Comprehensive Plan includes policies pertaining to conservation lands that support the use of prescribed fire for management (CON 1.1.4 and 1.4.3). The Future Land Use Element has many policies related to development in rural areas that could incorporate Firewise principles. Conservation subdivisions permitted by Policy FLU 2.1.6 could be made more resilient by encouraging or requiring Firewise neighborhood design and specifying wildland fuel management in the required open space plan for the subdivision. There are restrictions for the provision of water in the rural policies that could consider fire fighting water supplies such as included in National Fire Protection Agency 1141 standards that have been adopted by the Pasco County Fire Rescue.

A balanced approach should be achieved between wildfire mitigation and policies for arbor regulations and tree preservation (FLU 1.2.10 and 1.2.11).

Local Mitigation Strategy

The Pasco County LMS addresses countywide, all-hazards mitigation. The plan is coordinated and prepared by the Pasco County Office of Emergency Management and developed and approved by the Hazard Mitigation Committee as well as participants and other interested parties. The Hazard Mitigation Committee has representation from each of the six municipalities, the Pasco County Development Review Services, and the Pasco County Office of Emergency Management. Only the Emergency Management Director is on both the Hazard Mitigation Committee and the CWPP Working

Group. Of the LMS participants, Pasco County Fire Rescue, Pasco County Growth Management, and Southwest Florida Water Management District are also CWPP participants however the representatives from these agencies are different for the two planning efforts.

The LMS addresses wildfire as a high risk hazard for all jurisdictions in Pasco County. The goals and objectives of the plan are consistent with the CWPP. The LMS Project List has several conservation land acquisition projects specified as benefiting wildfire mitigation. Additional projects from this CWPP should be added to the LMS Project List. Grant funding can be collaboratively sought between both the LMS and CWPP planning efforts for wildfire mitigation projects.

Person Responsible for Mitigation Grant Applications by Jurisdiction

Jurisdiction	Responsible Party
Pasco County	County Emergency Management Mitigation Coordinator
Dade City	Public Works Director/City Engineer
Zephyrhills	Director of Development
New Port Richey	City Redevelopment Officer
Port Richey	City Clerk
San Antonio	City Clerk and/or County Emergency Management Mitigation Coordinator
St. Leo	City Clerk and/or County Emergency Management Mitigation Coordinator

Source: Pasco County CEMP, 2010

Conservation Land Agencies

There are approximately 124,541 acres of conservation lands within Pasco County (FDOF, 2010). See **Appendix B** for a map of conservation lands with pineland types. The majority of the conservation acreage, approximately 74,000 acres, is managed by the Southwest Florida Water Management District (SWFMWD), of which about 48,000 acres are considered fire-dependent. Pinellas County manages the Cross Bar and Al Bar Ranch well fields which make up a considerable amount of the forested conservation lands in the central portion of Pasco County. Pasco County manages 10 properties; however these account for only approximately 2,000 acres or 2% of the conservation holdings' acreage.

SWFMWD has an extensive prescribed burning program and management plans for each of its properties, prescription burning approximately 10,000 acres within the county annually. SWFMWD also assists FDOF in wildfire suppression on District lands (see **Wildland Fire Response Capabilities**).

Pasco County has an Environmental Lands Acquisition and Management Program with the purpose of acquiring lands and conservation easements in order to protect natural communities, including uplands and wetlands, connect natural linkages, conserve viable populations of native plants and animals, protect habitat for listed species, protect water resources and wetland systems, protect unique natural resources, enhance resource-based recreational opportunities, and expand environmental education opportunities with Pasco County.

Firewise Communities

There is one established Firewise Community in Pasco County. Sabalwood in New Port Richey was designated a Firewise Community in 2008.

Wildland Fire Response Capabilities

Pasco County has vulnerability to wildland, structural, and commercial fire. The Emergency Support Function (ESF) 4 annex to the Pasco County CEMP describes the overall approach used by the Pasco County Emergency Services and Fire Rescue Department, the three municipal fire departments of New Port Richey, Port Richey, and Zephyrhills, the FDOF, and the Florida Fire Chiefs Association to coordinate firefighting response operations. Firefighting assets are managed in accordance with the principles and practices of the Incident Command System. Mutual aid resources will be provided across jurisdictions in the interest of ensuring life safety, incident stabilization, and property preservation as a matter of routine. This automatic mutual aid agreement applies throughout Pasco County and to those counties contiguous to Pasco County. Additional firefighting resources will be activated in accordance to the established procedures in the State Emergency Response Plan when local agencies are overwhelmed and additional firefighting assistance is required (Pasco County, 2010).

Coordination between ESF 4 and the FDOF to obtain state firefighting support is accomplished in accordance with standing mutual aid agreements with FDOF and the Pasco County Fire Rescue (SOG 15.700: Brushfire Management). Coordination between ESF 4 and the Florida Fire Chiefs Association to obtain state firefighting support is accomplished in accordance with the State Emergency Response Plan (Pasco County, 2010).

The SWFWMD also coordinates with FDOF in the suppression of wildfires on its lands to provide manpower and equipment. At a minimum, staff and equipment from SWFWMD Land Management Section will perform “mop-up” duties to reduce smoke and prevent escape after initial suppression of the fire has been completed. SWFWMD also has a cooperative fire protection agreement with FDOF allowing the District to provide additional assistance outside of District lands in the event of a declared incident. This coordination has become even more critical in recent years due to the increase in District land holdings, population increases along District land boundaries, and the increased complexity of prescribed burning (Southwest Florida Water Management District, 2007).

Wildland Fuel Management Capabilities

Since 2005, FDOF has conducted 2,862 acres of fuel reduction and defensive barrier construction in Pasco County which is estimated to have protected 3,575 structures from wildfire (detailed in **Appendix C**). Approximately 83% of these fuel management projects have been on privately owned land. None of these project costs were levied on the county.

SWFWMD also conducts regular fuel management on its properties within Pasco County. During fiscal years 2008 through 2010, the District burned 29,000 acres on its Pasco properties – an average of 9,600 acres per year or 20% of the fire-dependent acres. Additionally, during the same three-year timeframe SWFWMD performed significant mechanical fuel reduction in the Starkey Wilderness Preserve, Conner Preserve, and Weeki Wachee (see **Appendix C** for details).

Experience Implementing Wildfire Protection Programs

The FDOF has an extensive history of wildfire prevention public outreach and education programs. Pasco County is a designated Forest Area and the Forest Area Center is located in Dade City. The public education programs include instructive programs on outdoor burning laws, Firewise Community Programs, school programs for K-6th grade with the emphasis on Smokey Bear programs, and participation in community public events. Recently the Withlacoochee Forestry Center, the major service district for Pasco County, has implemented Wildfire Prevention Working Groups at the Forest Area level. This working group directly supports Pasco County's Community Wildfire Protection Plan's wildfire prevention goals through cooperative fire prevention programs throughout the county. The FDOF has in place an aggressive hazardous fuels reduction program that identifies wildland/urban interface areas that require fuels mitigation actions to reduce exposure and threats from wildland fires. This program identifies projects on a county basis and funding is provided through federal resources. Since 2008 the Division of Forestry has reduced fuel loadings in Pasco County on over 476 acres which provided wildfire threat reduction to approximately 2,129 structures within a quarter of a mile from the treatment boundaries. These treatments were a combination of mowing operations and prescribed burning.

Pasco County Fire Rescue has experience in implementing public education programs for children and adults related to fire safety. Some programs have been recently suspended due to budget concerns but are slated to be reinstated in future budgets when possible.

5. Goals and Objectives

Goal 1: Promote collaboration among agencies responsible for wildfire mitigation and suppression within Pasco County.

> **Objective 1.1:** Maintain a recurring, cooperative review process among Pasco County Fire Rescue, FDOF, municipal fire departments, and public and private land managers to review high-risk wildfire areas and develop and prioritize fuel management plans to mitigate that risk.
>
> **Objective 1.2:** Coordinate with the Hazard Mitigation Committee and State and regional agencies to seek funding sources for wildfire mitigation projects and to include CWPP projects on the LMS Project List when applicable.
>
> **Objective 1.3:** Share educational materials among agencies and collaborate on a communications plan that prioritizes outreach to at-risk neighborhoods within the County.

Goal 2: Provide a broad range of opportunities for public awareness and education relating to wildfire mitigation

Objective 2.1: Expand the knowledge and practice of Firewise principles by Pasco County residents through public education programs.

Objective 2.2: Reduce the County's arson and careless burning fire statistics using public education and intervention programs.

Goal 3: Advance community resiliency to wildfire for new development through community development tools.

Objective 3.1: Evaluate potential for amendments to the County and municipalities' comprehensive plans and development codes to support wildfire mitigation through Firewise methods of development

Objective 3.2: Encourage development standards consistent with National Fire Protection Agency standards for water supply and access in suburban and rural communities at risk from wildfire

Goal 4: Continue to improve local fire services' wildfire suppression capabilities and interagency coordination and communications.

6. Implementation and Plan Maintenance

The CWPP is to be implemented as resources become available to incrementally mitigate community wildfire vulnerability. The Pasco County Fire Rescue will oversee implementation of the CWPP in collaboration with the CWPP Working Group. An action plan has been collaboratively developed by the CWPP Working Group to guide implementation efforts over the next 5 years. An action as listed in this Plan is a strategy, project, or program that reduces wildfire vulnerability in the community. Each action will be assigned a lead agency or organization that will be responsible for implementation. Interagency and public-private partnerships in CWPP implementation are encouraged.

Potential Funding Sources

Project funding and/or local and state agency staff time should be continually sought in order to implement the CWPP Action Plan. The CWPP Working Group should meet annually to discuss budget requests among the partner agencies and determine potential grant opportunities that can be applied for during the year. Descriptions of major federal and state funding sources applicable to wildfire mitigation and response improvements are available in the Florida State Hazard Mitigation Plan in the Wildfire Mitigation Annex.

Plan Maintenance and Evaluation

The CWPP should be reviewed on an annual basis to ensure information is current, monitor progress of the Plan, and alter Plan content as necessary. Every 5 years the plan should receive a major update in

which the vulnerability assessment is updated and the action plan is evaluated for its effectiveness over the past 5 years and its suitability for the next 5 years. A resource for evaluating the plan is the *Community Wildfire Protection Plan Evaluation Guide* prepared by the University of Oregon Resource Innovations Institute for a Sustainable Environment in 2008. The FDOF has adapted evaluation questions from this resource to guide Florida communities in assessing the CWPP during a major plan update. The organizational representation from the Working Group should be reconvened, at a minimum, to conduct the major update. The 5-year update should ideally occur prior to or simultaneously with the 5-year update to the LMS. Only the 5-year update requires new plan approval signatures (**page ii**).

7. Action Plan

This section describes implementation strategies or actions that will advance the goals and objectives of this CWPP. The actions are organized by mitigation category: 1) wildland fuel management, 2) community outreach and education, 3) Firewise building retrofit and landscaping, 4) policy and regulation recommendations, and 5) wildland fire response improvements. The following action recommendations are listed in priority order within each mitigation category based upon ability to most significantly decrease wildfire vulnerability in the community. Timeframes specified are calendar years. Detailed information for high priority actions, including participating agencies and evaluation criteria, can be found in **Appendix C**.

Wildland Fuel Management

Fuel management projects help reduce the size and intensity of wildland fires and may also decrease the likelihood that a wildfire will start in an area. These actions can increase the safety of people and property while reducing response and suppression costs. Fuel management methods, which can be used alone or in combination with other methods to achieve site-specific benefits, include:

- Prescribed burning;
- Mechanical treatment (e.g., mowing, mulching, disking, fire line plowing, and chopping);
- Chemical treatment (herbicide application);
- Biomass removal (e.g., pine straw harvesting, vegetation or tree thinning, and timber harvesting); and
- Biomass conversion (grazing).

Fuel management treatments designed to reduce wildfire risk are temporary and in most cases reduce the hazard in the treated area for three to five years. Periodic management is required on a regular basis to maintain fuels at an acceptable level to reduce wildfire risk.

Wildland Fuel Management Actions

Action	Lead Agency	Timeframe	Potential Funding
Collaboratively draft an annual fuel management plan with specific projects prioritized and paired with available agency funding	FDOF with assistance from CWPP working group	Annually	Not needed
Determine annually if additional agency capacity, equipment, or contractor funding is needed to meet fuel management goals	All land management agencies	Annually	Determined annually

Community Outreach and Education

Outreach and education initiatives are designed to raise awareness and improve community knowledge of wildfire risk and mitigation strategies. A good example of an education program is the Florida Firewise Communities Program. Education and outreach programs can influence attitudes and opinions and lead to behavioral changes, such as homeowners' participation in fuel management strategies.

Community Outreach and Education Actions

Action	Lead Agency	Timeframe	Potential Funding
Continue community-specific education events and target additional at-risk locations to hold these	FDOF	Ongoing	FDOF will fund
Plan and conduct a series of fire station open house events with info on outdoor burning laws, Firewise practices, and home safety fire safety practices	Pasco County Fire Rescue	2011-2013	Estimated $600 + staff time
Coordinate with School Board to explore feasibility of using the FDOF on-line interactive Wildfire Prevention Program for Grades 4-6	FDOF	2011-2013	Not needed.
Reinstate Pasco County Fire Rescue program in school classrooms	Pasco County Fire Rescue	2011-2013	Pasco County budget appropriation
Provide County and municipal fire stations with Firewise education materials	FDOF	Annually	FDOF will fund
Train members of the county and municipal fire departments as Firewise Community resources of information	FDOF	2011-2013	Seek federal grant funding

Coordinate with County IFAS to schedule and conduct a "Firewise Home" and "Prescription Burn" education program as part of their annual public education curriculum	FDOF	Annually	Not needed
Identify other community organizations and events in which wildfire mitigation education could be integrated to utilize existing resources and distribution methods	CWPP Working Group	Annually	Not needed for identification

Firewise Building Retrofit and Landscaping

Projects that reduce the ignitability of community facilities and private structures decrease community wildfire vulnerability and provide Firewise models that can assist in community awareness. Grant funding, such as the FEMA Hazard Mitigation Grant Program, can be sought to retrofit public or private buildings in high-risk wildfire zones with Firewise building materials. Other project examples could include public-private partnerships supplying Firewise landscaping materials while volunteer programs could assist in making Firewise improvements to the zone of defensible space.

Firewise Building Retrofit and Landscaping Actions

Action	Lead Agency	Timeframe	Potential Funding
Explore methodologies for identifying neighborhoods that need financial assistance to perform wildfire mitigation retrofits. Model after repetitive flood loss program where projects are listed in the LMS in the event HMGP grant funds become available after a disaster	FDOF	2012-2014	None for identifying projects, projects may be eligible for HMGP or PDM FEMA grants

Policy and Regulation Recommendations

Updating local government plans, policies, and regulations is another effective way to advance wildfire mitigation goals. By modifying requirements for development, high risk wildfire zones can be avoided or new development can be proactively designed to reduce wildfire risk and therefore make living and working in these areas safer.

Policy and Regulation Actions

Action	Lead Agency	Timeframe	Potential Funding
Evaluate opportunities for including wildfire mitigation in the comprehensive plan	All local government planning agencies	During the 2011 EAR process	Not needed
Evaluate opportunities to include Firewise and NFPA 1144/1141 development standards in the Land Development Code (LDC) and in development review procedures	All local government planning agencies	During current LDC update process	Not needed
Evaluate the ingress/egress requirement in the LDC for Firewise purposes	All local government planning agencies	During current LDC update process	Not needed
Coordinate with Fire Rescue to determine if the LDC needs to be amended to include water supply for fire fighting in the rural corridor	All local government planning agencies	During current LDC update process	Not needed
Update the LMS to reference the CWPP and include new wildfire risk assessment data and projects	Pasco County Emergency Management	2012	Not needed
Review conservation easement language used in the land acquisition program to ensure it is consistent with fuel management best practices	Pasco County Environmental Lands	2012	Not needed

Wildland Fire Response Improvements

Opportunities to improve wildland fire response capabilities are also critical to reducing the risk of wildfire damage to people and property. Improvements in response capabilities can include advanced training, increasing staff or volunteer fire fighting resources, and developing new procedures or protocols.

Wildland Fire Response Improvement Actions

Action	Lead Agency	Timeframe	Potential Funding
Increase # of fire fighters with S190 training through a "train the trainer" program or by finding funding for $75/pp + backfill	Pasco County Fire Rescue	2012-2013	Research necessary
Hold meeting to determine feasibility of using FIN red line for radio communication between FDOF and local fire services	Pasco County Fire Rescue, FDOF	ASAP, 2011	Not needed
Coordinate with planning staff on recommendations for required additional water supplies in rural corridor (i.e. tanks)	Pasco County Fire Rescue	During 2011 EAR and LDC update process	Not needed
Plan and implement a cooperator program to familiarize all agencies with joint wildfire/structure protection suppression tactics and combined operations practices	Pasco County Fire Rescue, FDOF	2011-2013	Not needed
Establish a County Wildfire Prevention Working Team to focus intervention and prevention activities within county regions	FDOF, Pasco County Fire Rescue	2011-2012	Not needed

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Appendix A: Planning Process Meetings

Meeting summaries from the CWPP planning process are included in this appendix.

Working Group Meeting #1, November 2, 2010

Attendees: Jim Martin, Pasco County Emergency Management (EM); Donald Campbell, Pasco County Emergency Services; Kalah Mueller, Pasco County EM; Quanlin Hu, Pasco County Growth Management; Glen Clegg, Zephyrhills Fire Department; Alex Onishenko, New Port Richey Fire Department; Tim Exline, New Port Richey Fire Department; Dave Fogler, Division of Forestry (DOF); Don Ruths, DOF; Allison Boyd, CSA International

Meeting Summary:

The Pasco County Community Wildfire Protection Plan (CWPP) Working Group met to begin providing input on a draft CWPP. The purpose of this first Working Group meeting was to review background information, preliminary risk information, and draft capacity assessment portions of the CWPP. The meeting began with introductions and Allison Boyd provided a brief description of the project and expected benefits. The discussion then focused around the 8 step planning process that was provided as a handout. A copy of the draft CWPP prepared by Don Ruths was also provided as a handout at the meeting. The group discussed integrating the CWPP into the Local Mitigation Strategy (LMS) as an appendix in the future. It was brought up that the Fire Department should play a larger participation role in the LMS Working Group if that occurred. The CWPP will need to be signed by 3 of the Working Group participants who agree to the plan's contents to have an official plan: a local government, fire department, and DOF representative. Jim Martin believes that the CWPP would need to be presented to the BOCC, however, before the County would be able to sign the plan. He explained that this would be approximately a 6 week process and may require an adjustment of the project timeline which sets the plans to be signed in April. Allison said she would work with the group to quickly turn around the draft plan after the next meeting so that the finalized plan could be submitted to the BOCC as soon as possible in the spring. In light of the timeline it was determined that comments to the draft CWPP handed out at the meeting should be provided by mid-December so that edits to those portions of the plan could be completed before the next meeting. Don Ruths requested that he be able to review the comments prior to changes being made so he could clarify any questions concerning information he had included in the draft.

Allison asked the group to think about any other stakeholder groups that should be invited to participate in the CWPP planning process and the Southwest Florida Water Management District and County Building Department were suggested. Pasco Community Emergency Response Teams (CERTs) were also mentioned as a potential participant and Kalah Mueller explained that she works with that group.

The capacity assessment was discussed to determine where there may be gaps in the draft. Chief Campbell offered to provide more details on how the County Fire works with the other communities. Capacity and roles of the city fire departments regarding wildfires were brought up and it was generally agreed that the cities had a support role in the form of mutual aid but in most cases did not have extensive Wildland Urban Interface within their jurisdictions. Wildfire training and the issue of funding is potentially an issue and several suggestions for helping cities with firefighter training were mentioned. Public education efforts were said to be mostly handled by DOF since recent budget cuts required the County Fire to cut back on their programs including the elementary school program. They still do public outreach for Fire Prevention Week however. The arson statistics in the draft CWPP were determined to be best handled through fuel management since the persons causing these fires were so few in number and not a major education issue. The capacity assessment will also address growth management policies and Quanlin Hu pointed out the County is about to start its Evaluation and Appraisal Report (EAR) comprehensive plan update process which is good timing for this project.

Upcoming Meetings and Assignments: The Firewise Workshop that will be provided by the Pandion consulting group is scheduled for January 7, 2010 at 8:30 am and will be an opportunity for public/stakeholder wildfire mitigation education and to make others aware of the CWPP planning process underway. CWPP Working Group members will assist Kalah in providing lists of people to invite to the workshop.

The next CWPP Working Group Meeting is scheduled for February 8, 2011 at 9:30 am. The purpose of the meeting is to provide input and come to agreement on the CWPP's action plan. A detailed agenda will be provided at a later date and the meeting is expected to last at least 3 hours. The meeting will include a working lunch to be provided.

The CWPP Working Group will review the content of the draft compiled by Don Ruths and provide comments and additional information to include by mid December. Comments on the actions included in the plan will be discussed at the February meeting and do not need to be included in the written comments. An email with instructions will be sent out.

All drafts and background material for this project will be uploaded to the project website www.wildfiremitigation.org.

Working Group Meeting #2, February 8, 2011

Attendees: Jim Martin, Pasco County Emergency Management (EM); Donald Campbell, Pasco County Emergency Services; Kalah Mueller, Pasco County EM; Carol Clarke, Pasco County Growth Management; Quanlin Hu, Pasco County Growth Management; Glen Clegg, Zephyrhills Fire Department; Tim Exline, New Port Richey Fire Department; Dave Fogler, Division of Forestry (DOF); Don Ruths, DOF; Allison Boyd, CSA International

Meeting Summary:

The Pasco County Community Wildfire Protection Plan (CWPP) Working Group met to discuss goals and actions for the draft CWPP. The meeting began with introductions and then broke into questions on the draft plan that Don Ruths had prepared prior to the first meeting. The questions were to clarify some terms used in the draft such as "unincorporated communities". Carol Clarke also pointed out that recent comprehensive plan policy changes concerning shifting of density to the southern and western portions of the county could be integrated into the community background section. Allison Boyd said she would make edits for the next draft version concerning these issues.

Next the group reviewed a handout that contained the implementation section of the plan and began discussing what agency should be designated the lead for plan implementation. Don Ruths said that most communities have the fire department as the lead. Chief Campbell said that the county fire department is short on staff and capacity for additional projects. Kalah Mueller pointed out that the CWPP Working Group representatives are not the same as the LMS representatives from each agency/jurisdiction and so that could be an issue if the CWPP was rolled into existing LMS implementation and adopted as part of the LMS in the future. It may be best to simply cross reference the CWPP in the LMS and to coordinate implementation with the LMS in the future but not formally combine the plans. Questions arose on who needs to sign the CWPP and it was suggested that the cities should also sign even though they aren't required to as part of this project. Chief Campbell will set up some meetings between County Fire and Emergency Management staff to determine a structure for implementation.

During the meeting, it was discussed whether Pasco would hold one of the Firewise Workshops being offered by FDOF and Pandion Systems, Inc. Jim Martin thought that it would be most useful for planning staff and local developers.

The remainder of the meeting was spent discussing ideas for actions and edits for the goals and objectives. Topics discussed included:

- Evaluating the comprehensive plan for opportunities to incorporate Firewise development practices
- Conflicts of HOA covenants with Firewise principles and need for education
- Changes to municipal development codes for wildfire risk areas
- Add codes to require separate ingress/egress

- Water supply issues.
    - For the rural corridor, the comprehensive plan overrules the fire code.
- Coordination and communications between FDOF and fire departments
    - FDOF only has one 800 radio, need better communication between operators out in field. Can use the FIN red line to fix issue and just need to meet about doing this.
- Difficulty in obtaining funding. Cities have had trouble getting AFG grants in past.
- Fire department staffing is an issue, many browned out stations
- Funding for S190 needed ($75pp + backfill). Mostly an issue for Zephyrhills and County, New Port Richey only has 4 without S190 training.
    - Look into a train the trainer program
- Most important goal is prevention through education and fuel management
    - Fuel management on state lands is ok compared to private lands
    - Need to target particular areas
    - Provide educational materials for HOAs and community newsletters
    - FDOF sets up table at local grocery stores and works well

Upcoming Meetings and Assignments: The next CWPP Working Group Meeting is scheduled for March 8, 2011 at 9:30 am and it will be offered as a webinar for those who have farther to travel. The purpose of the meeting will be to provide input on a new draft of the CWPP complete with risk assessment maps and in the new template. The new draft will be emailed out on March 1st for review prior to the meeting.

Working Group Meeting #3, March 8, 2011

Attendees: Jim Martin, Pasco County Emergency Management (EM); Donald Campbell, Pasco County Emergency Services; Kalah Mueller, Pasco County EM; Quanlin Hu, Pasco County Growth Management; Glen Clegg, Zephyrhills Fire Department; Tim Exline, New Port Richey Fire Department; Dave Fogler, Division of Forestry (DOF); Don Ruths, DOF; Allison Boyd, CSA International

Meeting Summary:

The Pasco County Community Wildfire Protection Plan (CWPP) Working Group met in an online teleconference to comment on the March 1st draft of the CWPP. The first item on the agenda discussed was the status of discussions regarding CWPP implementation structure. Chief Campbell organized a meeting with Pasco County Fire Rescue staff, including Chief Lopinto and Chief Holland, and Division of Forestry, including Don Ruths and Dave Fogler, to discuss the CWPP's purpose and future implementation. Chief Lopinto is very supportive of the plan and the consensus was that the County Fire Rescue will lead implementation. A successful meeting between Division of Forestry and County Fire Rescue was also held to discuss interagency communication to determine short and long-term results. It was agreed that the CWPP should remain a stand-alone plan and that it should go to the Board of County Commissioners for adoption.

The remainder of the meeting focused on the March 1st draft of the CWPP and most edits were made in tracked changes during the meeting (see attached draft with tracked changes). The following comments were not directly reflected in tracked changes taken during the meeting but will be addressed in the next update of draft:

- The 2008 fire stations list provided needs to be double checked. Several edits were made to the table of fire stations during the meeting.
- On the Western Pasco checklist provided in the Appendix B there is a typo "region region". Don Ruths has the original of the checklist and will provide the correction.
- Red Cross may move their Pasco branch office soon so should just use the Tampa headquarters
- The critical facilities discussion needs updating with better data.
- Jim Martin will review LMS section of draft in more detail
- Quanlin will check with Carol Clarke about the community description on pg. 1 and the discussion of Community Development on pg 17 (renamed Planning and Growth Management)
- Quanlin suggested using pie charts showing just LOC 5-9 to augment the risk assessment discussion. Allison will add these.
- Dave Fogler requested that the Quail Hollow community be moved from the Western Pasco checklist to the Central one. Don Ruths will make this adjustment.
- Don Campbell explained the development review process in which he uses NFPA standards 1141, 1144, and 1142 to guide requirements for developments regarding location of ingress/egress and water supply. Need to determine whether this has been formalized in the current Land Development Code (LDC) update underway. He has not begun reviewing

developments for Firewise layout of the subdivision so this would still be a recommended action for LDC future amendments.

Upcoming Meetings and Assignments: The Working Group has an additional week to provide comments on the current March draft of the CWPP discussed in today's meeting. Allison will then update the draft and send out a new version for final review as soon as possible. There could be a delay due to the risk assessment data from another contractor needing changes. Once the updated, "final" draft is distributed via email Allison will give everyone a week to review and respond via email or if necessary we will schedule another web meeting at that time.

Next steps after a final draft has been approved by the Working Group will be for Chief Campbell to provide the draft for Chief Lopinto's review. An agenda item for the Pasco Board of County Commissioners will need to be drafted so that the CWPP can be recommended to the Board for final approval. This is expected to be a 6 week or more process so we will be trying to get this next step initiated as soon as possible.

Appendix B: Wildfire Vulnerability Assessment

This Appendix includes the following:

MAPS

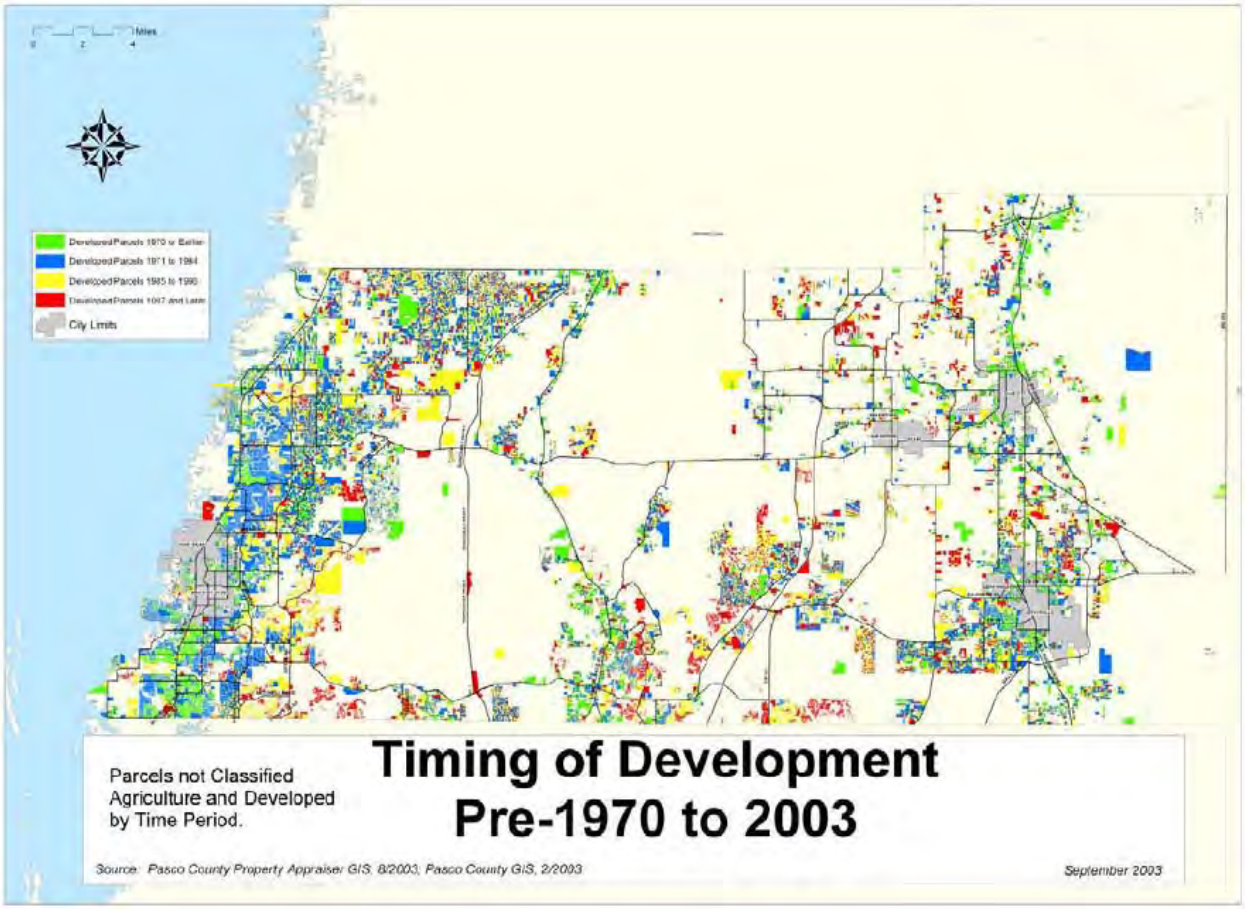
- Timing of Development
- Pasco County Wildfire Risk (LOC)
- Pasco County Surface Fuels
- Pasco County Wildfire Susceptibility Index
- Pasco County Conservation Lands
- Pasco County Emergency Operations Center and Fire Stations

FDOF RISK ASSESSMENT CHECKLISTS

- Western Pasco County
- Central Pasco County
- Eastern Pasco County

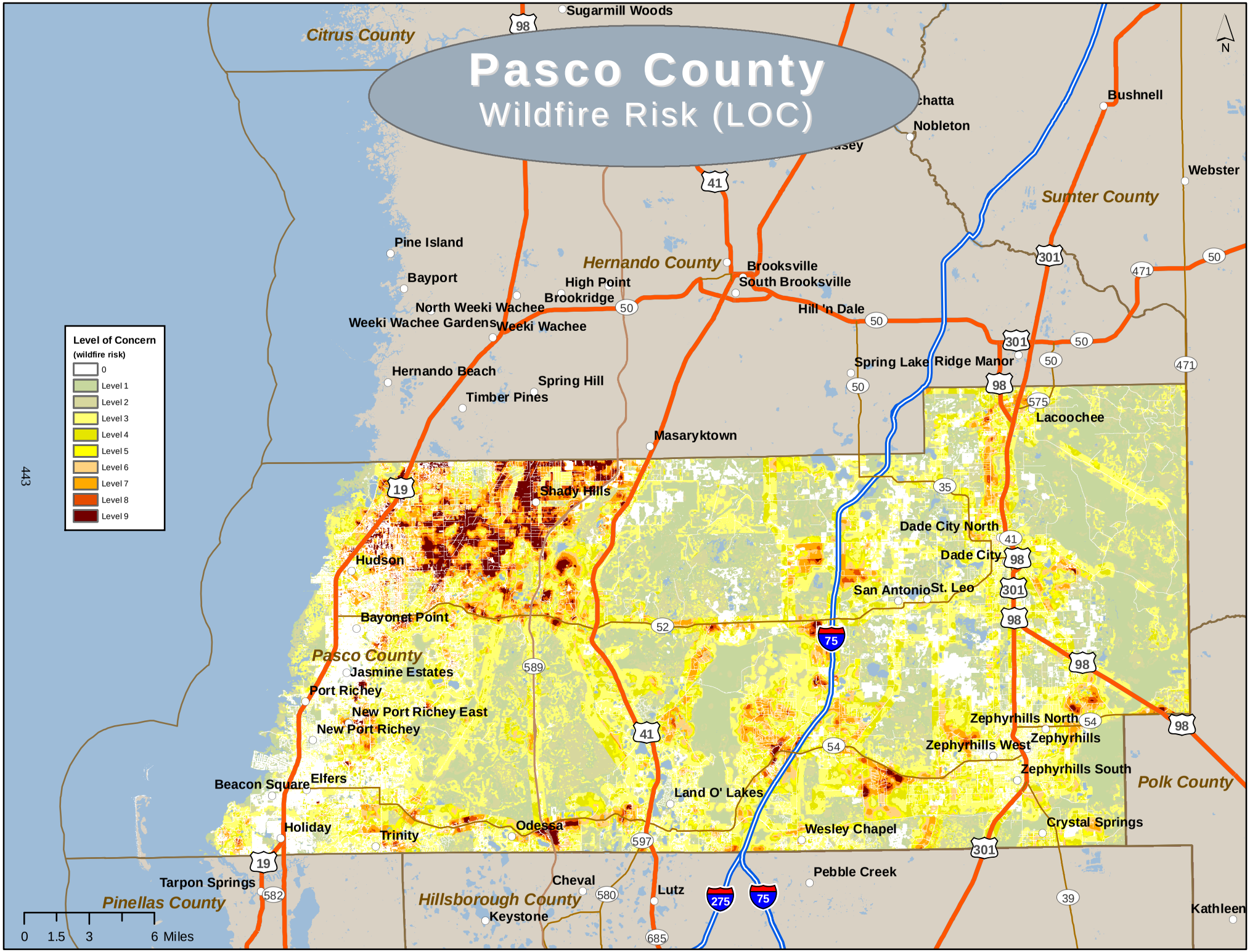
METHODOLOGY SUMMARIES

- Florida Fire Risk Assessment System (FL FRAS)
- Methods for determining population and structures at risk

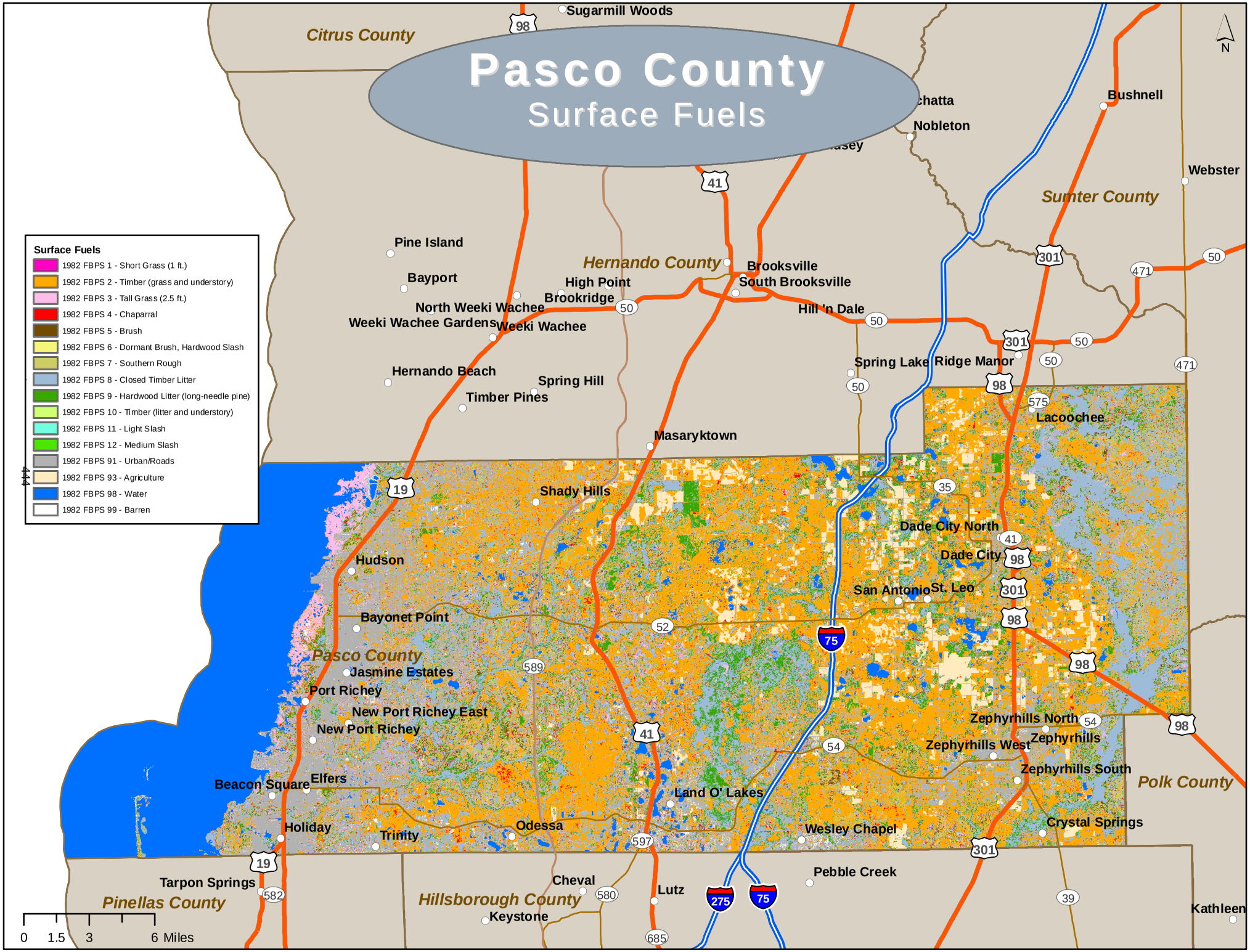


Source: Pasco County CEMP, 2010

Pasco County
Wildfire Risk (LOC)

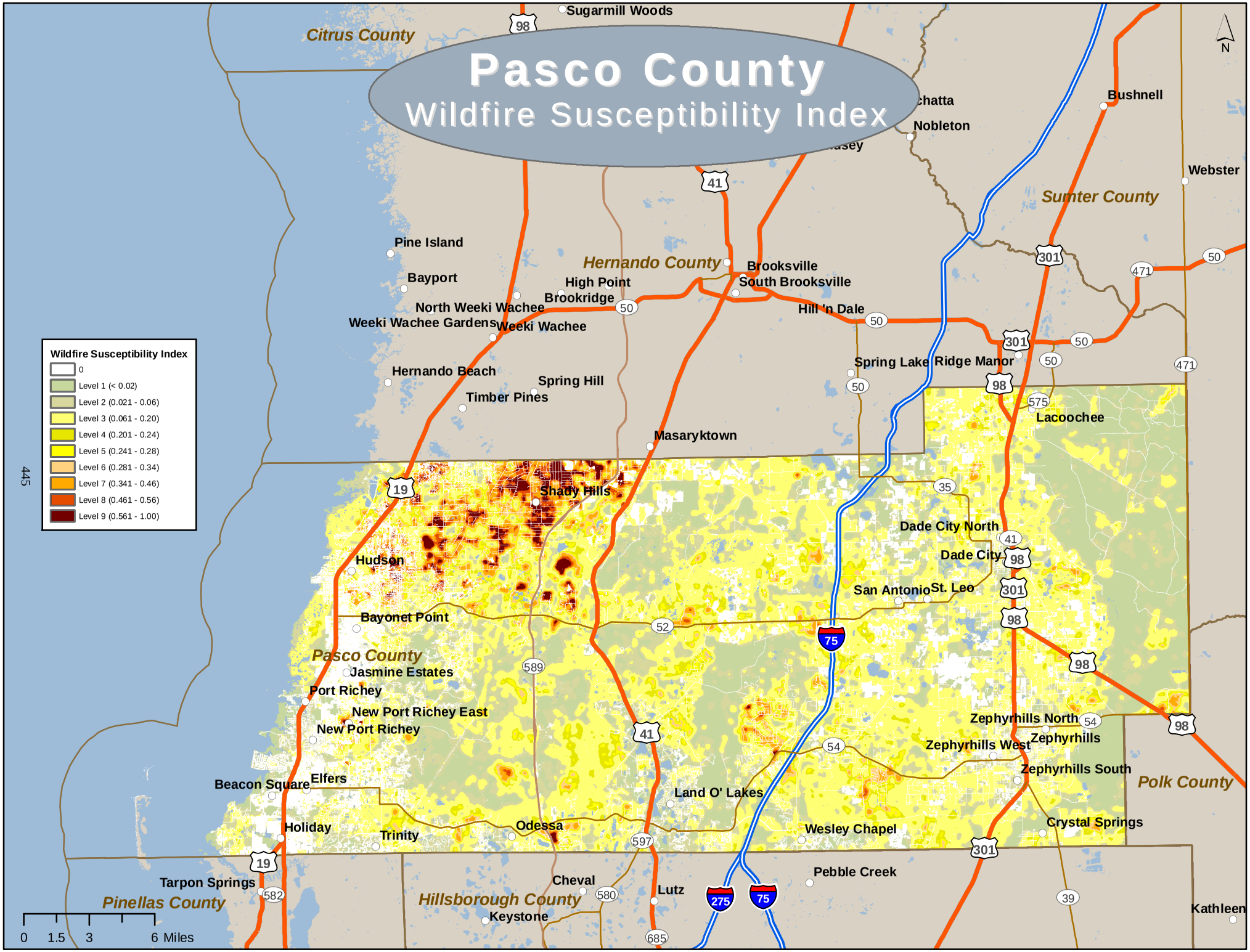


Sanborn Map Company, 2011



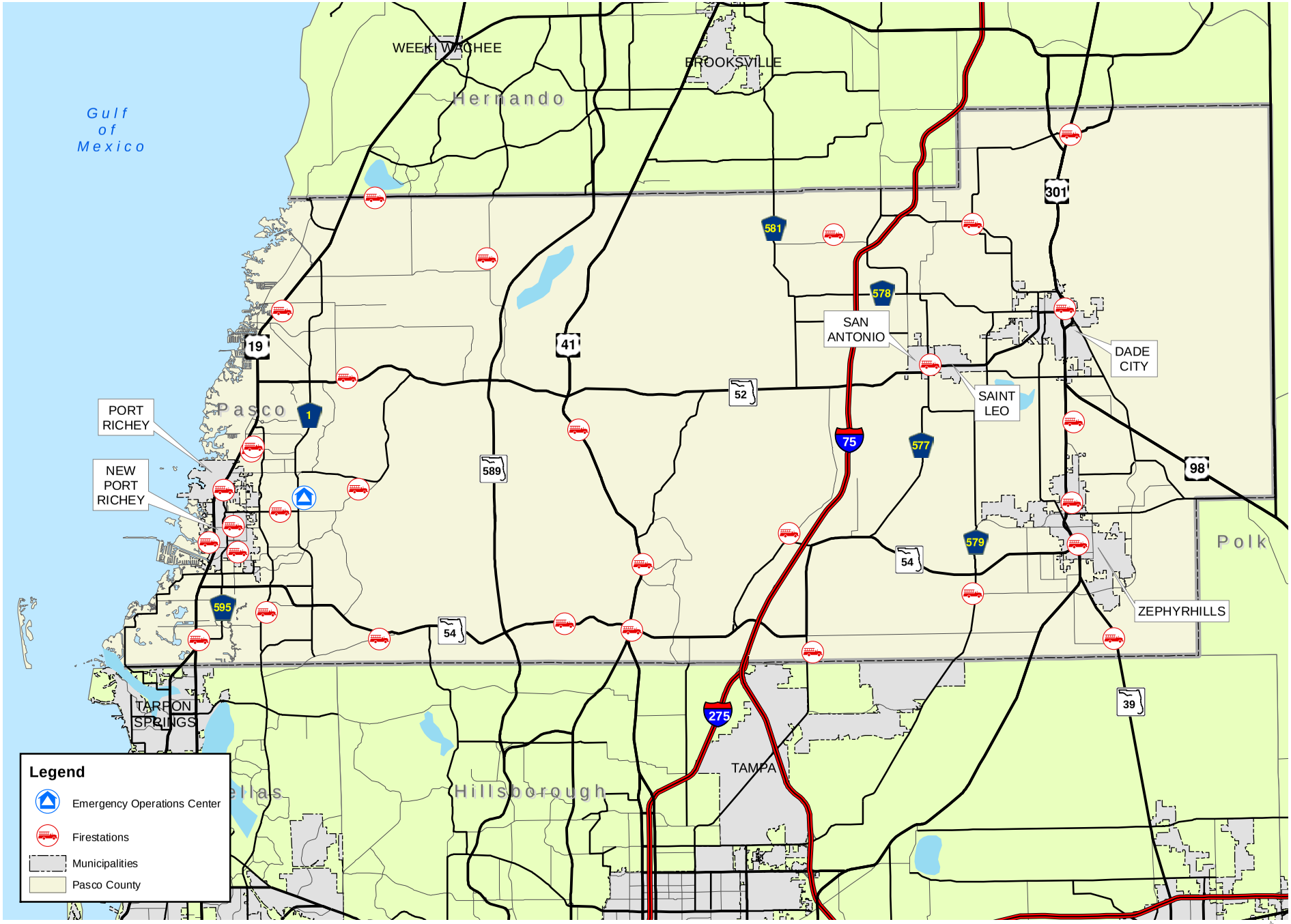
Sanborn Map Company, 2011

Pasco County
Wildfire Susceptibility Index



Sanborn Map Company, 2011

Pasco County Emergency Operations Center and Fire Stations



Data Source: Florida Division of Emergency Management, 2008

0 2.5 5 10 Miles

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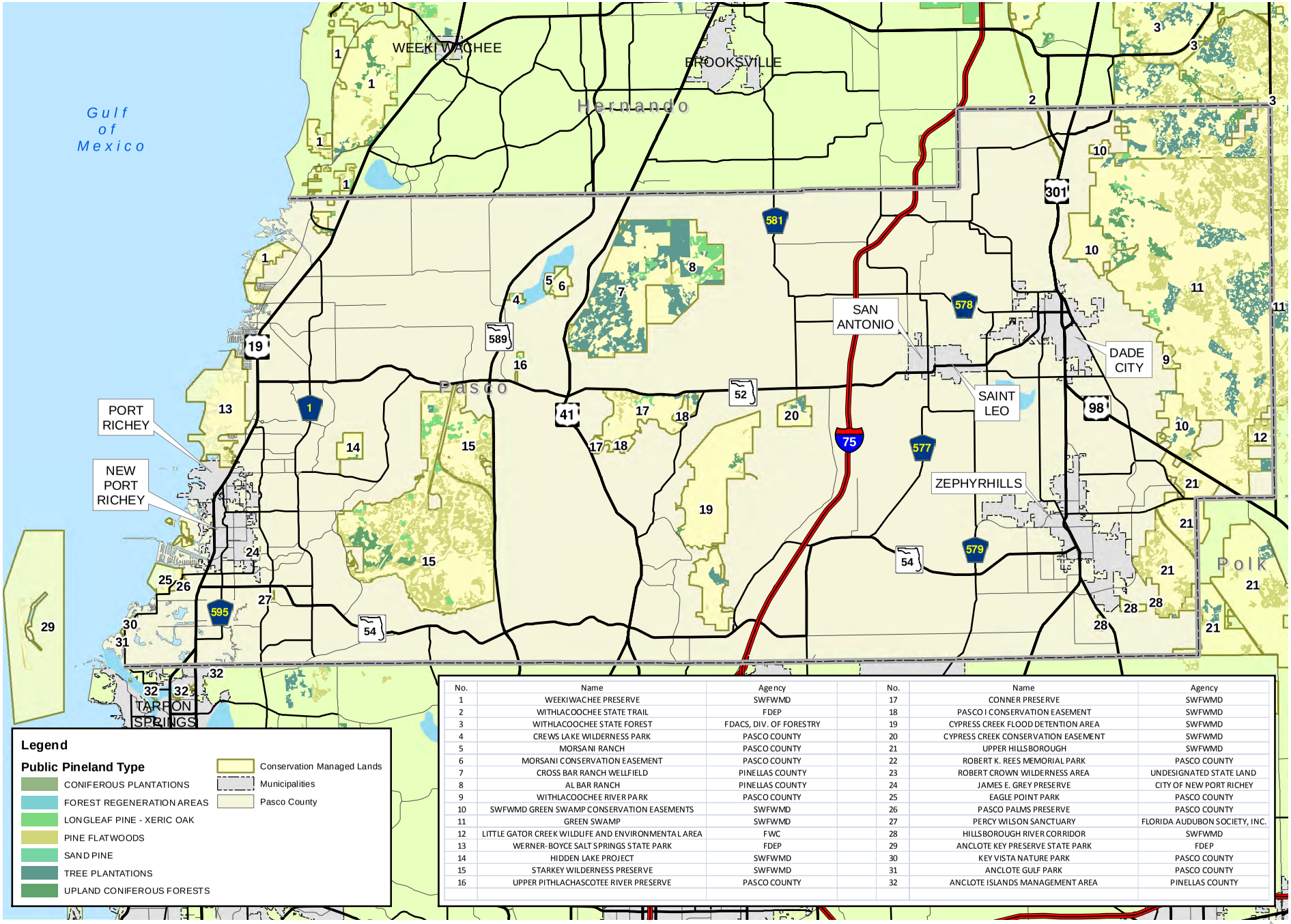
Conservation Lands in Pasco County



No.	Name	Agency	No.	Name	Agency
1	WEEKIWACHEE PRESERVE	SWFWMD	17	CONNER PRESERVE	SWFWMD
2	WITHLACOOCHEE STATE TRAIL	FDEP	18	PASCO I CONSERVATION EASEMENT	SWFWMD
3	WITHLACOOCHEE STATE FOREST	FDACS, DIV. OF FORESTRY	19	CYPRESS CREEK FLOOD DETENTION AREA	SWFWMD
4	CREWS LAKE WILDERNESS PARK	PASCO COUNTY	20	CYPRESS CREEK CONSERVATION EASEMENT	SWFWMD
5	MORSANI RANCH	PASCO COUNTY	21	UPPER HILLSBOROUGH	SWFWMD
6	MORSANI CONSERVATION EASEMENT	PASCO COUNTY	22	ROBERT K. REES MEMORIAL PARK	PASCO COUNTY
7	CROSS BAR RANCH WELLFIELD	PINELLAS COUNTY	23	ROBERT CROWN WILDERNESS AREA	UNDESIGNATED STATE LAND
8	AL BAR RANCH	PINELLAS COUNTY	24	JAMES E. GREY PRESERVE	CITY OF NEW PORT RICHEY
9	WITHLACOOCHEE RIVER PARK	PASCO COUNTY	25	EAGLE POINT PARK	PASCO COUNTY
10	SWFWMD GREEN SWAMP CONSERVATION EASEMENTS	SWFWMD	26	PASCO PALMS PRESERVE	PASCO COUNTY
11	GREEN SWAMP	SWFWMD	27	PERCY WILSON SANCTUARY	FLORIDA AUDUBON SOCIETY, INC.
12	LITTLE GATOR CREEK WILDLIFE AND ENVIRONMENTAL AREA	FWC	28	HILLSBOROUGH RIVER CORRIDOR	SWFWMD
13	WERNER-BOYCE SALT SPRINGS STATE PARK	FDEP	29	ANCLOTE KEY PRESERVE STATE PARK	FDEP
14	HIDDEN LAKE PROJECT	SWFWMD	30	KEY VISTA NATURE PARK	PASCO COUNTY
15	STARKEY WILDERNESS PRESERVE	SWFWMD	31	ANCLOTE GULF PARK	PASCO COUNTY
16	UPPER PITHLACHASCOTEE RIVER PRESERVE	PASCO COUNTY	32	ANCLOTE ISLANDS MANAGEMENT AREA	PINELLAS COUNTY

0 2.5 5 10 Miles

N

Data Source: Florida Natural Areas Inventory, 2010.

Florida Wildfire Risk Assessment Checklist

Assessment Area: Eastern Pasco County

This assessment evaluated the county's fuels and wildfire occurrence rates and causes for communities east of Interstate 75 to the interface with the Richloam and Green Swamp Conservation/Forest areas. Representative communities include Lacoochee, Dade City, Wesley Chapel, Zephyrhills and Crystal Springs.

A. Access	Points Available	Score
1. Ingress and Egress		
Two or more roads in/out	0	0
One road in/out (entrance and exit is the same)	7	4
2. Road Width		
Road width is ≥24 feet	0	0
Road width is ≥20 feet and < 24 feet	2	1
Road width is < 20 feet	4	
3. Road Accessibility		
Hard surface all-weather road with drivable shoulders	0	0
Hard surface road without drivable shoulders	2	2
Graded dirt road	3	1
Non-maintained dirt road	5	
4. Secondary Road Terminus		
Majority of dead end roads <300 feet long	0	0
Majority of dead end roads > 300 feet long	3	
5. Cul-de-sac Turnarounds		
Outside radius >50 feet	0	1
Outside radius < 50 feet	3	
6. Street Signs		
Present with non-combustible materials	0	0
Present with combustible materials	3	2
Not present	5	
B. Vegetation		
1. Vegetation Types		
a. Low fire hazards		
— grasses to 3 feet tall (except cogon grass)	5	3
— blowy leaves		2
— hardwood swamps		2
— palmetto/gallberry less than 3 feet		
b. Medium fire hazard	10	
— cypress swamp		2
— palmetto/gallberry 3-6 feet		3
— grasses over 6 feet tall/cogon grass		2
— sand pine scrub less than 6 feet tall		
— dense pine 20-60 feet tall		2
c. High fire hazard	20	
— palmetto/gallberry 3 to 6 feet with dense pine overstory*		
— palmetto/gallberry greater than 6 feet		3
— sand pine scrub over 6 feet		2

d. Extreme fire hazards	25	
— palmetto/gallberry over 6 feet with dense pine overstory*		2
— sand pine scrub with dense pine overstory*		2
— dense melaleuca		
* Pine canopy must have at least 75% crown closure to be considered dense pine		
2. Defensible Space (average for subdivision structures adjacent to wildland fuels)		
More than 100 feet	0	
Between 30 and 100 feet	10	5
Less than 30 feet	25	5
C. Building Construction		
1. Roof Material		
75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	0	0
50-75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	10	5
< 50% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	15	5
2. Soffits/Siding		
> 75% of homes have non-combustible or fire-resistant siding and soffits	0	0
50-74% of homes have non-combustible or fire-resistant siding and soffits	5	3
< 50% of homes have non-combustible or fire-resistant siding and soffits	10	3
3. Skirting (skip if not applicable)		
> 75% of homes have skirting underneath raised floors/decks	0	0
50-74% of homes have skirting underneath	5	5
< 50% of homes have skirting underneath	10	
D. Fire Protection		
Helicopter Dip Spots (min 4' water depth year round/45' radius obstruction clearance/75' approach clearance in at least one direction)		
Under 2 minute turnaround (< 1 mile)	0	
Within 4 minute turnaround (1-2 miles)	2	2
Within 6 minute turnaround (2-3 miles)	4	
Beyond 6 minute turnaround (greater than 3 miles) or unavailable	7	
2. Structural Fire Protection		
5 miles or less from staffed fire department	0	0
More than 5 miles from staffed fire department	5	5
3. Water Supply		
a. Pressurized hydrants		
500 gallons per minute hydrants available < 1000 foot spacing (municipal)	0	0
< 500 gallons per minute hydrants available	5	2
No pressurized hydrants available	10	3
b. Other water sources ****NOTE: If a pressurized system is available, skip this section***		
Dry hydrants available year round within subdivision	0	
Other accessible draft sources (min. 3000 gal) exist within subdivision	1	
Draft or pressure sources available within 5 miles via all weather roads	3	3
No draft or pressure sources available within 5 miles	10	

E. Utilities		
1. Gas (skip if not applicable)		
Underground/clearly marked	0	0
Underground/not marked	3	
Above ground/clearly marked with a 30 foot cleared perimeter	1	
Above ground/not marked	3	
2. Electric		
Underground/clearly marked	0	0
Underground/not marked	3	
Overhead with a 20 foot wide maintained right of way	1	2
Overhead with right of way not maintained	5	
3. Septic Tank/Drain Field Systems (skip if not applicable)		
Present and clearly marked	1	
Present, not clearly marked	3	
F. Additional Rating Factors *		
1. Large adjacent areas of wildlands with accumulated wildland fuels and no prescribed burning program for fuel management	0-10	5
2. Homeowner association lacks the organizational structure for a sustained fire prevention and mitigation effort.	0-5	2
3. Extensive canal or ditch system makes cross country access to fires difficult	0-10	2
4. Closeness of adjacent structures may contribute to fire spread from structure to structure.	0-5	
5. Less than 2/3 of the lots have been developed - undeveloped lots covered with wildland fuels, making stopping spread of the fire through the subdivision difficult.	0-10	5
6. History of wildfire occurrence is higher than surrounding areas due to lightning, arson, debris burning, etc.	0-10	3
Total		**98**

* Score only if applicable

HAZARD ASSESSMENT	POINT RANGE
Low Hazard	less than 50
Moderate Hazard	50-74
High Hazard	75-99
Very High Hazard	100-120
Extreme Hazard	more than 120

The eastern region of Pasco County is the most rural and has the most areas of wildland/urban interface (WUI). It has the highest wildfire occurrence rate with the majority occurring within the northeast corner at the Richloam and Green Swamp Conservation area interface. The primary causes are human; however lightening is a very close second. The region's communities may have the greatest risk from wildfire exposure due to the following factors: fuel types, heavy fuel loading within the county, building construction and type (numerous mobile home structures and timber framed homes), large areas of intermix wildland/urban interface, lack of pressurized water systems, lack of access roads and clearly marked addresses, and distances from fire suppression response stations.

Florida Wildfire Risk Assessment Checklist

Assessment Area: Central Pasco County

This assessment evaluated the county's fuels and wildfire occurrence rates and causes for communities within the Central region between the Veterans Expressway (589) and Interstate 75. Representative communities include Darby, Gowers, Land O Lakes, Ehren, Pasco Trails, and Quail Hollow.

A. Access	Points Available	Score
1. Ingress and Egress		
Two or more roads in/out	0	0
One road in/out (entrance and exit is the same)	7	
2. Road Width		
Road width is ≥ 24 feet	0	0
Road width is ≥ 20 feet and < 24 feet	2	1
Road width is < 20 feet	4	
3. Road Accessibility		
Hard surface all-weather road with drivable shoulders	0	0
Hard surface road without drivable shoulders	2	
Graded dirt road	3	2
Non-maintained dirt road	5	
4. Secondary Road Terminus		
Majority of dead end roads < 300 feet long	0	0
Majority of dead end roads > 300 feet long	3	
5. Cul-de-sac Turnarounds		
Outside radius > 50 feet	0	0
Outside radius < 50 feet	3	
6. Street Signs		
Present with non-combustible materials	0	0
Present with combustible materials	3	1
Not present	5	
B. Vegetation		
1. Vegetation Types		
a. Low fire hazards		
— grasses to 3 feet tall (except cogon grass)	5	2
— blowy leaves		1
— hardwood swamps		
— palmetto/gallberry less than 3 feet		
b. Medium fire hazard	10	
— cypress swamp		4
— palmetto/gallberry 3-6 feet		3
— grasses over 6 feet tall/cogon grass		
— sand pine scrub less than 6 feet tall		2
— dense pine 20-60 feet tall		
c. High fire hazard	20	0
— palmetto/gallberry 3 to 6 feet with dense pine overstory*		2
— palmetto/gallberry greater than 6 feet		3
— sand pine scrub over 6 feet		7
d. Extreme fire hazards	25	0

— palmetto/gallberry over 6 feet with dense pine overstory*		
— sand pine scrub with dense pine overstory*		
— dense melaleuca		
* Pine canopy must have at least 75% crown closure to be considered dense pine		
2. Defensible Space (average for subdivision structures adjacent to wildland fuels)		
More than 100 feet	0	
Between 30 and 100 feet	10	5
Less than 30 feet	25	3
C. Building Construction		
1. Roof Material		
75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	0	0
50-75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	10	5
< 50% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	15	3
2. Soffits/Siding		
> 75% of homes have non-combustible or fire-resistant siding and soffits	0	0
50-74% of homes have non-combustible or fire-resistant siding and soffits	5	5
< 50% of homes have non-combustible or fire-resistant siding and soffits	10	
3. Skirting (skip if not applicable)		
> 75% of homes have skirting underneath raised floors/decks	0	0
50-74% of homes have skirting underneath	5	5
< 50% of homes have skirting underneath	10	
D. Fire Protection		
Helicopter Dip Spots (min 4' water depth year round/45' radius obstruction clearance/75' approach clearance in at least one direction)		
Under 2 minute turnaround (< 1 mile)	0	
Within 4 minute turnaround (1-2 miles)	2	2
Within 6 minute turnaround (2-3 miles)	4	
Beyond 6 minute turnaround (greater than 3 miles) or unavailable	7	
2. Structural Fire Protection		
5 miles or less from staffed fire department	0	2
More than 5 miles from staffed fire department	5	
3. Water Supply		
a. Pressurized hydrants		
500 gallons per minute hydrants available < 1000 foot spacing (municipal)	0	0
< 500 gallons per minute hydrants available	5	2
No pressurized hydrants available	10	
b. Other water sources ****NOTE: If a pressurized system is available, skip this section***		
Dry hydrants available year round within subdivision	0	
Other accessible draft sources (min. 3000 gal) exist within subdivision	1	
Draft or pressure sources available within 5 miles via all weather roads	3	
No draft or pressure sources available within 5 miles	10	

E. UTILITIES		
1. Gas (skip if not applicable)		
Underground/clearly marked	0	0
Underground/not marked	3	
Above ground/clearly marked with a 30 foot cleared perimeter	1	
Above ground/not marked	3	
2. Electric		
Underground/clearly marked	0	0
Underground/not marked	3	
Overhead with a 20 foot wide maintained right of way	1	1
Overhead with right of way not maintained	5	
3. Septic Tank/Drain Field Systems (skip if not applicable)		
Present and clearly marked	1	
Present, not clearly marked	3	2
F. Additional Rating Factors *		
1. Large adjacent areas of wildlands with accumulated wildland fuels and no prescribed burning program for fuel management	0-10	2
2. Homeowner association lacks the organizational structure for a sustained fire prevention and mitigation effort.	0-5	2
3. Extensive canal or ditch system makes cross country access to fires difficult	0-10	
4. Closeness of adjacent structures may contribute to fire spread from structure to structure.	0-5	3
5. Less than 2/3 of the lots have been developed - undeveloped lots covered with wildland fuels, making stopping spread of the fire through the subdivision difficult.	0-10	3
6. History of wildfire occurrence is higher than surrounding areas due to lightning, arson, debris burning, etc.	0-10	
Total		**73**

* Score only if applicable

HAZARD ASSESSMENT	POINT RANGE
Low Hazard	less than 50
Moderate Hazard	50-74
High Hazard	75-99
Very High Hazard	100-120
Extreme Hazard	more than 120

The majority of wildland fires within the county's central region are human caused with escaped outdoor burns being the primary cause. The region contains sizable conservation tracts, such as the Big Cypress Swamp and the Cypress Creek well fields. The primary factors influencing the moderate risk rating are: vegetation type and increasing fuel loads, building construction materials and roads access, and fire protection limitations.

Florida Wildfire Risk Assessment Checklist

Assessment Area: Western Pasco County

This assessment evaluated the county's fuels and wildfire occurrence rates and causes for communities west of Veterans Expressway (589) to the coast. Representative communities include Hudson, Aripeka, Bayonet Point, and Moon Lake.

A. Access	Available Points	Score
1. Ingress and Egress		
Two or more roads in/out	0	0
One road in/out (entrance and exit is the same)	7	
2. Road Width		
Road width is ≥ 24 feet	0	0
Road width is ≥ 20 feet and < 24 feet	2	
Road width is < 20 feet	4	
3. Road Accessibility		
Hard surface all-weather road with drivable shoulders	0	0
Hard surface road without drivable shoulders	2	
Graded dirt road	3	
Non-maintained dirt road	5	
4. Secondary Road Terminus		
Majority of dead end roads < 300 feet long	0	0
Majority of dead end roads > 300 feet long	3	
5. Cul-de-sac Turnarounds		
Outside radius > 50 feet	0	0
Outside radius < 50 feet	3	
6. Street Signs		
Present with non-combustible materials	0	0
Present with combustible materials	3	
Not present	5	
B. Vegetation		
1. Vegetation Types		
a. Low fire hazards		
— grasses to 3 feet tall (except cogon grass)	5	3
— blowy leaves		
— hardwood swamps		
— palmetto/gallberry less than 3 feet		
b. Medium fire hazard	10	
— cypress swamp		4
— palmetto/gallberry 3-6 feet		3
— grasses over 6 feet tall/cogon grass		
— sand pine scrub less than 6 feet tall		
— dense pine 20-60 feet tall		
c. High fire hazard	20	0
— palmetto/gallberry 3 to 6 feet with dense pine overstory*		
— palmetto/gallberry greater than 6 feet		5
— sand pine scrub over 6 feet		3
d. Extreme fire hazards	25	0

— palmetto/gallberry over 6 feet with dense pine overstory*		
— sand pine scrub with dense pine overstory*		
— dense melaleuca		
* Pine canopy must have at least 75% crown closure to be considered dense pine		
2. Defensible Space (average for subdivision structures adjacent to wildland fuels)		
More than 100 feet	0	
Between 30 and 100 feet	10	10
Less than 30 feet	25	
C. Building Construction		
1. Roof Material		
75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	0	0
50-75% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	10	5
< 50% of homes have Class A asphalt or fiberglass shingles, slate, or clay tiles, cement, concrete or metal roofing or terra-cotta tiles	15	
2. Soffits/Siding		
> 75% of homes have non-combustible or fire-resistant siding and soffits	0	0
50-74% of homes have non-combustible or fire-resistant siding and soffits	5	5
< 50% of homes have non-combustible or fire-resistant siding and soffits	10	3
3. Skirting (skip if not applicable)		
> 75% of homes have skirting underneath raised floors/decks	0	0
50-74% of homes have skirting underneath	5	5
< 50% of homes have skirting underneath	10	
D. Fire Protection		
Helicopter Dip Spots (min 4' water depth year round/45' radius obstruction clearance/75' approach clearance in at least one direction)		
Under 2 minute turnaround (< 1 mile)	0	
Within 4 minute turnaround (1-2 miles)	2	
Within 6 minute turnaround (2-3 miles)	4	
Beyond 6 minute turnaround (greater than 3 miles) or unavailable	7	
2. Structural Fire Protection		
5 miles or less from staffed fire department	0	0
More than 5 miles from staffed fire department	5	
3. Water Supply		
a. Pressurized hydrants		
500 gallons per minute hydrants available < 1000 foot spacing (municipal)	0	0
< 500 gallons per minute hydrants available	5	3
No pressurized hydrants available	10	2
b. Other water sources ****NOTE: If a pressurized system is available, skip this section***		
Dry hydrants available year round within subdivision	0	
Other accessible draft sources (min. 3000 gal) exist within subdivision	1	
Draft or pressure sources available within 5 miles via all weather roads	3	2
No draft or pressure sources available within 5 miles	10	

E. Utilities		
1. Gas (skip if not applicable)		
Underground/clearly marked	0	0
Underground/not marked	3	
Above ground/clearly marked with a 30 foot cleared perimeter	1	
Above ground/not marked	3	
2. Electric		
Underground/clearly marked	0	0
Underground/not marked	3	
Overhead with a 20 foot wide maintained right of way	1	
Overhead with right of way not maintained	5	
3. Septic Tank/Drain Field Systems (skip if not applicable)		
Present and clearly marked	1	
Present, not clearly marked	3	
F. Additional Rating Factors *		
1. Large adjacent areas of wildlands with accumulated wildland fuels and no prescribed burning program for fuel management	0-10	5
2. Homeowner association lacks the organizational structure for a sustained fire prevention and mitigation effort.	0-5	2
3. Extensive canal or ditch system makes cross country access to fires difficult	0-10	6
4. Closeness of adjacent structures may contribute to fire spread from structure to structure.	0-5	3
5. Less than 2/3 of the lots have been developed - undeveloped lots covered with wildland fuels, making stopping spread of the fire through the subdivision difficult.	0-10	0
6. History of wildfire occurrence is higher than surrounding areas due to lightning, arson, debris burning, etc.	0-10	7
Total		**76**

* Score only if applicable

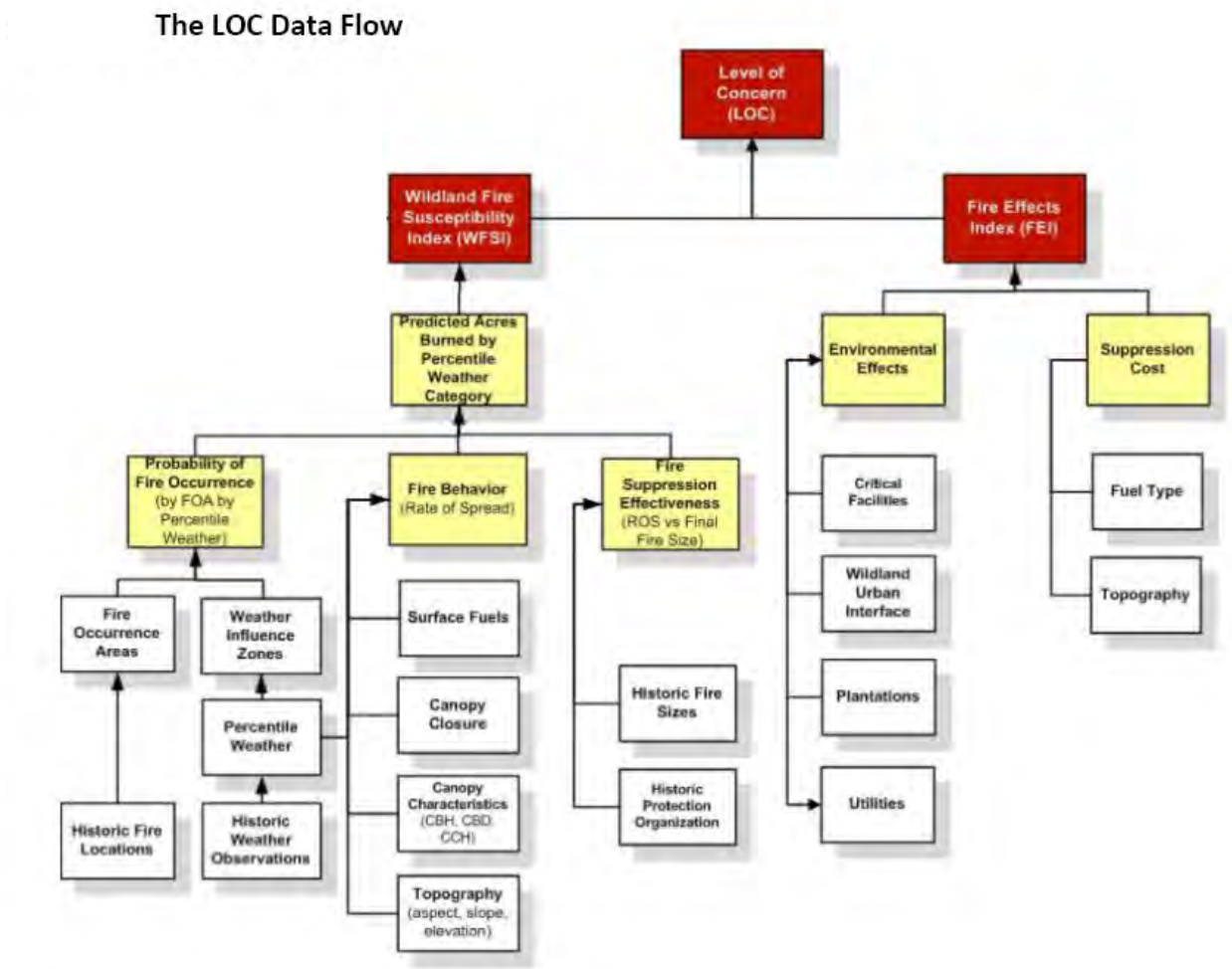
HAZARD ASSESSMENT	POINT RANGE
Low Hazard	less than 50
Moderate Hazard	50-74
High Hazard	75-99
Very High Hazard	100-120
Extreme Hazard	more than 120

The western region of Pasco County has the greatest wildland fire occurrence rate for the 5 year period from 2005 through 2010. The majority of fires occurred in the southeast region, primarily the Starkey Park Wilderness Preserve. The region has the greatest number of staffed fire stations so initial response times are much shorter. The wildland fuels loadings are moderate and the interface is primarily intermix. Primary fire causes are lightning and human-caused (arson and escaped outdoor burns). The primary factors influencing the moderate risk rating are boundary and intermix areas of wildlands, extensive canal or ditch systems which may impede access, above average occurrence rate history, type

of structure (mobile home vs. block stucco), and value of homes, commercial structures, and infrastructure facilities.

Florida Fire Risk Assessment System

The Florida Fire Risk Assessment System (FL FRAS) provides up to date wildfire occurrence, hazard, and risk data. This data is available as a 30 meter resolution dataset in GIS format. For this project, maps of surface fuels, Wildland Fire Susceptibility Index (WFSI), and Level of Concern (LOC) were generated for the County. Tabulations of acres within each LOC were also generated.



The LOC model integrates the WFSI output with the Fire Effects Index (FEI) to derive an overall Level of Concern. LOC is calculated by simply multiplying WFSI x FEI. The output values were assigned to nine LOC categories ranging from Level 1 to Level 9. The LOC output can be used to prioritize areas for further analysis. The LOC results can be used to complete a more detailed analysis at the local level and communicate wildland fire management concerns.

Source: Florida Fire Risk Assessment System, FLFRAS v9.3 User Guide, 2011, Sanborn.

Methods for determining population and structures at risk

The population and structure risk assessment was conducted for all Florida counties as part of a project to develop a Wildfire Mitigation Annex for the State of Florida Hazard Mitigation Plan. The following is a summary of the methodology used. A full methodology can be found in the State Wildfire Mitigation Annex.

The assessment combined FL FRAS LOC outputs with parcel and assessor data obtained from the Florida Division of Revenue (DOR). Data was combined to generate summaries consistent with FEMA Hazard Mitigation Planning methodologies that defined:

- total population by wildfire risk zone in each county
- total number of structures by wildfire risk zone in each county
- total value ($) of structures by wildfire risk zone in each county

The primary sources of data for this assessment were as follows:

- FL FRAS, 2011 update
- Parcel Data – Florida Department of Revenue, 2010
- Assessor data – Florida Department of Revenue, 2010
- Census data – Census Bureau, Summary File 1(SF1) table, 2000 (2010 was not available at the time analysis was conducted)

The population was determined on a parcel basis by generalized land use code. The assessor data was utilized to assign a generalized land use code to each parcel based on the detailed DOR code for the parcel. The population was calculated as follows:

Population of Parcel = PPH x Res_Units

where:

PPH = persons per household in the census tract containing the parcel (derived from 2000 census figures)

Res_Units = the number of residential units in the parcel as identified in the assessor data (derived from 2010 assessor data)

Certain caveats and assumptions exist with respect to the estimation of population. These include:

- *Parcels* - Each county provides their parcel data to the Florida Department of Revenue - each county's property appraiser is different and has different work flows and different base data. The information provided by one county may be different than the information provided by

another. We can only work with the data that was provided and if the property appraiser did not populate the number of units for a property we cannot determine the population of that parcel.

- *PPH Factors* - The people per household factors were calculated based on 2000 Census Tract data. The 2000 Census data was all that was available at the time of this project. In addition, due to the volume of data for the entire state the Census Tracts were used instead of Block Groups. The differences between using the Block Group level data and Tract level data would probably not be that great, but this was not tested. The PPH values are calculated based on data from the 2000 census so some tracts resulted in zero PPH values since they didn't have information in the 2000 census to determine the PPH values. In this case these tracts were given the average PPH of the state.
- *Population Control Totals* - The population is being compared to Florida Bureau of Economic and Business Research (BEBR) quality control totals that those control totals are estimates based off of 2000 census data and that not every county accepts the BEBR control totals.
- Population values are created as Integer so there are no partial people calculated - of course this means there is rounding in the population.
- The Commercial/Industrial generalized land use class includes the "Mixed Use" DOR Code which by definition includes "store and office or store and residential or residential combination". It is therefore reasonable for this class to have a population count.

A summary of the number of structures and the dollar value of structures for each parcel was also calculated using methods similar to the population summary described above. The assessed dollar value for each parcel and the number of structures on each parcel were available in the Assessor data[1].

Source: Florida Division of Forestry, State Hazard Mitigation Plan Annex Project Documentation, Sanborn, 2011.

[1] As with population, the quality of the assessor data varies from county to county.

Appendix C: CWPP Projects

Past Projects

FDOF Fuel Management Projects in Pasco County, 2005-2010

Ownership	Completion Date	Treatment Type	Acres	Miles Mowed	Structures Protected
Private	1/29/2005	Prescribed burn	88	0	6
Private	1/31/2005	Prescribed burn	38	0	32
Private	3/7/2005	Prescribed burn	170	0	488
Private	4/7/2005	Prescribed burn	148	1	166
Private	10/3/2005	Plowing	40	1	47
Private	3/24/2006	Prescribed burn	94	0	130
Private	12/14/2006	Plowing	25	12	25
Private	2/14/2008	Mowing	0	2	19
State	7/3/2008	Mowing	16	2	42
State	7/10/2008	Mowing	16	2	24
State	7/31/2008	Mowing	16	2	22
Private	3/6/2008	Plowing	22	2	48
Private	3/6/2008	Plowing	26	1	48
State	4/15/2008	Prescribed burn	214	3	52
State	4/15/2008	Prescribed burn	214	2	9
Private	4/22/2008	Prescribed burn	10	0	12
Private	4/22/2008	Prescribed burn	10	1	14
Private	10/17/2008	Plowing	20	1	16
Private	2/6/2009	Plowing	21	1	16
Private	4/9/2009	Mowing	12	3	234
Private	9/17/2009	Plowing	40	1	20
Private	10/19/2009	Prescribed burn	1,407	0	24
Private	10/19/2009	Prescribed burn	298	3	1,642
Private	10/22/2009	Plowing	47	1	61
County	4/28/2010	Prescribed burn	7	0	45
County	5/18/2010	Mowing	3	0	320
Private	5/27/2010	Prescribed burn	74	1	13
TOTAL			**2,862**	**42**	**3,575**

SWFWMD Fuel Management Projects, 2008-2010

The SWFWMD has summarized fuels management data for fiscal years 2008-2010 on properties managed by the District in Pasco County. Properties include Starkey Wilderness Preserve, Green Swamp West, Conner Preserve, Cypress Creek, a small portion of Weekiwachee Preserve, and Upper Hillsborough Preserve (less the Alston tract which lies in Polk).

Of the 74,000 acres of conservation lands owned by the SWFWMD in Pasco County, 48,000 acres are considered fire dependent based on FNAI natural community data. During fiscal years 2008-2010 the District burned 29,000 acres on the Pasco properties mentioned above. This yields an average of 9,600 acres per year or 20% of the fire dependent acres per year.

Additionally, the District performed several large-scale mechanical fuel reduction projects in the same three-year timeframe as listed below.

<u>Starkey Wilderness Preserve</u>

- 460 acres of sand pine scrub clear-cut adjacent to the community of Aristida and along Starkey Blvd
- Additional 40 acres of non-merchantable sand pine were hydro-axed (mowed) adjacent to Aristida
- 40 acres of scrubby flatwoods and overgrown sandhill were hydro-axed adjacent to the Moon Lake WUI

<u>Conner Preserve</u>

- 20 acres of scrubby flatwoods mechanically reduced utilizing hydro-ax and burned

<u>Weekiwachee</u>

- 40 acres of heavy scrub and mesic pine fuels fringing hydric hammock bayhead communities mowed utilizing a hydro-ax adjacent to the Briarwoods subdivision west of US 19
- 20 acres of WUI along the easternmost boundary of TRS 01/24/16 was mowed and burned

Future Projects

Projects included in this appendix are priorities as described in the Action Plan of the CWPP. These Project Detail Sheets can be used in adding projects to the Local Mitigation Strategy Project List and applying for grant funding. The following information will be provided for each project, as available.

Project Name

Project Type

[i.e. fuel mitigation, education, policy/regulations, or response improvement]

Timeframe for Implementation

Agency Responsible for Implementation

Project Description

Estimated Cost

Potential Funding Source

Target Population Benefited

Estimated Size:

Method for determining:

Partnerships for Implementation

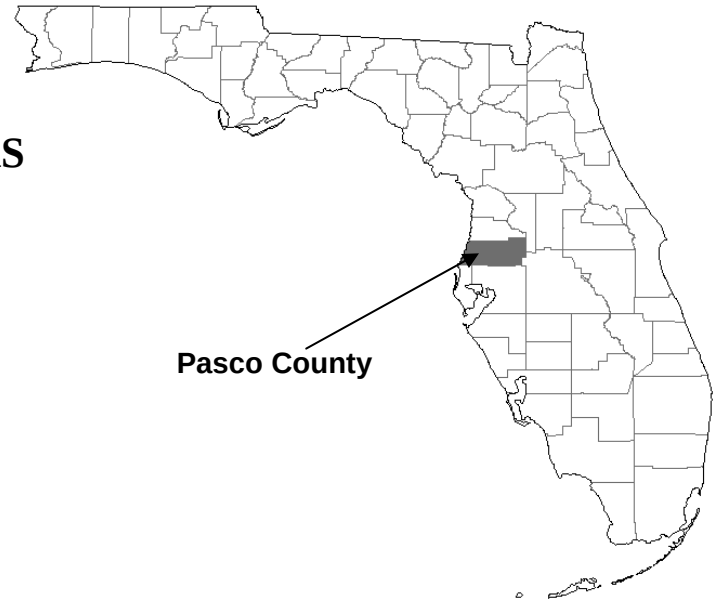
Project Evaluation Criteria

Appendix N
2014 Flood Information Study

FLOOD INSURANCE STUDY

PASCO COUNTY, FLORIDA
AND INCORPORATED AREAS

Community Name	Community Number
DADE CITY, CITY OF	120231
NEW PORT RICHEY, CITY OF	120232
PASCO COUNTY (UNINCORPORTED AREAS)	120230
PORT RICHEY, CITY OF	120234
SAN ANTONIO, CITY OF	120634
ST. LEO, TOWN OF	120166
ZEPHYRHILLS, CITY OF	120235



PRELIMINARY

MAR 29 2013

EFFECTIVE:

Federal Emergency Management Agency

FLOOD INSURANCE STUDY NUMBER
12101CV000A

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study (FIS) report may not contain all data available within the Community Map Repository. It is advisable to contact the community repository for any additional data.

Part of all of this Flood Insurance Study (FIS) may be revised and republished at any time. In addition, part of this Flood Insurance Study may be revised by the Letter of Map Revision process, which does not involve republication or redistribution of the Flood Insurance Study. It is, therefore, the responsibility of the user to consult with community officials and to check the community repository to obtain the most current FIS report components.

Initial Countywide FIS Effective Date:

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Purpose of Study 1

1.2 Authority and Acknowledgments 1

1.3 Coordination 4

2.0 AREA STUDIED 5

2.1 Scope of Study 5

2.2 Community Description 7

2.3 Principal Flood Problems 9

2.4 Flood Protection Measures 14

3.0 ENGINEERING METHODS 15

3.1 Hydrologic Analyses 15

3.1.1 Precountywide Analyses 15

3.1.2 This Countywide FIS Report 24

3.2 Hydraulic Analyses 26

3.2.1 Precountywide Analyses 26

3.2.2 This Countywide FIS Report 28

3.3 Wave Height Analysis 30

3.4 Vertical Datum 31

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS 33

4.1 Floodplain Boundaries 33

4.2 Floodways 35

4.3 Base Flood Elevations 41

4.4 Velocity Zones 41

5.0 INSURANCE APPLICATIONS 41

6.0 FLOOD INSURANCE RATE MAP 43

7.0 OTHER STUDIES 46

8.0 LOCATION OF DATA 46

9.0 BIBLIOGRAPHY AND REFERENCES 46

FIGURES

Figure 1 – Transect Schematic 31
Figure 2 – Floodway Schematic 36

TABLES

Table 1: Flooding Sources Studied by Detailed Methods 6
Table 2: Letters of Map Change 7
Table 3: Summary of Discharges 18
Table 4: Summary of Stillwater Elevations 21
Table 5: Rainfall Values 24
Table 6: Manning's "n" Values 27
Table 7: Vertical Datum Conversion 32
Table 8: Terrain Data for East Pasco Watershed 34
Table 9: Floodway Data 37
Table 10: Community Map History 45

EXHIBITS

Exhibit 1 - Flood Profiles

Anclote River	Panel 01P
Bear Creek	Panel 02P
Buckhorn Creek	Panel 03P
Fivemile Creek	Panel 04P
Hillsborough River	Panel 05P
Pithlachascotte River	Panels 06P-07P
Tributary No. 1	Panel 08P
Tributary No. 2	Panel 09P
Tributary No. 5	Panel 10P
Tributary No. 6	Panel 11P
Tributary No. 9	Panel 12P
Tributary No. 11	Panel 13P
Tributary No. 12	Panel 14P
Tributary No. 13	Panel 15P
Tributary No. 14	Panel 16P
Tributary No. 15	Panel 17P
Tributary No. 16	Panel 18P
Tributary No. 25	Panel 19P
Withlacoochee River	Panel 20P

Exhibit 2 - Flood Insurance Rate Map Index (Published Separately)
Flood Insurance Rate Map (Published Separately)

FLOOD INSURANCE STUDY
PASCO COUNTY, FLORIDA AND INCORPORATED AREAS

1.0 INTRODUCTION

1.1 Purpose of Study

This Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in the geographic area of Pasco County, including the Cities of Dade City, New Port Richey, Port Richey, San Antonio, and Zephyrhills; the Town of St. Leo; and the unincorporated areas of Pasco County (referred to collectively herein as Pasco County), and aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations at 44 CFR, 60.3.

In some states or communities, floodplain management criteria or regulations may exist that are more restrictive or comprehensive than the minimum Federal requirements. In such cases, the more restrictive criteria take precedence and the State (or other jurisdictional agency) will be able to explain them.

The Digital Flood Insurance Rate Map (DFIRM) and FIS report for this countywide study have been produced in digital format. Flood hazard information was converted to meet the Federal Emergency Management Agency (FEMA) DFIRM database specifications and Geographic Information System (GIS) format requirements. The flood hazard information was created and is provided in a digital format so that it can be incorporated into a local GIS and be accessed more easily by the community.

1.2 Authority and Acknowledgments

The sources of authority for this FIS are the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973.

Precountywide Analyses

Information on the authority and acknowledgements for each jurisdiction included in this countywide FIS, as compiled from their previously printed FIS reports, is shown below:

Dade City, City of:	The hydrologic and hydraulic analyses for areas subject to shallow flooding and ponding within the Withlacoochee River basin for the February 17, 1981, FIS report (FIA, 1981a) were performed by Tetra Tech, Inc., for the Federal Insurance Administration (FIA), under Contract No. H-4510. The work was completed in July 1980.
New Port Richey, City of:	The hydrologic and hydraulic analyses for the Gulf of Mexico for the February 17, 1981, FIS report (FIA, 1981b) were performed by Tetra Tech, Inc., for the FIA, under Contract No. H-4510. The work was completed in June 1979. A FIS supplement for wave height analysis for the Gulf of Mexico was prepared by Tetra Tech, Inc., for FEMA on January 5, 1983 (FEMA, 1983a).
Pasco County (Unincorporated Areas):	The hydrologic and hydraulic analyses for the Gulf of Mexico, Anclote River, Duck Slough, Hillsborough River, Pithlachascotee River, and Withlacoochee River for the May 18, 1981, FIS report were performed by Tetra Tech, Inc., for the FIA, under Contract No. H-4510. The work was completed in May 1979 (FIA, 1981e). The hydrologic and hydraulic analyses for the Gulf of Mexico for the September 15, 1983, FIS revision were performed by FEMA to incorporate wave height analysis into the FIS Report (FEMA, 1983c). The hydrologic and hydraulic analyses for Cypress Creek and Trout Creek for the February 17, 1989, FIS revisions were performed by the Southwest Florida Water Management District (SWFWMD) for FEMA (FEMA, 1989). Analyses for the Buckhorn Creek, Bear Creek upstream of Bear Creek Drive, Fivemile Creek downstream of CSX railroad, Trout Creek

Pasco County (Unincorporated Areas) (continued):	upstream of county boundary, Cabbage Swamp downstream of Interstate 75, Zephyr Creek, Tributary Nos. 1, 2, 5-10, and 17 (to the Anclote River), Tributary Nos. 11-13 and 25 (to Bear Creek), Tributary No. 16 (to Fivemile Creek), Tributary Nos. 18-20 (to Cypress Creek), Tributary No. 21 (to Cabbage Swamp), and Tributary Nos. 22-24 (to Trout Creek) for the September 30, 1992, FIS revision (FEMA, 1992) were performed by Atkins, for FEMA under Contract No. EMW-88-R-2613. The hydrologic and hydraulic analyses for Zephyr Creek were taken from the Lake Zephyr Watershed, Stormwater, and Flood Management Master Plan (Greiner, Inc., 1989). The hydrologic and hydraulic analyses for Tributary No. 2 Basin and Tributary No. 7 Basin were performed by Boyle Engineering Corporation in 1991.
Port Richey, City of:	The hydrologic and hydraulic analyses for the Gulf of Mexico and Pithlachascotee River for the February 17, 1981, FIS report (FIA, 1981c) were performed by Tetra Tech, Inc., for the FIA, under Contract No. H-4510. The work was completed in June 1979. A FIS supplement for wave height analysis for the Gulf of Mexico at the open coast, Boggy Bay, Pithlachascotee River, and Millers Bayou was prepared by Tetra Tech, Inc., for FEMA on January 5, 1983 (FEMA, 1983b).
Zephyrhills, City of:	The hydrologic and hydraulic analyses for the Zephyr Creek for the December 17, 1991, FIS report (FEMA, 1991) were performed by Greiner, Inc., for FEMA. The work was completed in 1991.

The City of San Antonio and the Town of St. Leo have no previously printed FIS reports.

This Countywide FIS Report

The hydrologic and hydraulic analyses for the Anclote River Watershed, east of Suncoast Parykway, were performed by Atkins for the SWFWMD, under Interagency Agreement No.'s 06CC0000047, 07CC0000073, and 07CC0000075. The work was completed in February 2011.

The hydrologic and hydraulic analyses for the Cypress Creek Watershed were performed by Parsons Water & Infrastructure Inc. (Parsons) for the SWFWMD, under Contract No. B206, Work Order 5. The work was completed in March 2010.

The hydrologic and hydraulic analyses for the East Pasco Watershed were performed by URS for the SWFWMD, under Contract Number 03CONC00016. The work was completed in March 2010.

The hydrologic and hydraulic analyses for Trout Creek and Clay Gully (TCCG) West Subwatersheds known herein as the Trout Creek Watershed were performed by Ayres Associates (Ayres) for the SWFWMD, under Interagency Agreement No. 6CC0000051. The work was completed in April 2010.

Base map information shown on the Flood Insurance Rate Map (FIRM) was derived from Digital Orthophotos produced at a scale of 1:12,000, from aerial photography dated 2006 or later. The projection used in the preparation of this map is State Plane Florida West, and the horizontal datum used is North American Datum of 1983 (NAD83), Geodetic Reference System 1980 (GRS80) Spheroid.

1.3 Coordination

An initial Consultation Coordination Officer (CCO) meeting (often referred to as the Scoping meeting) is held with representatives of the communities, FEMA, and the study contractors to explain the nature and purpose of a FIS and to identify the streams to be studied by detailed methods. A final CCO (often also referred to as the Preliminary DFIRM Community Coordination, or PDCC, meeting) is held with representatives of the communities, FEMA, and the study contractors to review the results of the study.

For this revision of the countywide FIS, the initial CCO meeting was held on March 4, 2004, and attended by representatives of FEMA, the SWFWMD, and the communities.

The final CCO meeting was held on Month, xx, 20xx to review and accept the results of this FIS. Those who attended this meeting included representatives of the State, the Engineering Study Contractor, FEMA, and the communities. All

problems raised at that meeting and subsequent public outreach meetings have been addressed in this study.

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Pasco County, Florida, including the incorporated communities listed in Section 1.1. The areas studied by detailed methods were selected with priority given to all known flood hazards and areas of projected development or proposed construction.

There are 19 watersheds in Pasco County. These were grouped together into larger watersheds for study and delivery purposes. The following large watersheds and the smaller watersheds they contain are studied by detailed methods in this FIS report:

Pinellas Anclote Watershed*

Cypress Creek Watershed
- Cypress Creek Watershed
- South Lakes Watershed
- Upper East Cypress Creek Watershed

East Pasco Watershed
- East Zephyrhills Watershed
- Lake Zephyr Watershed

Trout Creek Watershed

*The Pinellas Anclote watershed was studied by detailed methods east of Suncoast Parkway only. West of Suncoast Parkway was digitally captured from the effective FIRMs.

The remaining watersheds included in this study which were not restudied are:

Blanton Lake Watershed

Double Hammock Watershed

Duck Lake Watershed

Upper Pithlachascotee Watershed

Hammock Creek Watershed

Lower Coastal Watershed

New River Watershed

Bear Creek Watershed

North Lakes Watershed

Pithlachascotee Watershed

Upper Hillsborough Watershed

Upper Withlacoochee Watershed

Effective data for the Hillsborough River and Withlacoochee River was transferred from previous FIS texts.

For this countywide FIS revision, all or portions of the following flooding sources, listed in Table 1, "Flooding Sources Studied by Detailed Methods," were restudied and/or newly studied by detailed methods. Newly studied flooding sources were selected with priority given to all known flood hazard areas, and areas of projected development and proposed construction. The scope and methods of this study were proposed to and agreed upon by FEMA and Pasco County.

Table 1: Flooding Sources Studied by Detailed Methods

Flooding Source	**Reach Length (miles)**
Anclote River	9.6
Bear Creek	3.6
Buckhorn Creek	3.7
Fivemile Creek	3.6
Hillsborough River	3.0
Pithlachascotte River	6.6
Tributary No. 1	.6
Tributary No. 2	2.6
Tributary No. 5	.7
Tributary No. 6	.5
Tributary No. 9	1.2
Tributary No. 11	1.3
Tributary No. 12	2.0
Tributary No. 13	1.6
Tributary No. 14	1.2
Tributary No. 15	1.3
Tributary No. 16	1.0
Tributary No. 25	1.8
Withlacoochee River	4.1

The limits of detailed study are indicated on the Flood Profiles (Exhibit 1) and on the FIRM (Exhibit 2).

For this countywide FIS, the FIS report and FIRM were converted to countywide format, and the flooding information for the entire county, including both incorporated and unincorporated areas, is shown. Also, the vertical datum was converted from the National Geodetic Vertical Datum of 1929 (NGVD) to the North American Vertical Datum of 1988 (NAVD). In addition, the Transverse Mercator, State Plane HARN coordinates, previously referenced to the North American Datum of 1927 (NAD27), are now referenced to the NAD83.

Approximate analyses were used to study those areas having low development potential or minimal flood hazards. Topographic and landuse information, in conjunction with aerial imagery, were used to estimate approximate floodplains. The scope and methods of study were proposed to and agreed upon by FEMA and Pasco County.

This countywide FIS also incorporates the determination of letter issued by FEMA resulting in Letters of Map Change as shown in Table 2, "Letters of Map Change (LOMCs)."

Table 2: Letters of Map Change (LOMCs)

LOMC	Case Number	Date Issued	Project Identifier	Watershed
LOMR	94-04-221P	August 12, 1994	Pithlachascotee River – Timber Greens	Pithlachascotee
LOMR	95-04-363P	March 5, 1996	Revision - Summary of Discharges	Countywide
LOMR	96-04-047P	February 29, 1996	Anclote River – Dreher Island	West Pinellas Anclote
LOMR	96-04-229P	August 5, 1996	Jasmine Lakes Subdiv. – unnamed canal	Double Hammock Creek
LOMR	00-04-2860P	January 25, 2001	Duck Slough Watershed – Heritage Springs Subdiv.	West Pinellas Anclote
LOMR	05-04-1536P	November 30, 2006	The Champions' Club	West Pinellas Anclote
LOMR	05-04-0987P	May 17, 2007	New River Lakes	New River/Upper Hillsborough
LOMR	10-04-8088P	April 29, 2011	Dupree Lakes, Phase 3A	Cypress Creek

2.2 Community Description

Pasco County occupies an area of approximately 772 square miles in west-central Florida. It stretches approximately 22 miles along the Gulf of Mexico from Hillsborough and Pinellas Counties on the south to Hernando County on the north. Polk and Sumter Counties border on the east. The City of Dade City, the county seat, is located approximately 280 miles northwest of the City of Miami, approximately 170 miles southwest of the City of Jacksonville and approximately 200 miles southeast of the City of Tallahassee.

The U.S. Census Bureau recorded the 2010 population of Pasco County at 464,697, which represented an approximate 26-percent increase over the 2000 census of 344,765 (U.S. Census Bureau, 2010).

Pasco County was founded in June 2, 1887, when Hernando County was divided into three counties: Citrus to the north; Hernando and Pasco to the south. It

comprises approximately 868 square miles, with land constituting 745 square miles, and water constituting the remaining 123 square miles. The county is approximately rectangular. At its widest points, it runs about 57 miles east to west and 27 miles north to south. It is bounded to the north by Hernando County, the northeast by Sumter, the southeast by Polk, the south by Hillsborough, and the southwest by Pinellas. Its western border is the Gulf of Mexico.

Pasco comprises six cities and unincorporated Pasco County, which makes up about 90 percent of the county. Dade City, the county seat, is located in the eastern part of the county. It was established in 1889, and people think of Dade City as "Old Florida" because of the nature of its physical appearance, as well as the lively spirit of its residents. San Antonio, which is just to the south and east of Dade City, was established in the late 1800s as a Catholic colony. Today, San Antonio still retains its hometown feel. Saint Leo, which is east of San Antonio, is home to Lake Jovita as well as Saint Leo University and the Saint Leo Benedictine Monastery. The city of Zephyrhills, the source of Zephyrhills Spring Water Company, is located in the southeast portion of the county.

New Port Richey is the largest city in the county. It is located on the Gulf of Mexico and was founded in 1915. Port Richey, just to the north of New Port Richey, is also located on the Gulf of Mexico.

The majority of developed land in the area is primarily agricultural, mostly cropland and pasture with some citrus groves. Commercial forestry also contributes a substantial percentage to the county economy. Industrial areas are located around the Cities of Dade City and Port Richey. Considerable commercial and residential development exists in areas along U.S. Highway 19 in the western part of the county and along the CSX Railroad and U.S. Highway 41 in the central part. Recently, development in inland areas of central Pasco County, around Land O' Lakes, has become more extensive.

The major streams within the county are the Withlacoochee River in the eastern portion, Hillsborough River in southeast, Anclote River in the south and west, and the Pithlachascotee River in the western and central sectors. The Withlacoochee River, which flows northwesterly through the eastern and northern sections of Pasco County from the Green Swamp in Polk County to the Gulf of Mexico, near Yankeetown, is approximately 157 miles in length, with a drainage area of 1,980 square miles. The Hillsborough River, which also originates at Green Swamp, flows through the southeastern corner of Pasco County southwesterly for approximately 54 miles into Hillsborough Bay at the City of Tampa and drains approximately 690 square miles. The North Branch Anclote River flows southwesterly to its confluence with South Branch Anclote River. They form the Anclote River, which then flows for approximately 21 miles into the Gulf of Mexico. The Anclote River watershed includes approximately 120 square miles. Pithlachascotee River originates near the City of Brooksville in Hernando County

and flows southwesterly through Pasco County to the Gulf of Mexico at the City of Port Richey. It drains an area of approximately 195 square miles.

Cypress Creek and other miscellaneous tributaries of Hillsborough River are in the south-central portion of the county. Along with their numerous tributaries, these streams provide a fairly extensive drainage system. The Withlacoochee River overflows into Hillsborough River at an overflow channel near the Town of Richland in the southeast corner of Pasco County. In addition, there is a network of canals and ditches to drain some of the low, flat areas. Several small creeks in the coastal portions of the county drain several miles inland. Tidewaters extend several miles inland into these coastal streams and into the Pithlachascotee and Anclote Rivers.

Physically, Pasco County is divided into two topographic regions, the Coastal Lowlands, and the Central Highlands, and is characterized by gently sloping terrain, with level or nearly level areas in the western section, and higher, gently rolling areas and shallow depressions in the eastern portion of the county. Numerous ponds and lakes are located throughout the county.

The elevation in the study area ranges from approximately 249 feet NAVD88 in the north-central parts to the sea level along the Gulf Coast. The Anclote Keys, in the extreme southwest of the county, are the low-lying offshore barrier islands. North of these keys there is an indistinct salt marsh shoreline averaging 1 to 2 feet above sea level.

Pasco County is located in the subtropical climate zone, which is characterized by mild, dry winters and warm, wet summers. The wet season extends from June through September and coincides with the hurricane season. The study area receives the majority of its precipitation during this 4-month period and averages approximately 53 inches annually. The average annual high temperature is approximately 84 degrees Fahrenheit (°F) and the average annual low temperature is approximately 62°F (The Weather Channel, 2010).

Vegetation in the study area is typically subtropical, with cypress swamps in the flat, poorly drained areas in the central parts of the county, marshes and mangroves along the coast, and pine, palm and live oak in the higher area.

2.3 Principal Flood Problems

Flooding in western Pasco County results primarily from tidal surge in the coastal areas of the county, which are caused by hurricanes, tropical storms, and overflow of the streams caused by rainfall and runoff. Not all storms which pass close to the study area produce extremely high tides. Similarly, storms which produce extreme conditions in one area may not necessarily produce critical conditions in other parts of the study area.

Flooding in central and east Pasco County results from overland flow during storm events.

The Pithlachascotee and Anclote Rivers are broad estuaries and, under certain conditions, tides generated at their mouths in the Gulf of Mexico can intrude far upstream. Rainfall which usually accompanies hurricanes can aggravate the tidal situation. Because of the flatness of the terrain along the streams and rivers, most inland areas are characterized by shallow flooding during heavy rainfall.

Many areas along the Zephyr Creek are flood prone during relatively minor or frequent storm events. The areas along Zephyr Creek between C Avenue and Meadowbrook Drive experience the most frequent overbank flooding (Greiner Inc., 1989).

Storms passing Florida in the vicinity of Pasco County have produced severe floods, as well as structural damage. A brief description of several significant tropical storms provides historic information to which coastal and riverine flood hazards and projected flood depths can be compared (Anderson and Ross, 1972; NOAA, 1975b; USACE, 1956; USACE, 1961; USACE, 1976).

October 21-31, 1921

This storm originated in the western Caribbean Sea and on October 25, 1921 entered Florida north of Tarpon Springs, where winds were estimated at 70 to 90 knots and tides from 7 to 10 feet above sea level. Its center moved across the Florida peninsula and over the Atlantic coast October 26, 1921. Flooding conditions prolonged because of the slow forward movement of the storm. Five or six lives were lost and property damage in Florida was placed at $3 million.

June 1934

Excessive rainfall during this period caused flooding in low-lying areas and considerable damage to bridges, highways, and railroad fills in the Withlacoochee River basin in eastern Pasco County.

August 1935

The storm that occurred and continued through September 8, 1935, was one of the most severe tropical disturbances ever recorded. The storm was first located east of Turks Island, traveled toward the Florida Straits, recurved across the Florida Keys, and then passed up west coast Florida on a broad recurve which brought it inland near Cedar Key. There was severe damage along many of the beach areas of the central and upper Gulf Coast.

September 1-7, 1950

Hurricane Easy struck the west coast of Florida. This hurricane originated over the western Caribbean Sea; passed northward over Cuba and the Gulf of Mexico, then moved north-northwest parallel to the Florida coastline. It made two loops near Cedar Key, moved inland south-eastward, passed approximately 30 miles north of the City of Tampa, recurved and traveled northward. Beach areas along the central and upper gulf coast sustained heavy damage. This small but severe hurricane was also accompanied by intense rainfall.

March 15-18, 1960

Thunderstorms and heavy rainfall averaging more than 10 inches over a 10,000-square-mile area in central Florida resulted in $14 million damage in the Four-Rivers area. In the Withlacoochee River basin in eastern Pasco County, there was damage to residential and agricultural lands and to transportation facilities.

June 4-14, 1966 (Hurricane Alma)

This storm originated from the Gulf of Honduras and passed between Key West and the Dry Tortugas. Tides on the west coast of Florida varied, ranging up to 10 feet above normal. The City of New Port Richey was one of the areas in which the highest tides were reported.

June 19, 1972 (Hurricane Agnes)

Hurricane Agnes originated on the northeastern tip of the Yucatan Peninsula and traveled westward. The storm was of large diameter and, although the center passed approximately 150 miles west of the Florida peninsula, it produced a high tidal surge. Tides of 3 to 6 feet above sea level to the south of the study area (Pinellas County) and 10 feet above sea level to the north of the study area (Cedar Key) were reported; some coastal areas experienced erosion from the wave action and tidal damage to homes, seawalls, revetments, and roads. Damage from this storm in Pasco County, as elsewhere along the Gulf coast of Florida, was minor and was caused mainly by the high winds associated with this storm.

August 30 to September 5, 1985 (Hurricane Elena)

A Category 3 Hurricane, which stalled off the west coast of Florida, caused saltwater and freshwater flooding.

March 13, 1993

No Name Storm. 5.0 inches of rainfall measured at TIA. Due to astronomically high tides, extremely heavy rainfall, wind of near tropical storm strength, and a storm surge of six to eight feet, the coastal areas of Aripeka, Hudson, Port Richey, and New Port Richey experienced severe flooding. Flooding in homes and businesses ranged from several inches to more than four feet of water. Several thousand homes were impacted. The Pasco County Emergency Operations Center (EOC) was fully activated in response to the event. Recovery operations commenced within 24 hours of the storm. The County received a Presidential Disaster Declaration for public assistance and individual assistance.

July 18, 1995

5.1 inches of rainfall measured at TIA. Pasco County experienced localized flooding due to extremely heavy rainfall of more than five inches falling within a few hours on already saturated ground. The flooding was concentrated mainly in the Port Richey area. Homes and businesses received one to two feet of water. The County responded with a partial activation of EOC. A Small Business Administration disaster declaration was awarded to assist in the recovery effort.

August 2, 1995 (Hurricane Erin)

5.0 to 6.0 inches of rainfall measured at TIA. Hurricane Erin passed over Pasco County with the eye of the storm passing near Dade City. EOC was fully activated as Pasco County was in the direct path of the storm. Damage was minimal, confined mostly to electric power and tree damage. One apartment building housing the elderly received roof damage and the residents evacuated to a local shelter. Rainfall associated with Hurricane Erin caused minor street flooding; however, storm surge was not a problem. Hurricane Erin exited to the north of Pasco County during a low tide period. Pasco County was included in the Presidential Disaster Declaration for Hurricane Erin.

October 4, 1995 (Hurricane Opal)

1.6 inches of rainfall measured at TIA. Pasco County fully activated EOC in expectation of receiving an impact from Hurricane Opal. Though no direct impact was felt, Hurricane Opal, a gulf storm, was responsible for prolonged high tides. Pasco County did not receive a disaster declaration.

October 7, 1996 (Tropical Storm Josephine)

2.0 inches of rainfall measured at TIA. Pasco County fully activated EOC in response to the threat of Tropical Storm Josephine. Tropical Storm Josephine impacted Aripeka, Hudson, Port Richey, and New Port Richey. The City of Port

Richey received the greatest impact from the storm, consisting mainly of flooding in homes. The impact of Tropical Storm Josephine was not as severe as the March 13, 1993, No Name Storm, as residents received generally less than one foot of water in their homes. Pasco County received a Presidential Disaster Declaration for individual assistance due to the damage received from Tropical Storm Josephine.

Tropical Storms and Hurricanes of 2004

The 2004 Hurricane Season was a very active season with a total of fifteen named storms. Eight of the storms grew to become hurricanes and the State of Florida saw four of those storms make landfall as major (Category 3 or higher) hurricanes. The names of the four major hurricanes were Charley, Frances, Ivan and Jeanne. Pasco County was involved in preparation actions for Hurricanes Charley, Frances and Jeanne, as well as response and recovery operations for Frances and Jeanne. Fortunately, when Hurricane Ivan arrived in mid September, it moved from south to north through the Gulf of Mexico towards landfall in the Panhandle some 300 miles offshore from Pasco County. Therefore, the County was not impacted by this storm.

The State of Florida has experienced several Labor Day/Labor Day weekend storms during its history. Hurricane Frances proved to be the latest in this string of storms, tracking through southwest Pasco County around 11 p.m. on September 5 as it exited the state.

Hurricane Frances made landfall in Martin County on Florida's east coast early in the morning of September 5 as a Category 3. It tracked towards the northwest through Polk and Hillsborough Counties, eventually exiting the State into the Gulf of Mexico through the southwest portion of Pasco County on September 5.

Unlike Hurricane Charley where only preparation actions were necessary on the part of Pasco County, response and recovery actions were needed following Hurricane Francis, since it passed through Pasco County with sustained gale force winds (55+ mph) that caused significant damage as it exited the state. Primary response and recovery operations conducted were flood response/pumping operations and debris removal. Damage assessment reports issued after the storm reflected 782 buildings (primarily mobile homes) in the County with minor damage and 114 with major damage resulting from the storm winds. In addition, 459 flooding reports were received by the County as a result of rains that accompanied the storm. Repetitive Loss Area No. 2, Bass Lake experienced flooding.

The third and final weekend storm of the 2004 Hurricane Season to impact Pasco County was Hurricane Jeanne. Jeanne proved to be a special challenge for Pasco County in that recovery operations that was well underway for Hurricane Frances

had to be suspended in order to retrench and initiate preparation (protective) actions for Jeanne. Likewise, after the storm passed, the concurrent efforts of resuming recovery operations for Frances and initiating recovery operations for Jeanne had to be undertaken.

Similar to Hurricane Frances, Jeanne made landfall in Martin County on Florida's east coast early in the morning of September 26 as a Category 3. It followed a track similar to Frances as it generally moved to the north-northwest through Polk, the northeastern part of Hillsborough and into Pasco County with the track taking the center of the storm very close to Zephyrhills and Dade City prior to it exiting the County into Hernando County late in the evening of September 26. Hurricane Jeanne passed through Pasco County with sustained gale force winds (55+ mph) that once again caused significant damage. Primary response and recovery operations conducted were flood response/pumping operations and debris removal. Damage assessment reports issued after the storm reflected 2,805 buildings (primarily homes) in the County with minor damage, and 558 with major damage resulting from the storm winds. As of the end of September 2004, 462 flooding complaints were received and tasked to field investigators. Unfortunately, Pasco County had one fatality attributable to Hurricane Jeanne.

2.4 Flood Protection Measures

No extensive community flood protection projects exist in the tidal areas. Flood proofing of structures is done on an individual basis and includes such measures as elevation of dwellings, conservation of mangrove, and construction of seawalls. The City of Dade City utilizes a pumping station that transfers water out of the low-lying ponding area near Howard Avenue and provides only minor protection against flooding within the city. Recent flood protection improvements, in the City of Dade City, consist of retention ponds between 17th and 10th Streets that collect runoff.

Geiger Pond, in the Zephyr Creek watershed, is approximately 1.25 square miles in area and about 1 mile long. The watershed, characterized by gentle slopes and a high percentage of pasture area, has a typical flood response time of about 14 hours and flood duration of less than one-half of a day. Natural conditions such as an intense precipitation event in the upper watershed that could lead to an embankment failure or other adverse condition could occur relatively rapidly. It should also be recognized that areas downstream of Geiger Pond in Zephyrhills are prone to flooding events that might occur at the same time as a dam emergency.

3.0 ENGINEERING METHOD

For the flooding sources studied by detailed methods in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Flood events of a magnitude that are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for floodplain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10-, 2-, 1-, and 0.2-percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents the long-term, average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood that equals or exceeds the 1-percent-annual-chance (100-year) flood in any 50-year period is approximately 40 percent (4 in 10); for any 90-year period, the risk increases to approximately 60 percent (6 in 10). The analyses reported herein reflect flooding potentials based on conditions existing in the community at the time of completion of this study. Maps and flood elevations will be amended periodically to reflect future changes.

3.1 Hydrologic Analyses

For this countywide study, hydrologic analyses were carried out to establish peak discharge-frequency relationships for each flooding source studied by detailed methods affecting the community. A summary of peak discharge-drainage area relationships for streams studied by detailed methods is shown in Table 3, "Summary of Discharges."

3.1.1 Precountywide Analyses

The determination of coastal inundation caused by passage of a hurricane storm surge was determined by the joint probability method (NOAA, 1970). The storm populations were described by probability distributions of five parameters which influence surge heights. These were central pressure depression (which measures the intensity of the storm), radius to maximum winds, forward speed of the storm, shoreline crossing point, and crossing angle. These characteristics were described statistically based upon an analysis of observed storms in the vicinity of Pasco County (NOAA, 1957; NOAA, 1975a; NOAA, 1975c; NOAA, 1977; NWS, 1965). Digitized storm information for all storms from 1886 through 1977 was used to correlate statistics (NOAA, 1978).

For areas subject to flooding directly from the Gulf of Mexico, the FIA standard coastal surge model was used to simulate the coastal surge generated by any

chosen storm (that is, any combination of the five storm parameters defined previously). Performing such simulations for a large number of storms, each of known probability, permits one to establish the frequency distribution of surge height as a function of coastal location. These distributions incorporate the large-scale surge behavior but do not include an analysis of the added effects associated with much finer scale wave phenomena such as wave height, setup, or runup. As the final step in the calculations, the astronomical tide for the region is statistically combined with the computed storm surge to yield recurrence intervals of total water level (FIA, 1977). The surge model employed in the procedure utilizes a grid pattern approximating the geographical features of the study area and the adjoining areas. Surges were computed utilizing grids of 5 nautical miles.

Surge levels in Anclote and Pithlachascotee Rivers were computed with the aid of a one-dimensional unsteady-flow model. The values for the mouth were taken from the results of the coastal model.

Stream flooding along the Anclote and Withlacoochee Rivers was studied using procedures outlined in Water Resources Council (WRC) Bulletin #17 (WRC, 1977). The flood frequency statistics for Hillsborough River, which runs through the southeastern portion of Pasco County, were developed from stream gage data on the mainstem of Hillsborough River near the City of Zephyrhills and Blackwater Creek (38 years of record). Flood flow frequencies for Hillsborough River were based on standard log-Pearson Type III analyses as outlined in WRC Bulletin #17 (WRC, 1977).

The discharge-frequency relationships for Bear Creek, Buckhorn Creek, Fivemile Creek, and Tributary Nos. 1, 2, 5, 6, 9, 11-16, and 25 were determined using USGS regional regression equations (USGS, 1982). For areas where significant urbanization has occurred, these discharges were adjusted using established techniques and parameters (USGS, 1984). The three-parameter estimating equations were used for this study. The parameters are rural discharges computed at specific locations, drainage area, and a basin development factor which is a measure of the efficiency on aerial photographs and information gathered during field surveys and reconnaissance.

The Pithlachascotee River stream gage (No. 2310300) had discharge records from 1963 through 1976, which were not sufficiently long to yield reliable results from flood frequency analysis. The logarithmic mean and standard deviation of the record were adjusted on the basis of regression with nearby long-term records, as outlined in WRC Bulletin #17 (WRC, 1977). The floods of the required frequencies were then computed by performing a log-Pearson Type III analysis.

The Anclote, Pithlachascotee and Withlacoochee River basins, which comprise a large part of the study area, have been altered by the construction of freeways and

canals. All major proposed and current projects that affect the study area have been taken into account in this analysis.

For areas affected by ponding from Withlacoochee River in the vicinity of the City of Dade City, the hydrology was adopted from floodplain information on the Withlacoochee River prepared by the SWFWMD (SWFWMD, 1976b). The hydrologic analysis consisted of a hydrologic budget based on the following factors: rainfall, infiltration, groundwater levels, evapotranspiration, basin size, slope, and storm frequency.

Allowance for infiltration to the groundwater is assumed to be the wet season capacity. Rainfall frequency data were extracted from NWS Technical Paper 40 (NWS, 1961) for durations up to 24 hours and frequencies up to 100 years. Values for return periods of more than 100 years were estimated by plotting the data from NWS Technical Paper 40 on log-normal probability paper.

Table 3: Summary of Discharges

Flooding Source and Location	Drainage Area (Square miles)	Peak Discharges (Cubic feet per second) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
ANCLOTE RIVER					
At State Highway 54	72.50	2,880	5,220	6,420	9,760
BEAR CREEK					
At Bear Creek Drive	9.00	*	*	1,322	1,944
At State Road 587	8.30	*	*	1,220	1,795
At Citrus Street	2.54	*	*	958	1,426
BUCKHORN CREEK					
At confluence with Bear Creek	3.86	*	*	199	307
At State Road 52	2.71	*	*	145	225
FIVEMILE CREEK					
At confluence with Pithlachascotee River	5.16	*	*	459	705
Just upstream of confluence of Tributary No. 16	1.20	*	*	397	632
HILLSBOROUGH RIVER					
At confluence with Blackwater Creek	84	2,600	4,130	4,890	6,800
PITHLACHASCOTEE RIVER					
Gaging Station at New Port Richey	182	1,084	2,060	2,600	4,170
TRIBUTARY NO. 1					
At confluence with Anclote River	0.95	*	*	409	633

Flooding Source and Location	Drainage Area (Square miles)	Peak Discharges (Cubic feet per second) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
TRIBUTARY NO. 2					
At confluence with Anclote River	11.87	*	*	2,323	3,396
TRIBUTARY NO. 5					
At confluence with Anclote River	1.92	*	*	603	920
TRIBUTARY NO. 6					
At confluence with Anclote River	0.78	*	*	252	382
TRIBUTARY NO. 9					
At confluence with Anclote River	3.88	*	*	880	1,364
At confluence of Tributary No. 10	3.07	*	*	706	1,109
TRIBUTARY NO. 11					
At Manatee Avenue	1.45	*	*	966	1,539
TRIBUTARY NO. 12					
At confluence with Bear Creek	3.88	*	*	434	671
TRIBUTARY NO. 13					
At confluence with Bear Creek	3.01	*	*	451	668
TRIBUTARY NO. 14					
At confluence with Pithlachascotee River	2.53	*	*	646	959
TRIBUTARY NO. 15					
At confluence with Pithlachascotee River	1.65	*	*	187	294
TRIBUTARY NO. 16					

Flooding Source and Location	Drainage Area (Square miles)	Peak Discharges (Cubic feet per second) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
At confluence with Fivemile Creek	2.29	*	*	268	418
TRIBUTARY NO. 25					
At confluence with Bear Creek	6.60	*	*	1,590	2,444
WITHLACOOCHEE RIVER					
At Trilby	570	3,880	7,260	9,080	14,400

*Data not available

Table 4: Summary of Stillwater Elevations

Water Surface Elevations (Feet NAVD)				
Flooding Source and Location	**10-percent-annual-chance**	**2-percent-annual-chance**	**1-percent-annual-chance**	**0.2-percent-annual-chance**
ANCLOTE RIVER				
At confluence with Duck Slough	5.1	8.1	9.1	11.6
GULF OF MEXICO				
At U.S. Highway 19	5.4	9.1	11.1	14.1
At Main Street	5.3	8.6	10.1	13.7
At Aripeka	6.0	10.0	11.8	15.6
At Port Richey	5.6	9.4	11.2	14.6
At Bird Key	5.2	8.8	10.5	13.6
Millers Bayou Along Bay Boulevard	5.5	9.4	11.1	14.5
PITHLACHASCOTEE RIVER				
At Upstream Corporate Limits of New Port Richey	5.3	8.3	9.8	12.7
PONDING AREA 1	**	**	34	35.2
PONDING AREA 2	**	**	35.4	36.0
PONDING AREA 3	**	**	34.0	35.2
PONDING AREA 5	**	**	35.3	36.0
PONDING AREA 6	**	**	36.0	36.6
PONDING AREA 7	**	**	35.8	36.5
PONDING AREA 8	**	**	34.0	35.2
PONDING AREA 9	**	**	35.8	36.0
PONDING AREA 10	**	**	36.5	37.0
PONDING AREA 11	**	**	34.0	35.2
PONDING AREA 12	**	**	34.6	35.3

Flooding Source and Location	Water Surface Elevations (Feet NAVD) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
10-04-8088P PONDING AREA 13	**	**	75.1	**
PONDING AREA 13	**	**	36.3	37.0
PONDING AREA 13a	**	**	75.1	**
10-04-8088P PONDING AREA 14	**	**	76.0	**
PONDING AREA 14	**	**	37.8	39.2
10-04-8088P PONDING AREA 15	**	**	75.1	**
PONDING AREA 15	**	**	37.6	38.3
PONDING AREA 16	**	**	39.1	39.8
PONDING AREA 17	**	**	36.9	37.7
PONDING AREA 18	**	**	39.0	40.0
PONDING AREA 19	**	**	37.4	37.6
PONDING AREA 20	**	**	37.9	38.3
PONDING AREA 21	**	**	37.7	37.8
PONDING AREA 22	**	**	37.3	37.6
PONDING AREA 23	**	**	37.3	37.6
PONDING AREA 24	**	**	35.4	36.0
PONDING AREA 25	**	**	35.8	36.5
PONDING AREA 26	**	**	39.1	40.5
PONDING AREA 28	**	**	36.9	37.4
PONDING AREA 29	**	**	37.8	38.6
PONDING AREA 30	**	**	41.8	42.9
PONDING AREA 31	**	**	38.6	39.1
PONDING AREA 32	**	**	38.8	39.4

Flooding Source and Location	Water Surface Elevations (Feet NAVD) 10-percent-annual-chance	2-percent-annual-chance	1-percent-annual-chance	0.2-percent-annual-chance
PONDING AREA 33	**	**	40.3	40.8
PONDING AREA 34	**	**	38.4	38.7
PONDING AREA 35	**	**	39.0	39.9
PONDING AREA 36	**	**	39.6	39.9
PONDING AREA 37	**	**	38.4	39.3
PONDING AREA 38	**	**	38.0	38.3
PONDING AREA 39	**	**	39.3	39.6
PONDING AREA 40	**	**	39.6	40.1
PONDING AREA C1	23.9	24.2	24.5	25.0
PONDING AREA 3-1	24.4	24.8	25.1	25.6
PONDING AREA 3-2	26.5	27.8	28.7	25.6
PONDING AREA 3-3	24.9	25.8	26.7	28.3
PONDING AREA 3-5	25.1	26.2	27.4	35.2
PONDING AREA 3-7	28.6	29.0	29.2	29.5
PONDING AREA 3-9	24.7	25.3	25.8	29.8
PONDING AREA 3-10	24.5	24.9	25.3	30.1
PONDING AREA 5-1	26.7	28.1	28.8	25.8
PONDING AREA 5-5	26.7	28.0	28.7	30.1
PONDING AREA 5-9	26.9	28.1	28.9	30.1
PONDING AREA 5-10	31.1	31.9	32.6	30.2
TRIBUTARY NO. 2 BASIN	**	**	21.2-39.5	33.5

*Data not available

3.1.2 This Countywide FIS Report

Two rainfall distributions were selected for rainfall-runoff analysis in the study area: the SCS Type II Florida-Modified 24-hour distribution, and the SWFWMD 120-hour rainfall distribution. 24-hour and 120-hour rainfall-intensity-duration relationships were developed for the study area. The total rainfall depths were obtained from depth-duration-frequency curves. The rainfall depth-duration-frequency relationships were applied in this study revision as follows:

- SCS Type II Florida-Modified 24-hour Rainfall Distribution: for the 1-percent-annual chance design storm;
- SWFWMD 120-hour Rainfall Distribution: for the 1-percent-annual-chance design storm.
- Total rainfall values for each watershed included in this revision are shown in Table 5.

Table 5: Rainfall Values

Watershed	Datum Offset (ft)	Total Rainfall Volume (in) Study Type	1 Day 100 yr	Multi-Day Rainfall Used *	Date of Model
Bear Creek	-0.84	Effective Transfer	12.0	-	09/30/92
Blanton Lake	-0.84	Effective Transfer	11.0	-	09/30/92
Cypress Creek	-0.84	Detailed	12.4	15.0	04/27/10
Double Hammock	-0.84	Effective Transfer	12.0	-	09/30/92
Duck Lake	-0.84	Effective Transfer	11.0	-	09/30/92
East Pasco	-0.84	Detailed	12.0	17.0	02/23/10
East Pinellas Anclote	-0.84	Detailed	12.0	-	04/26/11
Hammock Creek	-0.84	Effective Transfer	12.0	-	09/30/92
Lower Coastal	-0.84	Effective Transfer	12.1	-	09/30/92

Watershed	Datum Offset (ft)	Study Type	Total Rainfall Volume (in) 1 Day 100 yr	Multi-Day Rainfall Used *	Date of Model
North Lakes	-0.84	Effective Transfer	NA	-	09/30/92
Pithlachascotee	-0.84	Effective Transfer	12.0	-	09/30/92
Trout Creek	-0.84	Detailed	12.4	15.0	06/29/10
Upper Hillsborough	-0.84	Effective Transfer	11.0	-	05/01/79
Upper Pithlachascotee	-0.84	Effective Transfer	12.0	-	09/30/92
Upper Withlacoochee	-0.84	Effective Transfer	10.9	-	05/01/79
West Pinellas Anclote	-0.84	Effective Transfer	12.0	-	09/30/92

*Multi-day event used only in specific sub-basins, refer to engineering report

The hydrologic analyses for the watersheds of Anclote River east of Suncoast Parkway, Cypress Creek, East Pasco, and Trout Creek were performed using the Interconnected Channel and Pond Routing (ICPR) model, version 3 (Streamline Technologies, 2007). This model uses information that characterizes and defines the runoff component within the project area. This includes subbasin delineations, as well as land use and soils parameterization specific to the SCS Runoff Curve Number and Green Ampt Infiltration methods as incorporated in the ICPR.

As defined by the SWFWMD's guidelines, aerial topographic maps or contour maps generated from SWFWMD-authorized Digital Terrain Model (DTM) dated 2004-2007 were used to define subbasin boundaries and refine the study area limits. Determination of the subbasin boundaries within the watershed were made on the basis of the existing physical features such as topography, lakes, wetlands, ponds, hydrated management storage areas, and conveyance elements (pipes, channels, etc.) which describe the hydraulic system within the study area.

For the majority of the areas in the watersheds, the hydrological model was based on the SCS Runoff Curve Number method, which is appropriate due to the soil types, infiltration characteristics, and degree of development. The SCS Runoff

Curve Number calculations for the project areas were based on the GIS intersections of the SWFWMD soil coverage, the updated land use/land cover coverage and subbasins coverage.

However, approximately one percent of the project area is comprised of HSG, Hydraulic Soil Group, type A soils. The hydrologic method applied to these areas was the Green Ampt Infiltration method. Soil characteristics (cut-off depth, hydraulic conductivity, adjusted effective porosity and suction head) were obtained using the SURGO soils lookup tables and AcrHydro tools provided by the District.

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of flooding from the sources studied were carried out to provide estimates of the elevations of floods of the selected recurrence intervals. Users should be aware that flood elevations shown on the FIRM represent rounded whole-foot elevations and may not exactly reflect the elevations shown on the Flood Profiles or in the Floodway Data Table in the FIS report. Flood elevations shown on the FIRM are primarily intended for flood insurance rating purposes. For construction and/or floodplain management purposes, users are cautioned to use the flood elevation data presented in this FIS report in conjunction with the data shown on the FIRM.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2).

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

3.2.1 Precountywide Analyses

Cross section data for the Anclote, Hillsborough, Pithlachascotee, and the Withlacoochee Rivers were obtained by field surveys and from aerial photographs (SWFWMD, various dates (a), (b), (c); USGS, various dates).

Water-surface profiles for all streams studied by detailed methods were developed the using the USACE, Hydrologic Engineering Center (HEC), Computer Program, HEC-2 (HEC, 1974; HEC, 1976).

Computations for flood levels along the rivers resulting from either coastal surges or rainfall were independently performed. The results of each were combined statistically to obtain flood levels for each return period.

For flooding from Withlacoochee River near the City of Dade City, volumetric ponding analysis was utilized to determine the amount and distribution of excess rainfall in the low areas. The ponding depth was based on the volume of water which remained ponded in the low areas after allowances were made for discharge via the pumping system. The analysis indicated the ponding areas have an average ponding depth for the 1-percent-annual-chance flood of 1 to 3 feet.

The starting water-surface elevations for the Anclote River were taken from the FIS for the unincorporated areas of Pinellas County (FIA, 1981d). The starting water-surface elevation for Hillsborough River was taken from the FIS for the unincorporated areas of Hillsborough County (FIA, 1980). Mean high tide was used as the starting water-surface elevation for Pithlachascotee River. The starting water-surface elevations for Withlacoochee River were taken from the floodplain information report prepared by the SWFWMD (SWFWMD, 1976b).

Approximate flood elevations for North Branch Anclote River and South Branch Anclote River upstream of State Highway 54 were taken from floodplain information reports prepared by the SWFWMD (SWFWMD, 1977; SWFWMD, 1976a).

Approximate flood elevations for New River at Hillsborough River, from upstream of State Highway 39 to State Highway 35 were taken from the 1979 floodplain information report prepared by the SWFWMD (SWFWMD, 1979b).

Approximate elevations for Cypress Creek and Pithlachascotee River were taken from reports prepared by the USGS (USGS, 1978; USGS, 1979).

Approximate elevations for Bear Creek and Withlacoochee River (from the Old Henley crossing to Cumpressco at State Highway 471) were taken from floodplain information reports prepared by the SWFWMD (SWFWMD, 1976b; SWFWMD, 1979a).

Roughness coefficients (Manning's "n") used in this study were determined from aerial photographs and calibrated using high-water marks. Table 6, "Manning's 'n' Values," contains the channel and overbank "n" values for the studied streams.

Table 6: Manning's "n" Values

Flooding Source	Channel	Overbanks
Anclote River	0.04-0.13	0.07-0.30
Hillsborough River	0.04-0.13	0.07-0.30
Pithlachascotee River	0.04-0.13	0.07-0.30
Tributary No. 2 Basin	0.04-0.05	0.09-0.13
Withlacoochee River	0.04-0.13	0.07-0.30

Water-surface elevations along the Tributary No. 2 Basin were computed using the Route IV hydrologic and hydraulic computer model (Digital Matrix Systems Inc, undated).

Overbank cross sections for the backwater analyses of the streams were obtained from aerial photography (SWFWMD, various dates (a), (b), (c)). The below-water sections were obtained from field measurement at bridge structures. All bridges, dams, and culverts were field surveyed to obtain elevation and structural geometry data.

Water-surface elevations of floods of the selected recurrence intervals for Bear Creek, Buckhorn Creek, Fivemile Creek, and Tributaries No. 1, 2, 5, 6, 9, 11-16, and 25 were computed using the USACE HEC-2, computer program (HEC, 1984). Starting water-surface elevations were calculated using the slope-area method.

3.2.2 This Countywide FIS Report

Hydraulic parameters for each of the watersheds of Anclote River, Cypress Creek, East Pasco, and Trout Creek were developed consistent with the model requirements. Hydraulic included geometry of conveyance structures and overland weirs, stage-area relationships, roughness coefficients, starting water elevations, and boundary conditions. Conveyance structures include roadway culverts, open channels, and control structures. Data for the structures was identified from field reconnaissance/survey, Environmental Resource Permits (ERP's) and available as-builts/construction plans. The location of each structure was entered into a database as a hydraulic data point. Each hydraulic data point was linked to an attribute table that contains geometry details for each structure.

For the purpose of this study the ICRP model, version 3 (Streamline Technologies, 2007) uses the junction-reach concept to idealize the prototype drainage system. A junction is a discrete location in the drainage system where conservation of mass (continuity) is maintained. A reach is the connection between junctions that is used to convey water through the system. The entire network of junctions and reaches forms the hydraulic model network and serves as the computational framework for the ICPR.

Locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway was computed (Section 4.2), selected cross section locations are also shown on the FIRM (Exhibit 2).

The profile baselines depicted on the FIRM represent the hydraulic modeling baselines that match the flood profiles on this FIS report. As a result of improved

topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the Special Flood Hazard Area.

The hydraulic analyses for this study were based on unobstructed flow. The flood elevations shown on the Flood Profiles (Exhibit 1) are thus considered valid only if hydraulic structures remain unobstructed, operate properly, and do not fail.

3.3 Wave Height Analysis

The methodology for analyzing the effects of wave heights associated with coastal storm surge flooding is described in the National Academy of Sciences report (National Academy of Sciences, 1977). This method is based on the following major concepts. First, depth-limited waves in shallow water reach a maximum breaking height that is equal to 0.78 times the stillwater depth. The second major concept is that wave height may be diminished by dissipation of energy due to the presence of obstructions such as sand dunes, dikes and seawalls, buildings, and vegetation. The amount of energy dissipation is a function of the physical characteristics of the obstruction and is determined by procedures prescribed in aforementioned National Academy of Sciences report. The third major concept is that wave height can be regenerated in open fetch areas due to the transfer of wind energy to the water. This added energy is related to fetch length and depth.

Wave height were computed along transects (cross section lines) in accordance with the Users Manual for Wave Height Analysis (FEMA, 1981).The transects were located along the coastal areas as shown in the FIRM panels. The transects were located with consideration given to the physical and cultural characteristics of the land so that they would closely represent conditions in their locality. Transects were spaced close together in areas of complex topography and dense development. In areas having more uniform characteristics, they were spaced at larger intervals. It was also necessary to locate transects in areas where unique flooding existed and in areas where computed wave heights varied significantly between adjacent transects.

Each transect was taken perpendicular to the shoreline and extended to the inland limit of tidal flooding. Along each transect, wave heights and elevations were computed considering the combined effects of changed in ground elevation, vegetation, and physical features. The stillwater elevations for the 1-percent-annual-chance flood were used as the starting elevations for these computations. Wave heights were calculated to the nearest 0.1 foot, and wave elevations were determined at whole-foot increments along the transects. The location of the 3-foot breaking wave for determining the terminus of the V Zone (area with velocity wave action) was computed at each transect.

Figure 1, “Transect Schematic,” represents a sample transect that illustrates the relationship between the stillwater elevation, the wave crest elevation, the ground elevation profile, and the location of the V/A zone boundary. This figure also shows the wave elevations being decreased by obstructions, such as buildings, vegetation, and rising ground elevations and being increased by open, unobstructed wind fetches.

After analyzing wave heights along each transect, wave elevations were interpolated between transects. Various source data were used in the interpolation, including topographic maps (Real Estate Data, Inc., 1976; USGS, various dates), aerial photographs (SWFWMD, various dates (a),(b),(c)), as well as engineering judgment. Controlling features affecting the elevations were identified and considered in relation to their positions at a particular transect and their variation between transects.

The northern and western side of Miller Bayou may be subject to greater flood hazards than are presently indicated on the revised FIRM due to potential wave action. Due to limitations of the data and engineering methodology, including knowledge of wave generation and propagation mechanisms and wind-surge correlations in time, the magnitude and extent of wave hazard on the western side of Millers Bayou cannot be accurately determined at present and these areas have been omitted from rigorous analysis. As further refinements to existing study methods become available, the FIRM will be revised accordingly.

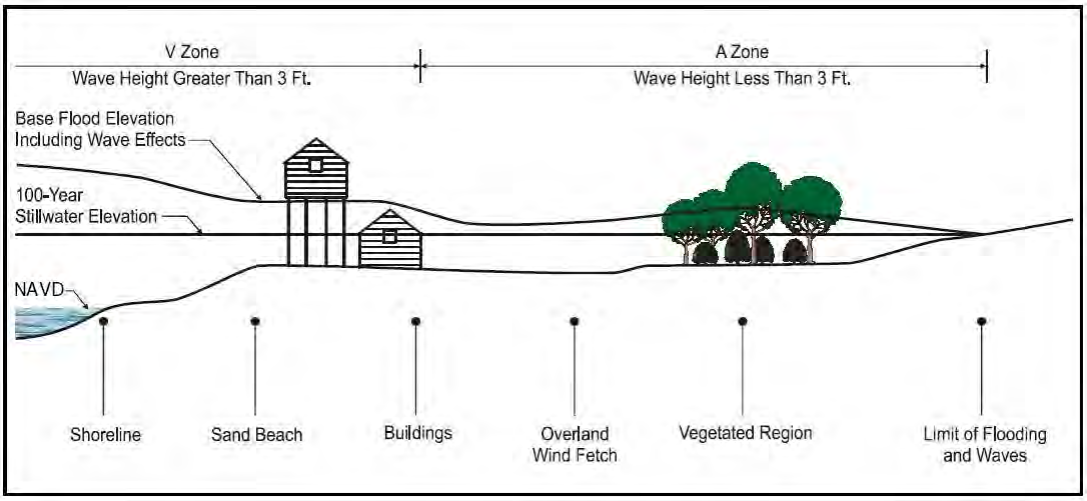


Figure 1 – Transect Schematic

3.4 Vertical Datum

All FIS reports and FIRMs are referenced to a specific vertical datum. The vertical datum provides a starting point against which flood, ground, and structure elevations can be referenced and compared. Until recently, the standard vertical datum used for newly created or revised FIS reports and FIRMs was NGVD29. With the completion of NAVD88, many FIS reports and FIRMs are being prepared using NAVD88 as the referenced vertical datum.

Flood elevations shown in this FIS report and on the FIRM are referenced to NAVD88. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. It is important to note that

adjacent communities may be referenced to NGVD29, which may result in differences in Base Flood Elevations (BFEs) across county lines.

Some of the data used in this study were taken from the prior effective FIS reports and adjusted to NAVD88. The average conversion factor that was used to convert the data in this FIS report to NAVD was calculated using the National Geodetic Survey's (NGS) VERTCON online utility (NGS, 2006). The data points used to determine the conversion are listed in Table 7, "Vertical Datum Conversion."

Table 7: Vertical Datum Conversion

Quad Name	Corner	Latitude	Longitude	Conversion from NGVD29 to NAVD88
Spring Lake	NE	28.500	-82.250	-0.797
Lacoochee	NE	28.500	-82.130	-0.843
Port Richey	NE	28.370	-82.630	-0.846
Fivay Junction	NE	28.370	-82.500	-0.850
Ehren	NE	28.370	-82.380	-0.817
San Antonio	NE	28.370	-82.250	-0.817
Dade City	NE	28.370	-82.130	-0.866
Tarpon Springs	NE	28.250	-82.740	-0.843
Elfers	NE	28.250	-82.630	-0.843
Odessa	NE	28.250	-82.500	-0.833
Lutz	NE	28.250	-82.380	-0.817
Wesley Chapel	NE	28.250	-82.500	-0.833
Zephyrhills	NE	28.250	-82.130	-0.873
				Average: -0.837

For additional information regarding conversion between NGVD29 and NAVD88, see the FEMA publication entitled Converting the National Flood Insurance Program to the North American Vertical Datum of 1988 (Reference 24) visit the National Geodetic Survey (NGS) website at www.ngs.noaa.gov, or contact the NGS at the following address:

Vertical Network Branch, N/CG13
National Geodetic Survey, NOAA
Silver Spring Metro Center 3
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

Temporary vertical monuments are often established during the preparation of a flood hazard analysis for the purpose of establishing local vertical control. Although these monuments are not shown on the FIRM, they may be found in the Technical Support Data Notebook associated with the FIS report and FIRM for this

community. Interested individuals may contact FEMA to access these data.

To obtain current elevation, description, and/or location information for benchmarks shown on this map, please contact the Information Services Branch of the NGS at (301) 713-3242, or visit their website at www.ngs.noaa.gov.

4.0 FLOODPLAIN MANAGEMENT APPLICATIONS

The NFIP encourages State and local governments to adopt sound floodplain management programs. Therefore, each FIS provides 1-percent-annual-chance (100-year) flood elevations and delineations of the 1- and 0.2-percent-annual-chance (500-year) floodplain boundaries and 1-percent-annual-chance floodway to assist communities in developing floodplain management measures. This information is presented on the FIRM and in many components of the FIS report, including Flood Profiles, Floodway Data Table, and Summary of Stillwater Elevations Table. Users should reference the data presented in the FIS report as well as additional information that may be available at the local map repository before making flood elevation and/or floodplain boundary determinations.

4.1 Floodplain Boundaries

To provide a national standard without regional discrimination, the 1-percent-annual-chance flood has been adopted by FEMA as the base flood for floodplain management purposes. The 0.2-percent-annual-chance flood is employed to indicate additional areas of flood risk in the community. For each stream studied by detailed methods prior to this countywide revision, the 1- and 0.2-percent-annual-chance floodplain boundaries have been delineated using the flood elevations determined at each cross section. Between cross sections, the boundaries were interpolated using topographic maps at a scale of 1:24,000, with a contour intervals of 5-10 feet (USGS, various dates) and aerial photographs at scales of 1:2,400, 1:4,800, and 1:12,000, with contour intervals of 1 and 2 feet (SWFWMD, various dates (a), (b), (c)). Flood boundaries for the Gulf of Mexico and Pithlachascotee River were cross-checked using a combination of topographic maps, aerial photographs, nautical charts as well as political maps (Greater New Port Richey Chamber of Commerce, undated; Real Estate Data Inc., 1976; SWFWMD, various dates (b); NOAA, undated; USGS, various dates)

The main topographic data used for this study was Light Detection and Ranging (LiDAR) data provided to SWFWMD by EarthData International in 2004 (EarthData International, 2004). The data was reviewed by BCI Engineers and Watershed Concepts and processed under separate projects.

In 2007, the topographic data (DEM) for the Cypress Creek Watershed was updated in two key areas. The areas included Cypress Creek Wellfield Surface

Water Management Project and the Cypress Creek Town Center development site (EarthData International, 2004).

The terrain data for the East Pasco Watershed was updated through 24 ERP's made from 2005 to 2007. Table 8, "Terrain Data for East Pasco Watershed" lists these ERP's by ERP number, Project name, and date of the last update.

Table 8: Terrain Data for East Pasco Watershed

002893007	HIGHLANDS MOBILE HOME PARK	3/28/2007	024630001	MICROTEL INN & SUITES-US 301 ZEPHYRHILLS	1/7/2005
008408005	E PASCO MED CTR-SURGICAL/EMERGENCY DEPT	5/26/2007	024630002	NORTHTOWN CENTER-SITE MODIFICATIONS	1/7/2005
008408006	FLORIDA HOSPITAL PARKING RENOVATIONS	8/10/2007	024630003	WHATABURGER-N TOWN CENTER	1/7/2005
011484005	MERCHANTS SQUARE RETENTION POND	10/31/2006	025468001	LOWES-ZEPHYRHILLS-RUBY TUESDAY	6/3/2005
012912003	SWEETWATER APARTMENTS	6/14/2006	027015002	CHAPEL CREEK SUBDIVISION PHASE 1B	5/23/2007
014124006	GRAND HORIZONS-PHASE I	1/7/2005	027015003	CHAPEL CREEK PH 1A	5/23/2007
014124010	GRAND HORIZONS-PHS 3	12/12/2006	027015004	CHAPEL CREEK SUBDIVISION PHASE 1B	8/8/2007
014124011	GRAND HORIZONS-PHS 4	12/12/2006	027215000	ESTATE HOMES OF HILLTOP	3/28/2006
014124012	GRAND HORIZONS-PHS 2	12/12/2006	027550004	PASCO CO - SR 52 & PROSPECT RD INTERSECT	9/7/2007
021487002	WAL MART ZEPHYRHILLS OUTPARCEL LOTS 2/3	1/7/2005	027931000	DOT-SR 41 N OF CHANCEY RD	7/29/2006
021487003	CHILIS WAL-MART-ZEPHYRHILLS LOT 4	1/7/2005	030817005	PASCO - HAPPY HILL ROADWAY IMPROVEMENTS	9/7/2007
023091001	CENTENNIAL ESTATES	12/12/2006	031286000	EASTHAM POND	3/24/2007

The 1- and 0.2-percent-annual-chance floodplain boundaries are shown on the FIRM (Exhibit 2). On this map, the 1-percent-annual-chance floodplain boundary corresponds to the boundary of the areas of special flood hazards (Zones A, AE, AH, and VE), and the 0.2-percent-annual-chance floodplain boundary corresponds to the boundary of areas of moderate flood hazards. In cases where the 1- and 0.2-percent-annual-chance floodplain boundaries are

close together, only the 1-percent-annual-chance floodplain boundary has been shown. Small areas within the floodplain boundaries may lie above the flood elevations but cannot be shown due to limitations of the map scale and/or lack of detailed topographic data.

For the streams studied by approximate methods, only the 1-percent-annual-chance floodplain boundary is shown on the FIRM (Exhibit 2).

4.2 Floodways

Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself. One aspect of floodplain management involves balancing the economic gain from floodplain development against the resulting increase in flood hazard. For purposes of the NFIP, a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 1-percent-annual-chance floodplain is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of encroachment so that the 1-percent-annual-chance flood can be carried without substantial increases in flood heights. Minimum Federal standards limit such increases to 1 foot, provided that hazardous velocities are not produced. The floodways in this study are presented to local agencies as minimum standards that can be adopted directly or that can be used as a basis for additional floodway studies.

The floodways presented in this FIS report and on the FIRM were computed for certain stream segments on the basis of equal-conveyance reduction from each side of the floodplain. Floodway widths were computed at cross sections. Between cross sections, the floodway boundaries were interpolated. The results of the floodway computations are tabulated for selected cross sections and provided in Table 9, “Floodway Data.” In cases where the floodway and 1-percent-annual-chance floodplain boundaries are either close together or collinear, only the floodway boundary is shown on the FIRM.

The area between the floodway and 1-percent-annual-chance floodplain boundaries is termed the floodway fringe. The floodway fringe encompasses the portion of the floodplain that could be completely obstructed without increasing the water surface elevation of the 1-percent-annual-chance flood more than 1 foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure 2.

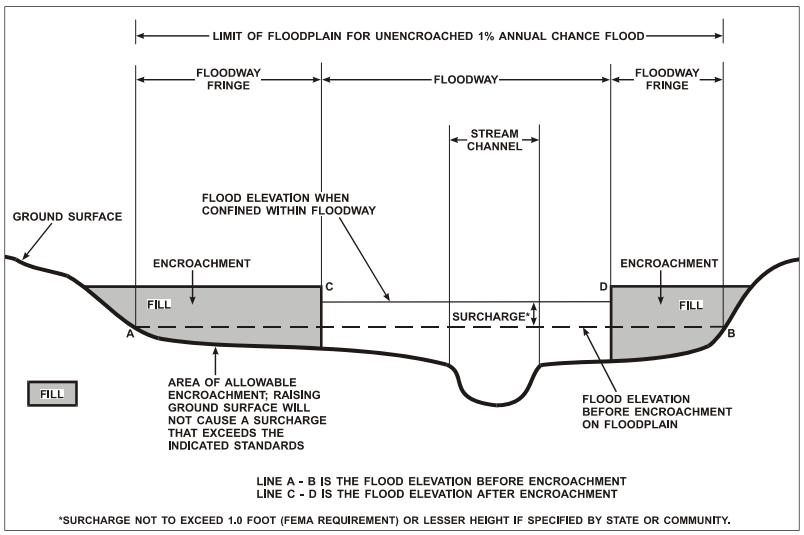


Figure 2 – Floodway Schematic

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
ANCLOTE RIVER								
A	38,800	184	2,146	3.2	8.9	7.9[2]	8.8	0.9
B	43,000	1,232	5,981	1.1	9.9	8.2[2]	9.0	0.8
C	46,400	1,185	6,034	1.1	10.2	8.4[2]	9.3	0.9
D	48,750	1,625	11,065	0.6	10.5	8.7[2]	9.6	0.9
E	54,750	980	8,110	0.8	10.9	9.6[2]	10.4	0.8
F	57,350	919	4,347	1.5	11.2	10.4[2]	11.2	0.8
G	61,150	459	4,120	1.6	12.7	12.4[2]	13.4	1.0
H	64,450	361	2,556	2.5	16.1	16.1	17.1	1.0
I	67,200	775	3,424	1.9	19.1	19.1	20.1	1.0
J	70,350	556	4,643	1.4	21.7	21.7	22.7	1.0
K	72,950	275	3,250	2.0	23.2	23.1	24.1	1.0
L	76,750	232	2,125	3.0	27.7	27.7	28.7	1.0
M	81,100	727	7,426	0.9	30.2	30.2	31.2	1.0

[1] Stream distance in feet above confluence with Gulf of Mexico
[2] Elevations without considering storm surge from Gulf of Mexico

TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

FLOODWAY DATA

ANCLOTE RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
HILLSBOROUGH RIVER								
A	19,650	964	7,808	0.6	57.6	57.6	58.6	1.0
B	21,250	1,190	10,440	0.5	58.5	58.5	59.5	1.0
C	24,200	1,348	11,272	0.4	59.5	59.5	60.5	1.0
D	25,200	1,613	13,806	0.4	60.2	60.2	61.2	1.0
E	26,000	1,736	15,263	0.3	60.3	60.3	61.3	1.0
F	28,100	1,973	11,207	0.4	61.0	61.0	62.0	1.0
G	30,200	1,145	7,449	0.7	62.5	62.5	63.5	1.0
H	31,700	1,042	7,654	0.6	64.2	64.2	65.2	1.0

[1]Stream distance in feet above U.S. Highway 301

TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

FLOODWAY DATA

HILLSBOROUGH RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
PITHLACHASCOTEE RIVER								
A	24,390	103	856	3.0	9.9	5.3[2]	6.3	1.0
B	24,950	462	2,501	1.0	9.9	5.6[2]	6.6	1.0
C	28,170	127	747	3.5	9.9	7.8[2]	8.6	0.8
D	28,820	209	1,876	1.4	10.2	8.5[2]	9.3	0.8
E	31,070	237	1,849	1.4	10.7	9.3[2]	10.0	0.7
F	33,262	338	2,331	1.1	12.1	10.7[2]	11.3	0.6
G	34,962	359	2,834	0.9	12.1	11.5[2]	12.2	0.7
H	37,162	270	2,252	1.2	13.1	12.9[2]	13.6	0.7
I	40,942	240	1,618	1.6	15.4	15.4	16.1	0.7
J	43,792	235	2,025	1.3	17.8	17.8	18.6	0.8
K	45,692	454	3,344	0.8	19.7	19.7	20.5	0.8
L	50,652	450	1,976	1.3	22.3	22.3	23.8	0.9

[1]Stream distance in feet above U.S. Route 19

[2]Elevations without considering storm surge from Gulf of Mexico

TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

FLOODWAY DATA

PITHLACHASCOTEE RIVER

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE-FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY (FEET NAVD)	WITHOUT FLOODWAY (FEET NAVD)	WITH FLOODWAY (FEET NAVD)	INCREASE (FEET)
WITHLACOOCHEE RIVER								
A	1,100	823	9,485	1.0	66.6	66.6	67.6	1.0
B	2,400	413	5,958	1.5	67.2	67.2	68.2	1.0
C	3,450	610	8,251	1.1	68.3	68.3	69.2	0.9
D	5,800	1,887[2]	26,634	0.3	69.1	69.1	70.0	0.9
E	9,850	1,023[2]	11,453	0.8	69.6	69.6	70.5	0.9
F	12,477	1,236[2]	16,136	0.6	70.2	70.2	71.1	0.9
G	15,050	1,180[2]	16,330	0.6	70.3	70.3	71.2	0.9
H	21,664	1,414	7,672	1.2	71.5	71.5	72.4	0.9

[1]Stream distance in feet above county boundary
[2]Width extends beyond county boundary

TABLE 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
(AND INCORPORATED AREAS)

FLOODWAY DATA

WITHLACOOCHEE RIVER

4.3 Base Flood Elevations

Areas within the community studied by detailed engineering methods have BFEs established in AE and VE Zones. These are the elevations of the 1-percent-annual-chance (base flood) relative to NAVD. In coastal areas affected by wave action, BFEs are generally maximum at the normal open shoreline. These elevations generally decrease in a landward direction at a rate dependent on the presence of obstructions capable of dissipating the wave energy. Where possible, changes in BFEs have been shown in 1-foot increments on the FIRM. However, where the scale did not permit, 2- or 3-foot increments were sometimes used. BFEs shown in the wave action areas represent the average elevation within the zone. Current program regulations generally require that all new construction be elevated such that the first floor, including basement, is elevated to or above the BFE in AE and VE Zones.

4.4 Velocity Zones

The USACE has established the 3-foot wave height as the criterion for identifying coastal high hazard zones (USACE, 1975). This was based on a study of wave action effects on structures. This criterion has been adopted by FEMA for the determination of VE zones. Because of the additional hazards associated with high-energy waves, the NFIP regulations require much more stringent floodplain management measures in these areas, such as elevating structures on piles or piers. In addition, insurance rates in VE zones are higher than those in AE zones.

The location of the VE zone is determined by the 3-foot wave as discussed previously. The detailed analysis of wave heights performed in this study allowed a much more accurate location of the VE zone to be established. The VE zone generally extends inland to the point where the 1-percent-annual-chance stillwater flood depth is insufficient to support a 3-foot wave.

5.0 INSURANCE APPLICATIONS

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no BFEs or base flood depths are shown within this zone.

Zone AE

Zone AE is the flood insurance risk zone that corresponds to the 1-percent-annual-chance floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone AH

Zone AH is the flood insurance risk zone that corresponds to the areas of 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between 1 and 3 feet. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone VE

Zone VE is the flood insurance risk zone that corresponds to the 1-percent-annual-chance coastal floodplains that have additional hazards associated with storm waves. Whole-foot BFEs derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance risk zone that corresponds to areas outside the 0.2-percent-annual-chance floodplain, areas within the 0.2-percent-annual-chance floodplain, areas of 1-percent-annual-chance flooding where average depths are less than 1 foot, areas of 1-percent-annual-chance flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 1-percent-annual-chance flood by levees. No BFEs or base flood depths are shown within this zone.

The FIRM for Pasco County includes areas designated by Congress as units of the Coastal Barrier Resources System (CBRS), where federally backed flood insurance is not available.

The Coastal Barrier Resources Act of 1982 and the Coastal Barrier Improvement Act of 1990 define and establish a system of protected coastal areas (including the Great Lakes) known as the CBRS. The Acts define areas within the CBRS as depositional geologic features consisting of unconsolidated sedimentary materials; subject to wave, tidal, and wind energies; and protecting landward aquatic habitats from direct wave attack. The Acts further define coastal barriers as “all associated aquatic habitats, including the adjacent wetlands, marshes, estuaries, inlets and nearshore waters, but only if such features and associated habitats contain few manmade structures and these structures and man’s activities on such features, and within such habitats do not significantly impede geomorphic and ecological processes.” The Acts provide protection to CBRS areas by prohibiting most expenditures of Federal funds within them. These prohibitions refer to “any form of loan, grant, guarantee, insurance, payment, rebate, subsidy or any other form of direct or indirect Federal assistance,” with specific and limited exceptions. The

CBRS boundaries depicted on the FIRM for Pasco County were adopted into public law by Acts of Congress and are, therefore, considered final and not subject to appeal.

In addition to the CBRS, the Coastal Barrier Improvement Act of 1990 established Otherwise Protected Areas (OPAs). OPAs are undeveloped coastal barriers within the boundaries of an area established under Federal, State, or local law, or held by a qualifying organization, primarily for wildlife refuge, sanctuary, recreational, or natural resource conservation purposes.

Congress designated the initial CBRS areas in 1982. Subsequent modifications of the CBRS are introduced as legislation to be acted on by Congress, and originate from State and local requests, as well as recommendations made by the U.S. Fish and Wildlife Service. After Congress approves additions to the CBRS, the new areas are assigned a unique effective date, after which Federal assistance prohibitions apply. In cooperation with the U.S. Department of the Interior, FEMA transfers CBRS boundaries to FIRMs using Congressionally adopted source maps titled *Coastal Barrier Resources System*. FIRMs clearly depict the different CBRS areas and their effective dates with special map notes and symbols. It should be noted that although FEMA shows CBRS areas on FIRMs, only Congress may authorize a revision of CBRS boundaries.

Within CBRS boundaries, Federal flood insurance is not available for structures built or substantially improved on or after the date that the subject area was added to the CBRS. To assist map users in determining the correct insurance prohibition date in CBRS areas, each separate CBRS unit is clearly identified on the FIRM. It is important to note that insurance for structures in OPAs may be obtained if written documentation is provided, which certifies that the structures are used in a manner consistent with the purpose for which the area is protected.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance risk zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot BFEs or average depths. Insurance agents use the zones and BFEs in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols, the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Pasco County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary

and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 10, “Community Map History.”

COMMUNITY NAME	INITIAL IDENTIFICATION	FLOOD HAZARD BOUNDARY MAP REVISION DATE	FIRM EFFECTIVE DATE	FIRM REVISION DATE
Dade City, City of	January 4, 1974	August 6, 1976	August 17, 1981	None
New Port Richey, City of	January 16, 1974	June 18, 1976 March 18, 1977	August 17, 1981	July 5, 1983
Pasco County (Unincorporated Areas)	November 4, 1977	None	November 18, 1981	March 15, 1984 February 17, 1989 September 30, 1992 June 30, 1999
Port Richey, City of	January 4, 1974	August 17, 1981	August 17, 1981	July 5, 1983
San Antonio, City of	To Be Determined	None	To Be Determined	None
St. Leo, Town of	To Be Determined	None	To Be Determined	None
Zephyrhills, City of	February 1, 1974	February 20, 1976	April 8, 1983	December 17, 1991

TABLE 10

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

COMMUNITY MAP HISTORY

7.0 OTHER STUDIES

An FIS report was previously prepared for Pasco County and its incorporated areas (Reference 7-10 and 13-15). This report either supersedes or is compatible with all previous studies on streams studied in this report and should be considered authoritative for purposes of the NFIP.

8.0 LOCATION OF DATA

Information concerning the pertinent data used in the preparation of this study can be obtained by contacting FEMA, Federal Insurance and Mitigation Division, Koger Center – Rutgers Building, 3003 Chamblee Tucker Road, Atlanta, Georgia 30341.

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(1960); Wesley Chapel, Florida (1973); Lutz, Florida (1974); San Antonio, Florida (1954); Branchborough, Flordia (1960); Zephyrhills, Florida (1975); Elfers, Florida (1974); Masaryktown, Florida (1954); Odessa, Florida (1974); Fivay Junction, Florida (1954); Spring Lake, Florida (1954); Socrum, Florida (1975); Port Richey, Florida (1954); Ehren, Florida (1954); Clay Sink, Florida (1960), U.S. Department of the Interior, various dates.

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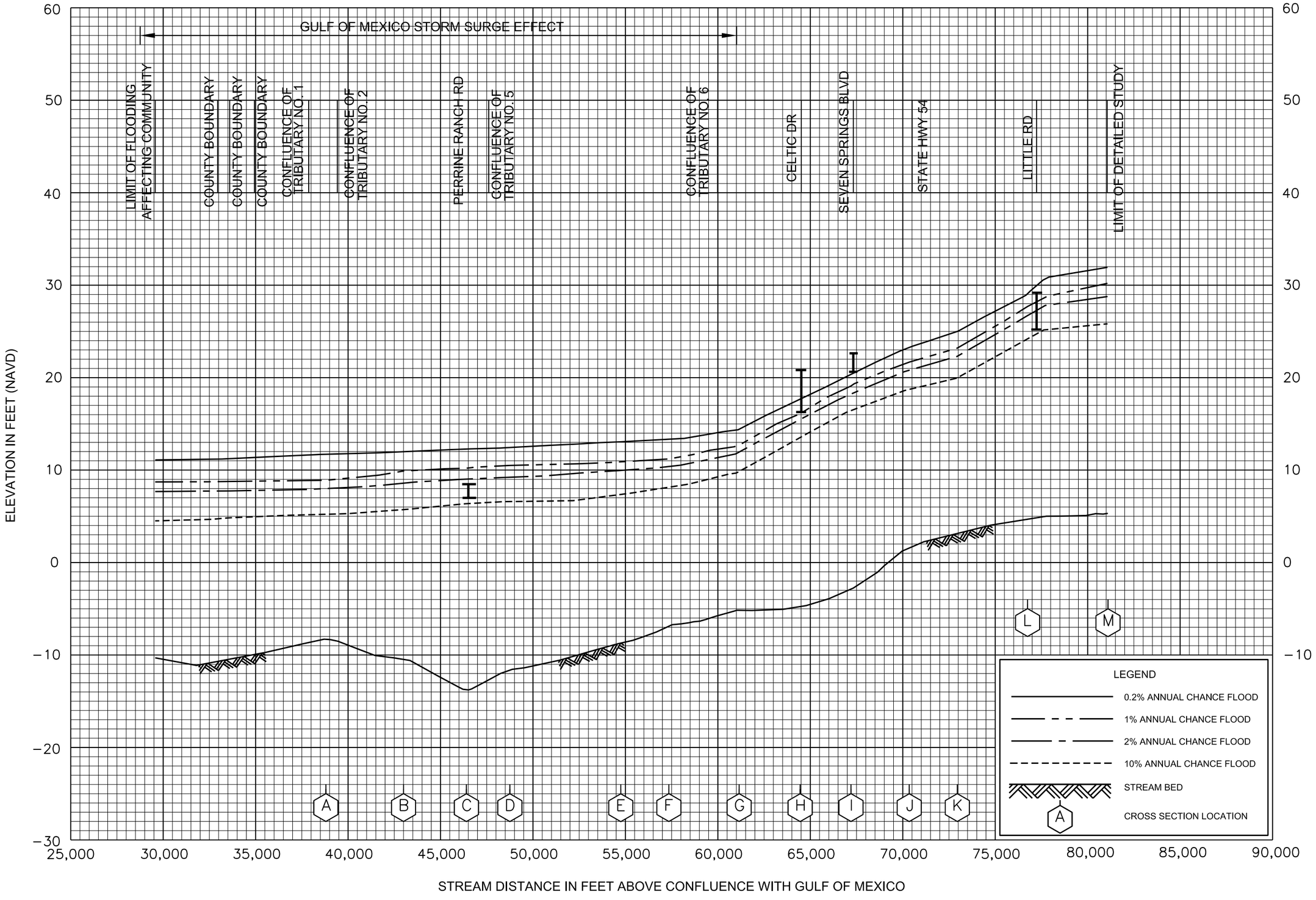


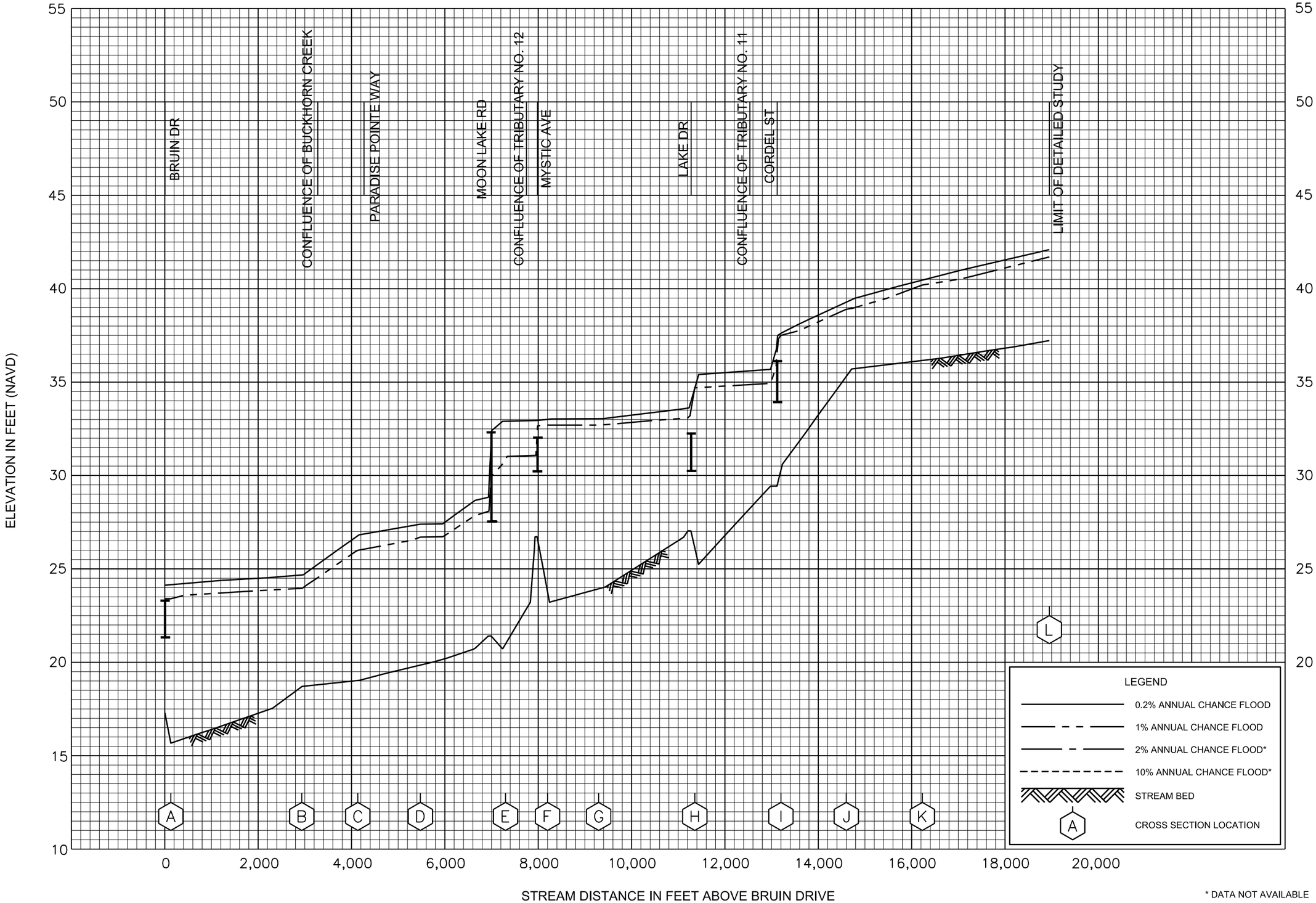
FLOOD PROFILES

ANCLOTE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

01P



* DATA NOT AVAILABLE

FLOOD PROFILES

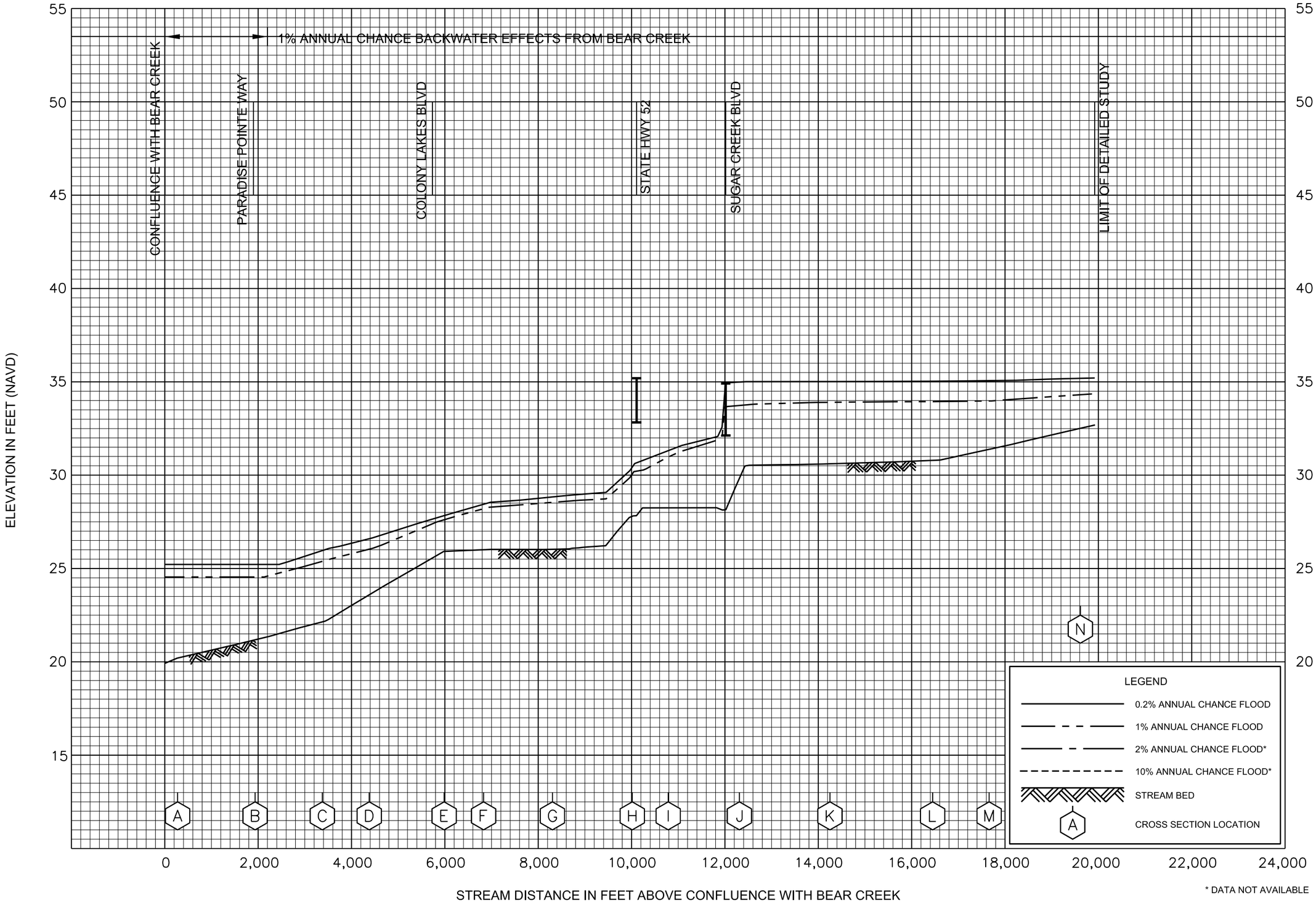
BEAR CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL

AND INCORPORATED AREAS

02P



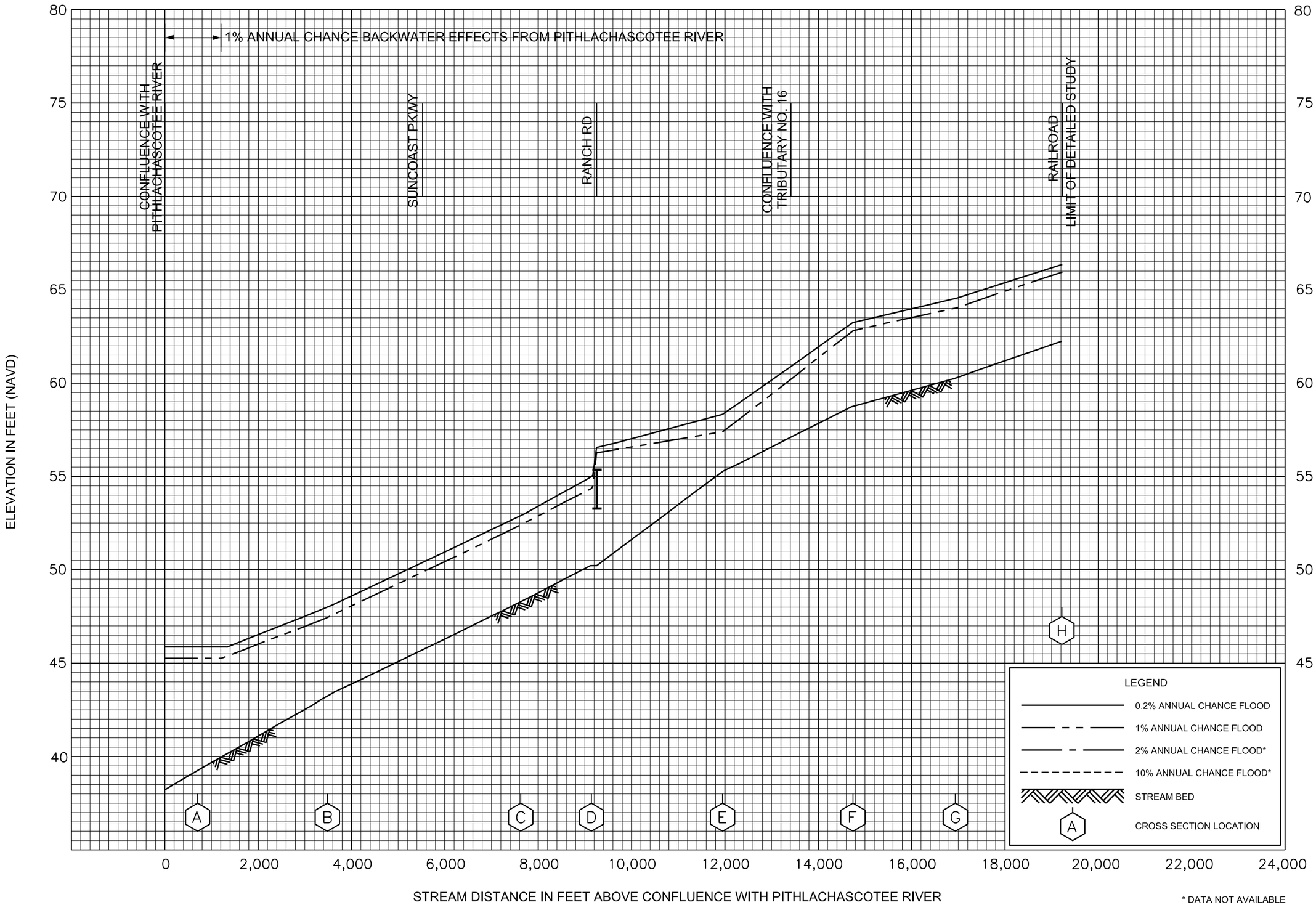
FLOOD PROFILES

BUCKHORN CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

03P



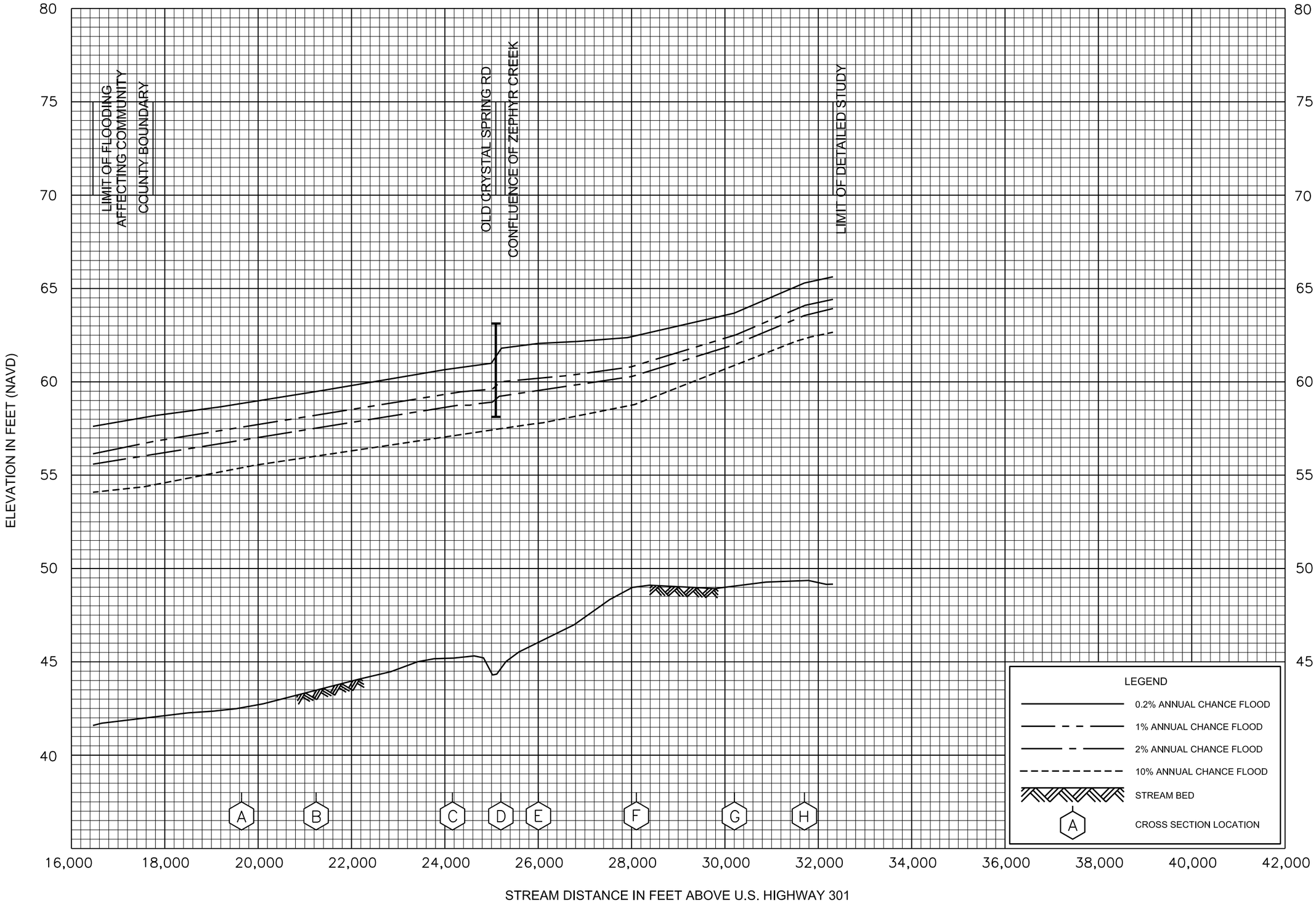
FLOOD PROFILES

FIVEMILE CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

04P



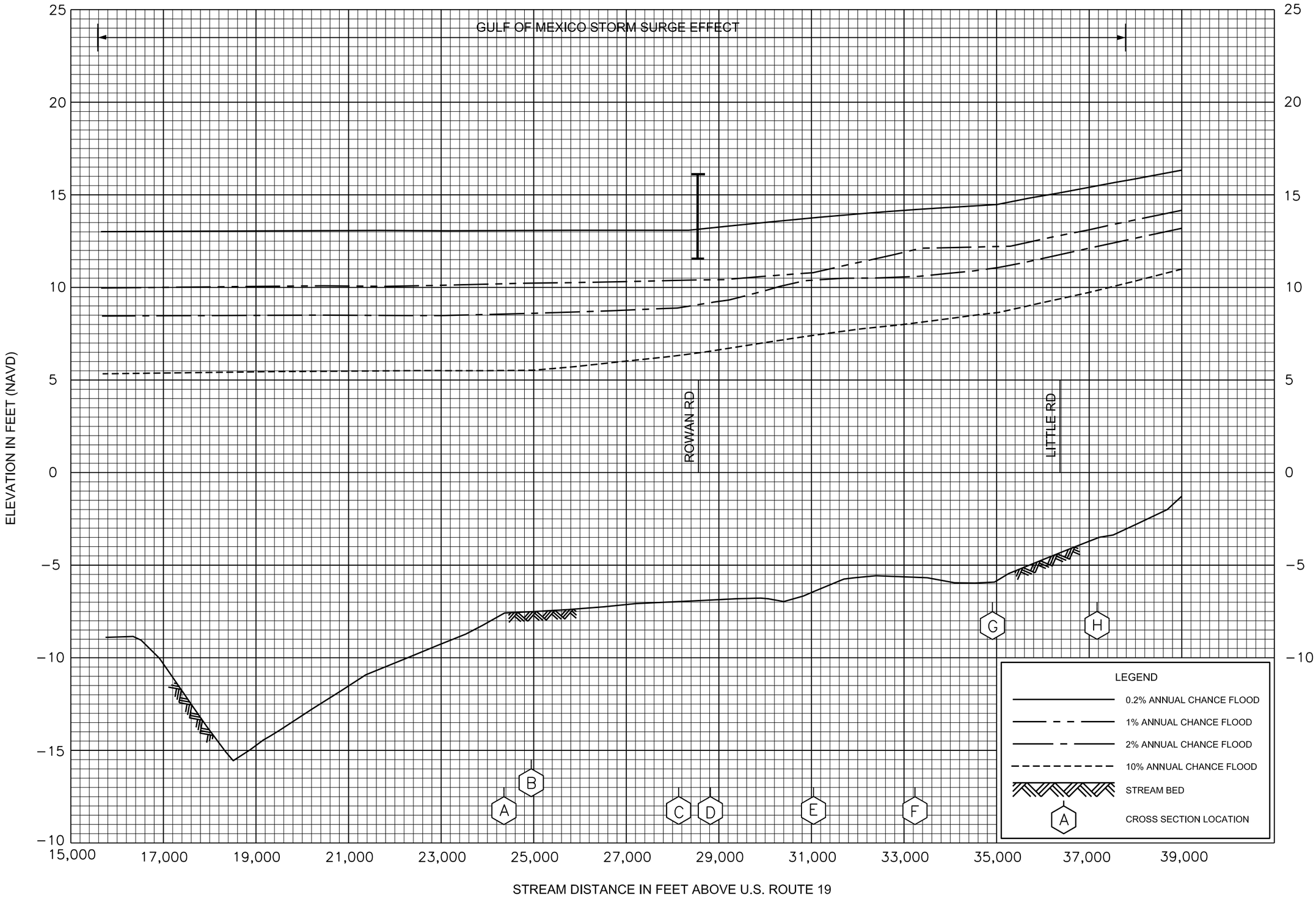
FLOOD PROFILES

HILLSBOROUGH RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

05P



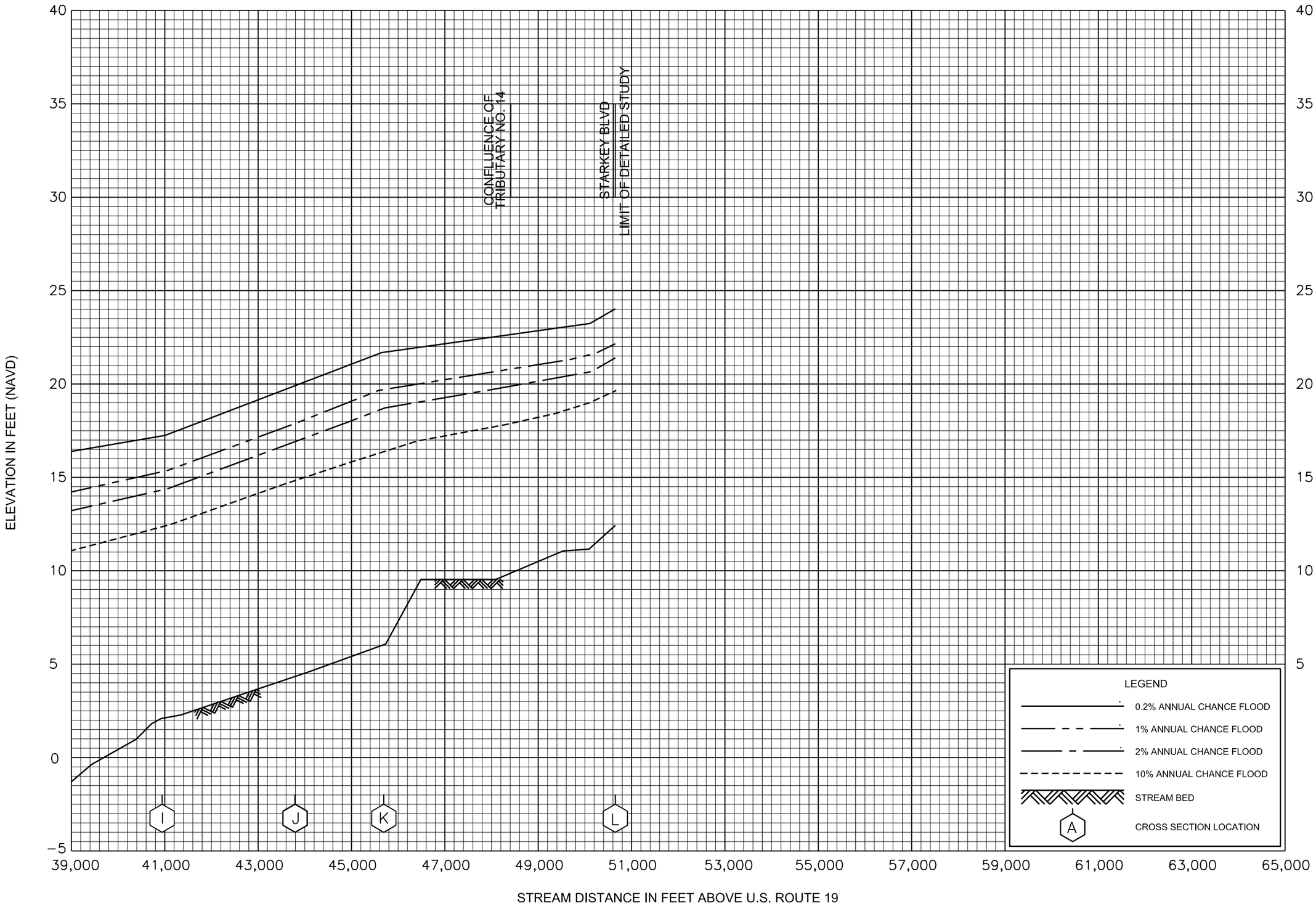
FLOOD PROFILES

PITHLACHASCOTEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

06P



FLOOD PROFILES

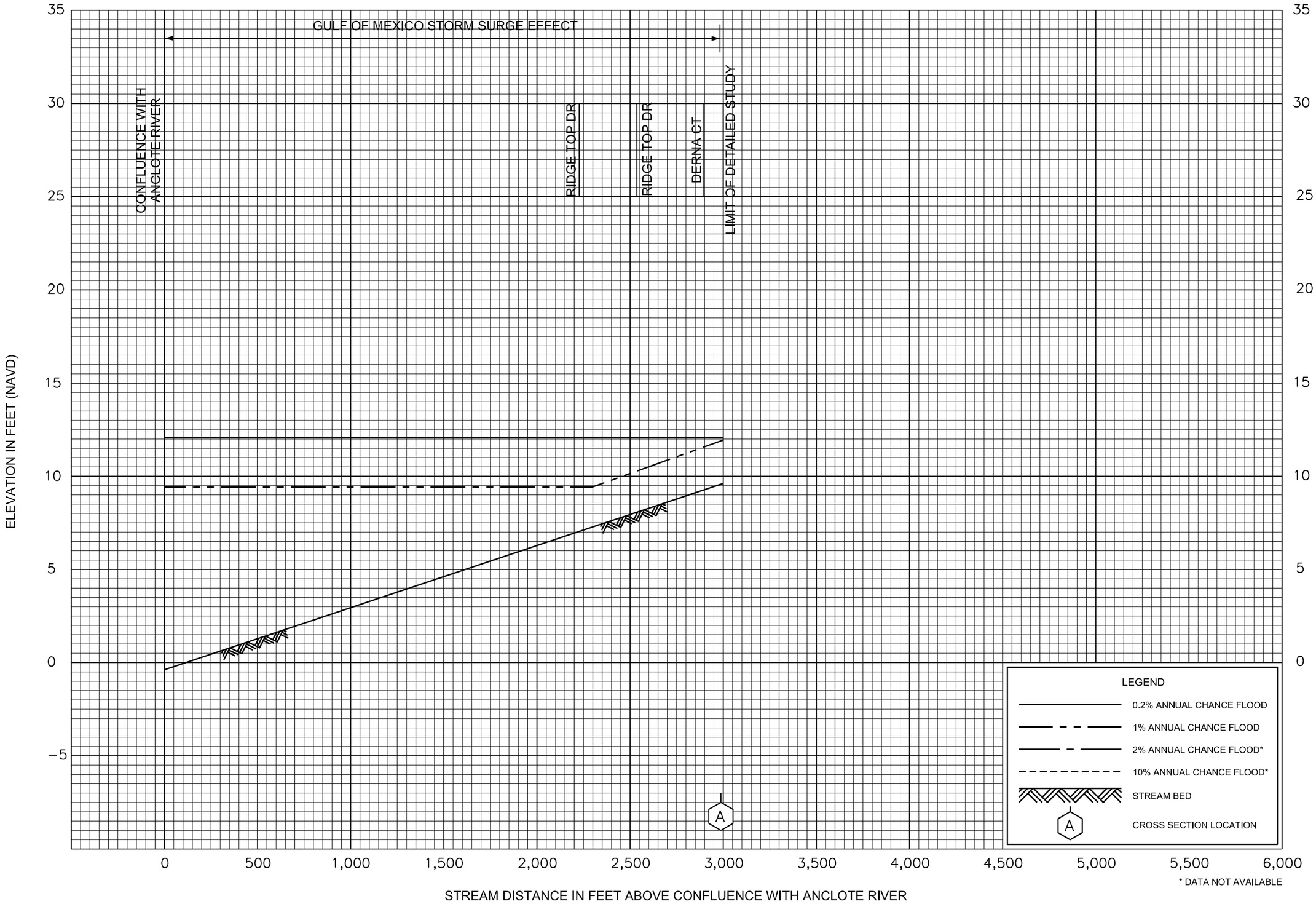
PITHLACHASCOTEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL

AND INCORPORATED AREAS

07P



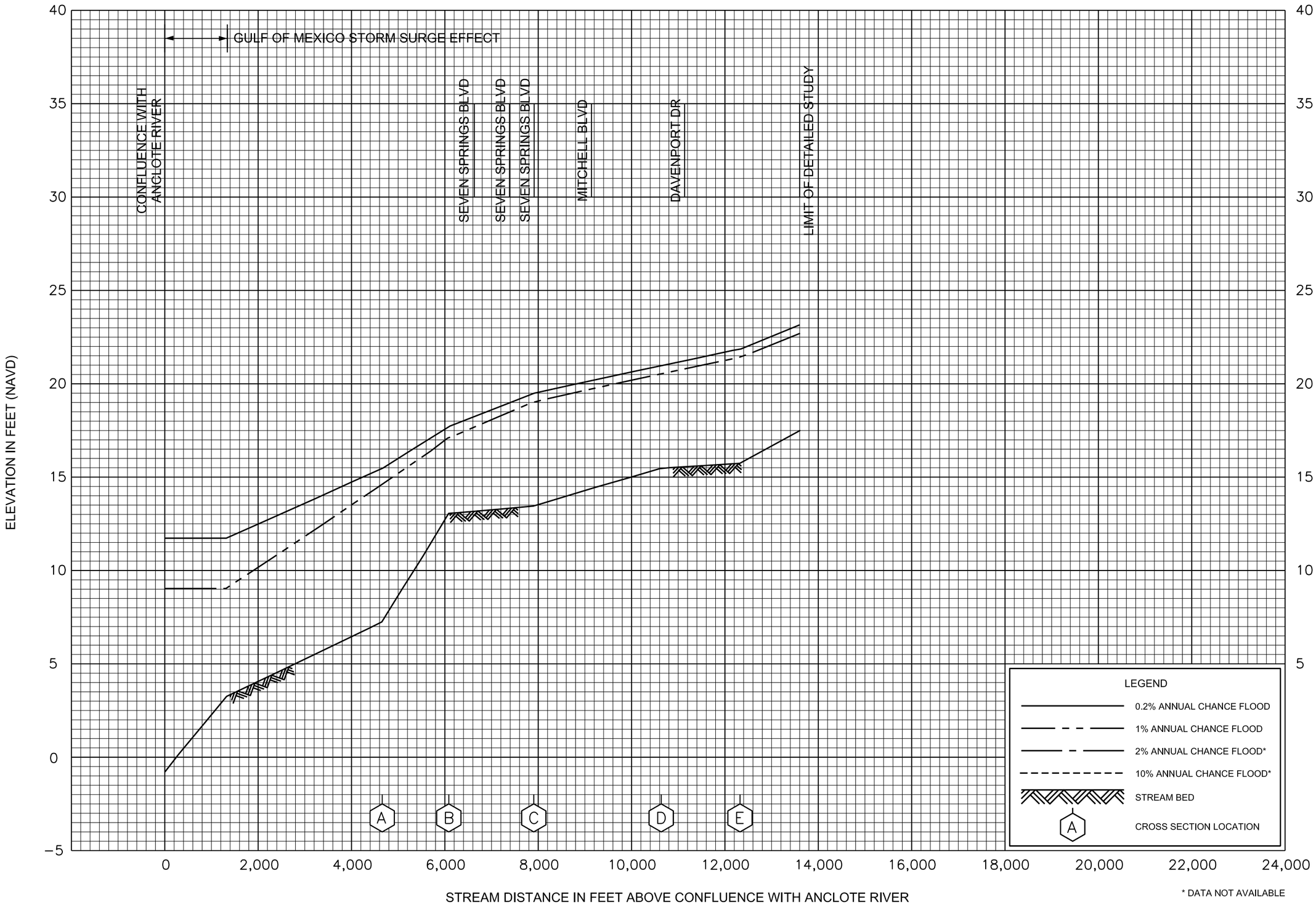
FLOOD PROFILES

TRIBUTARY NO. 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

08P



FLOOD PROFILES

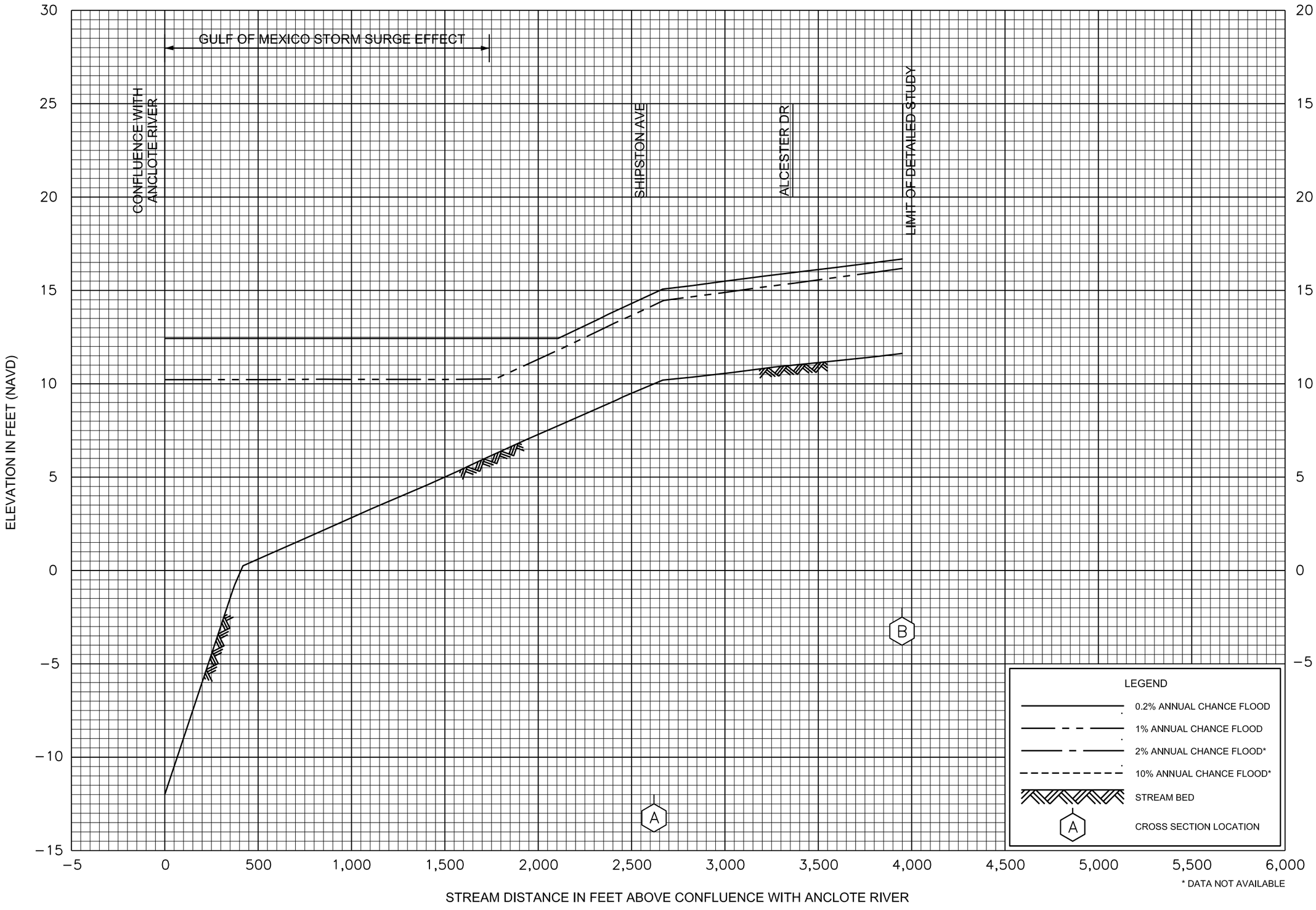
TRIBUTARY NO. 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL

AND INCORPORATED AREAS

09P



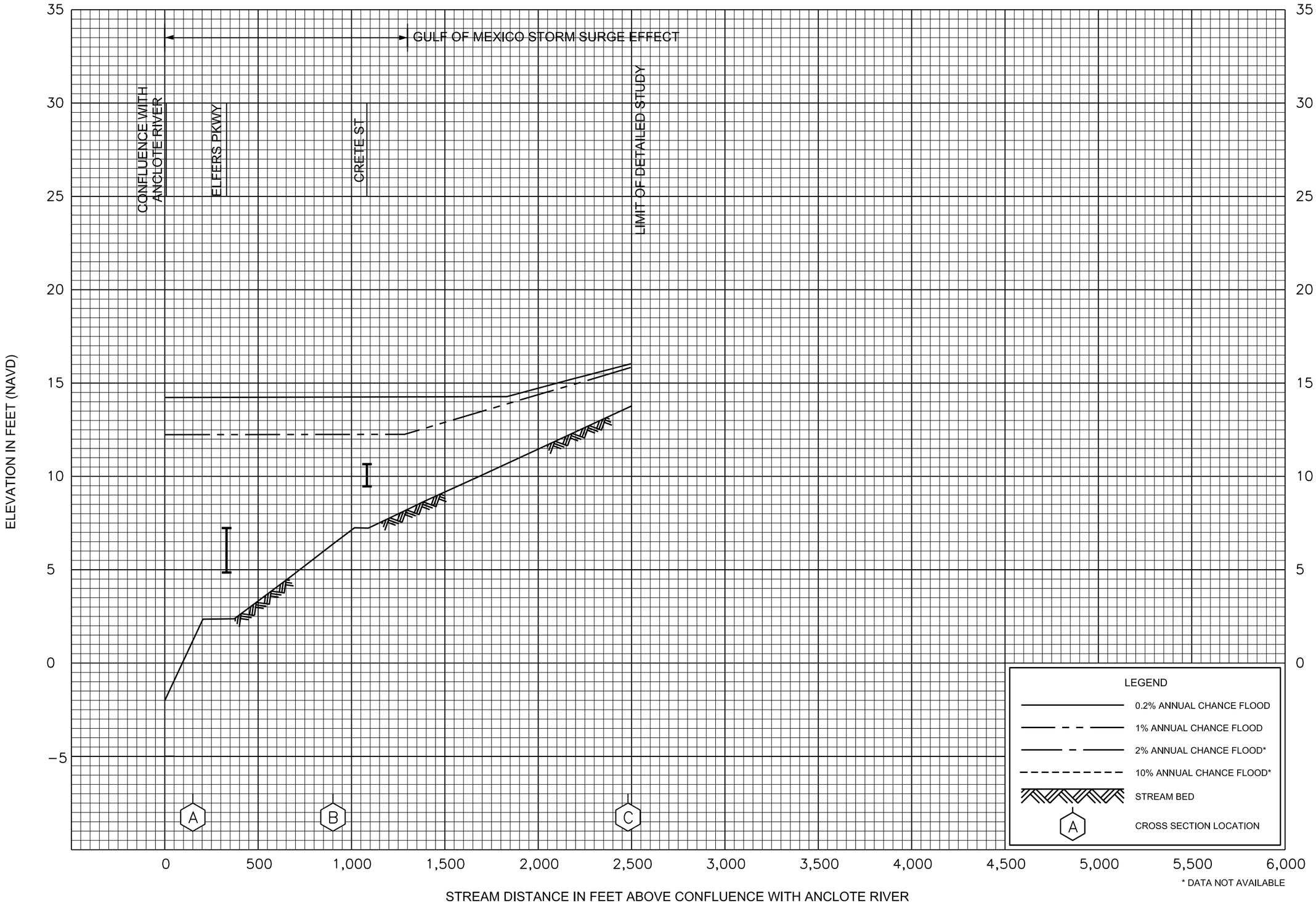
FLOOD PROFILES

TRIBUTARY NO. 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

10P



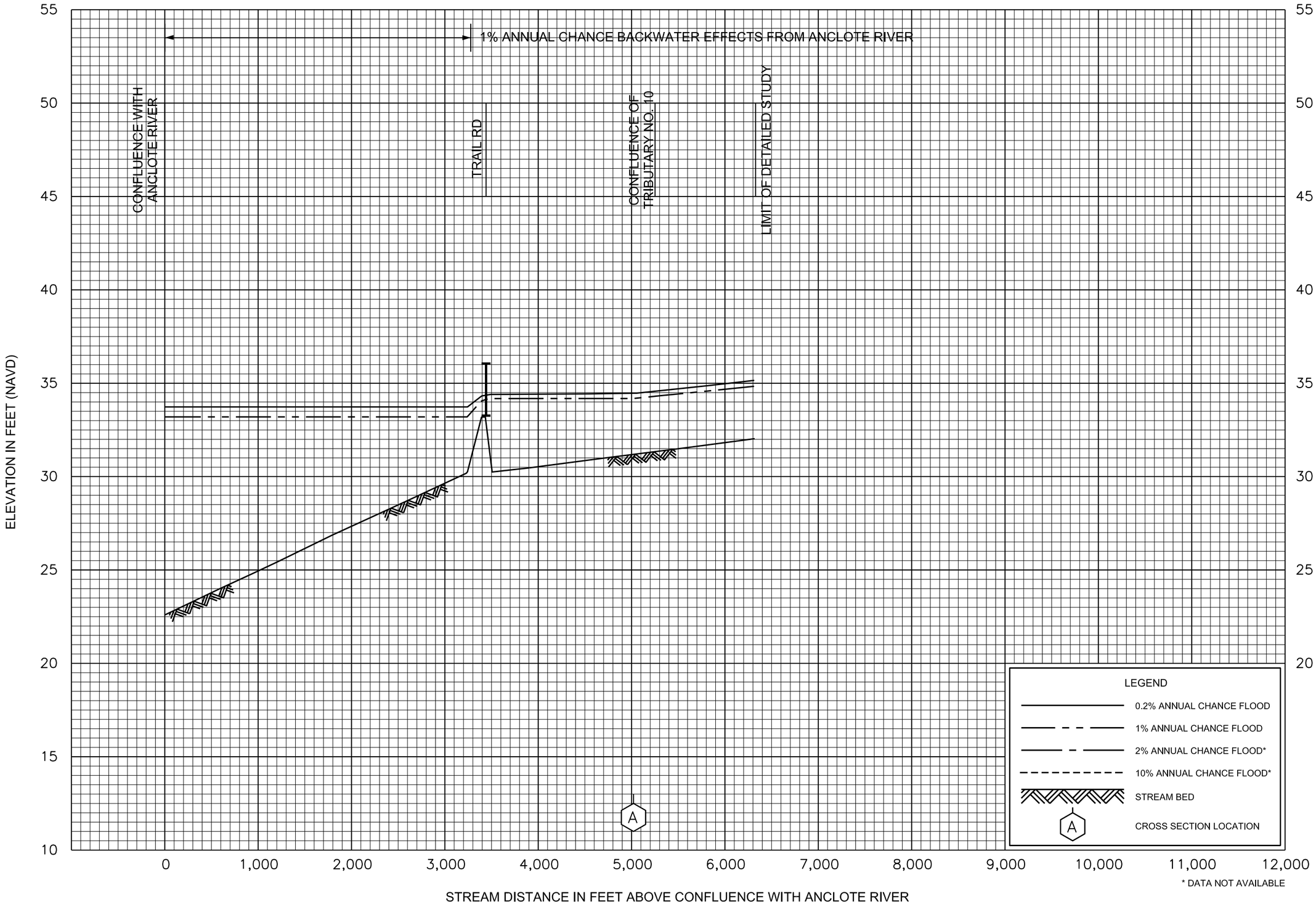
FLOOD PROFILES

TRIBUTARY NO. 6

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

11P



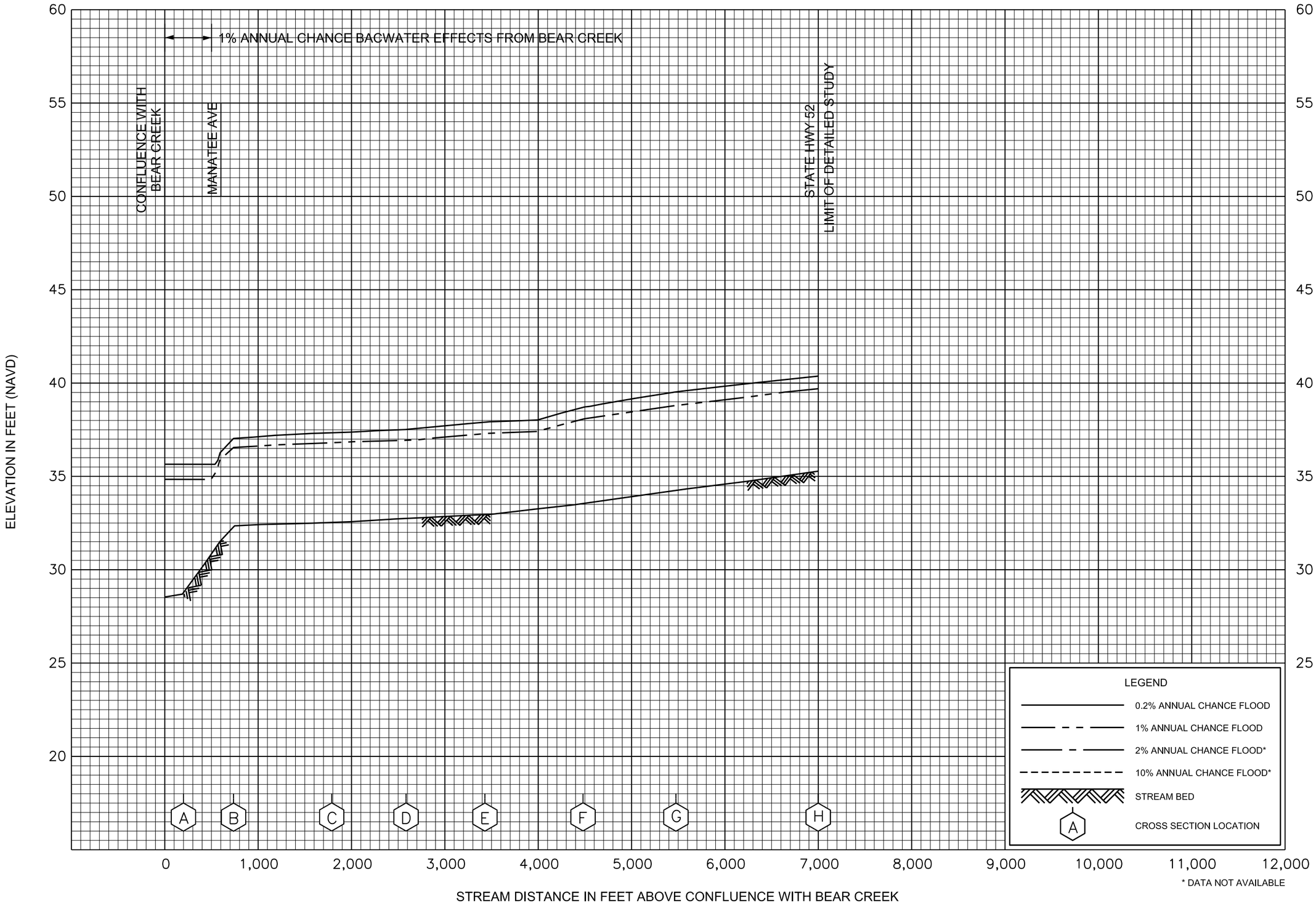
FLOOD PROFILES

TRIBUTARY NO. 9

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

12P



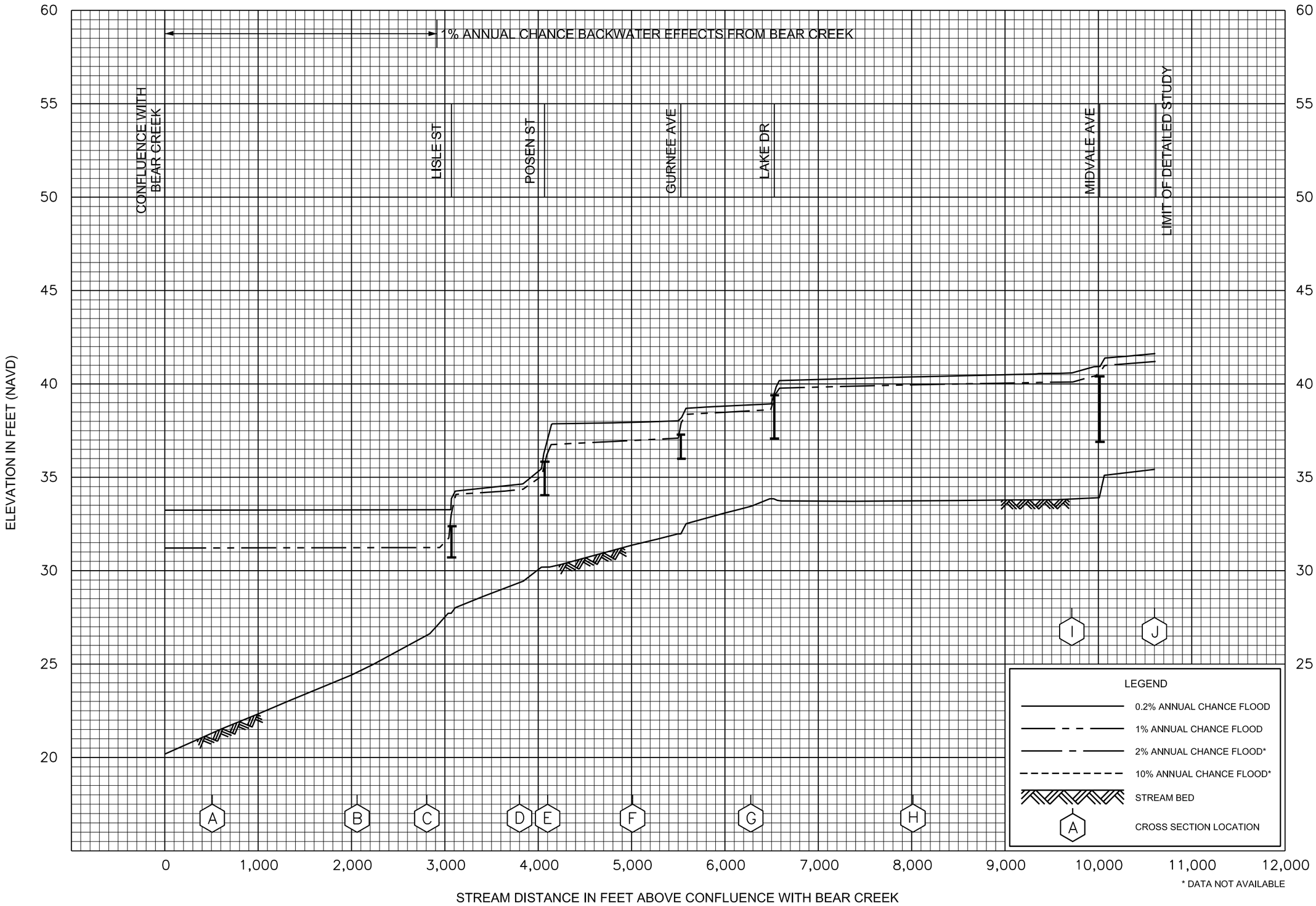
FLOOD PROFILES

TRIBUTARY NO. 11

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

13P



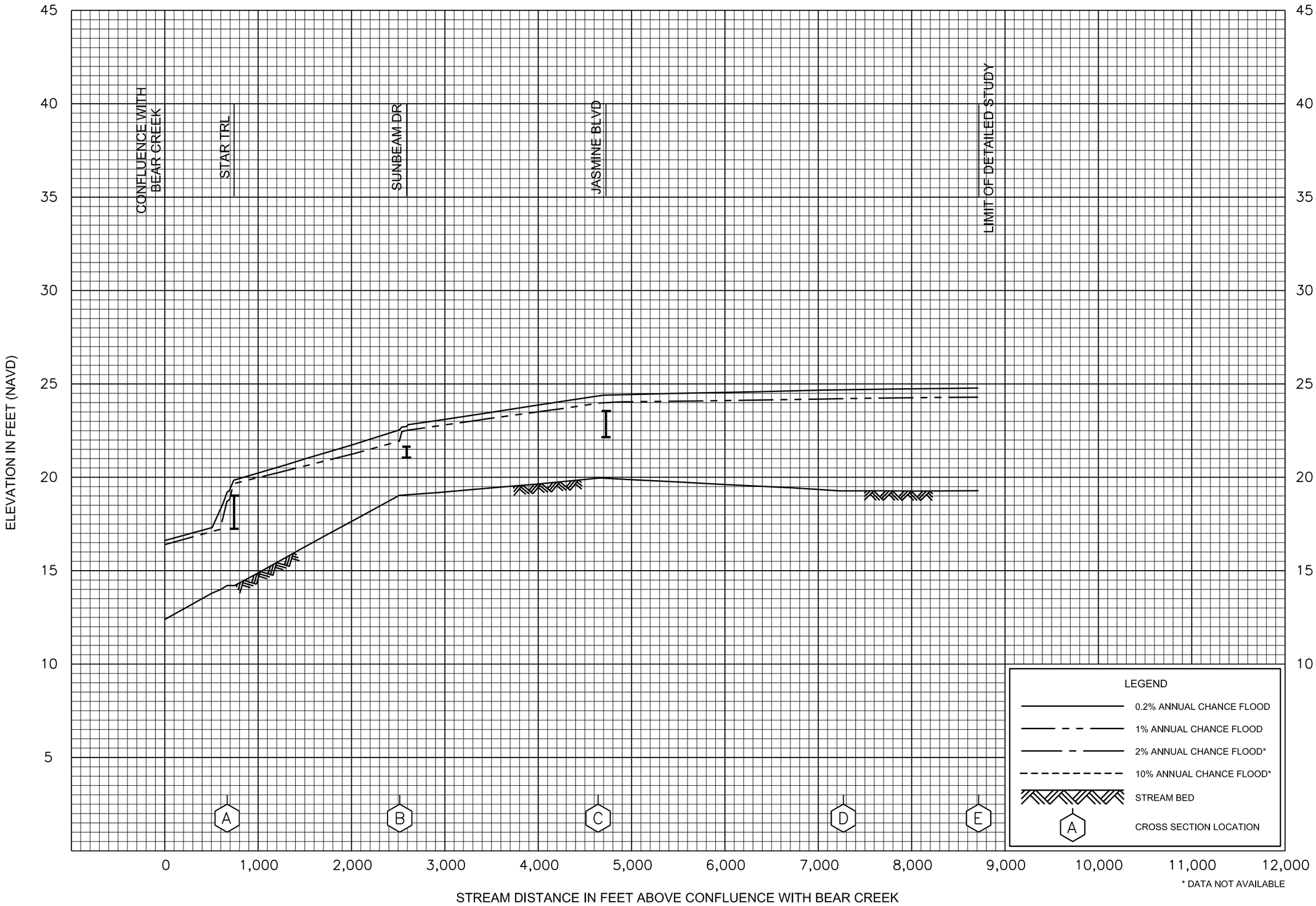
FLOOD PROFILES

TRIBUTARY NO. 12

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

14P



FLOOD PROFILES

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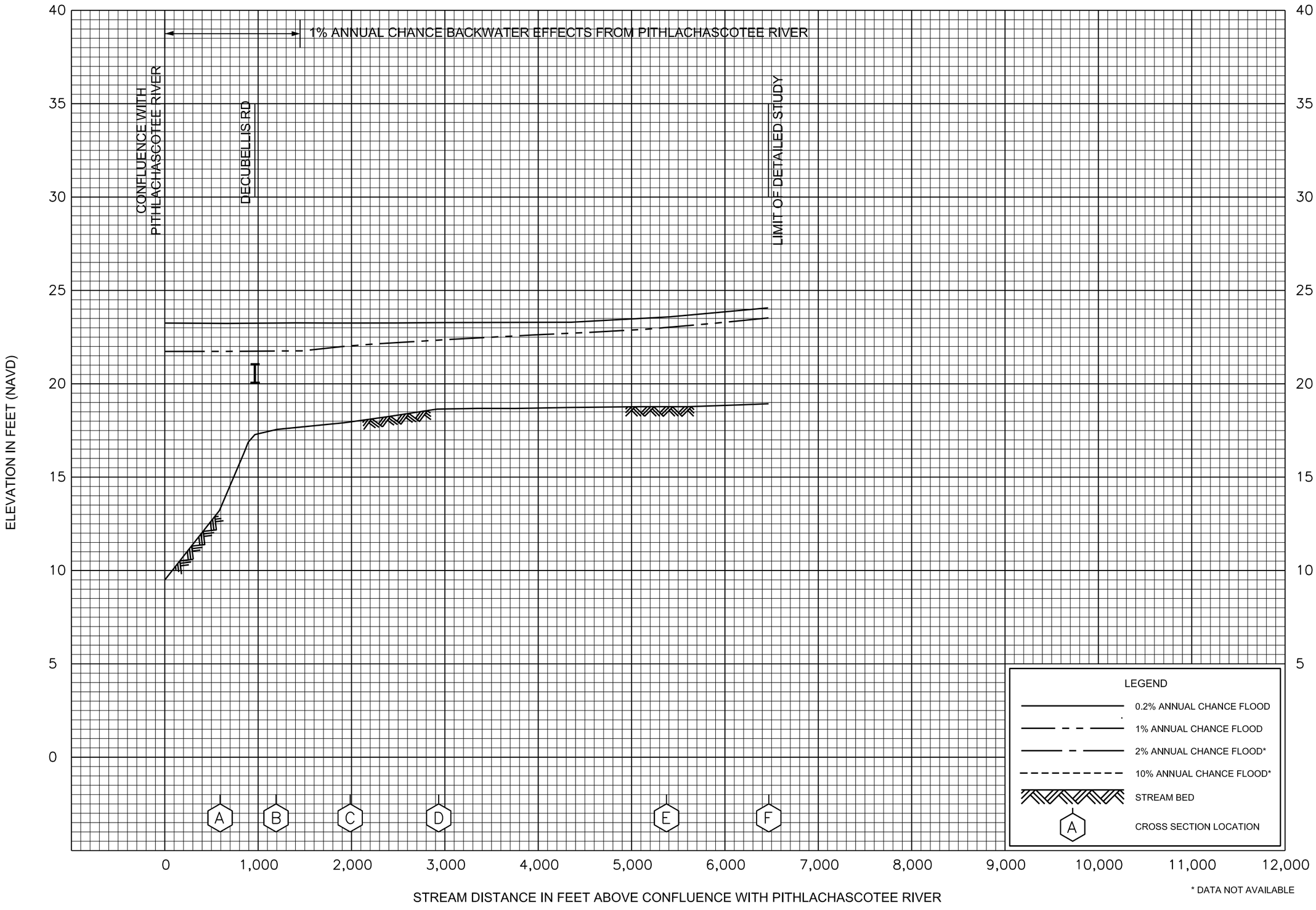
FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

15P



FLOOD PROFILES

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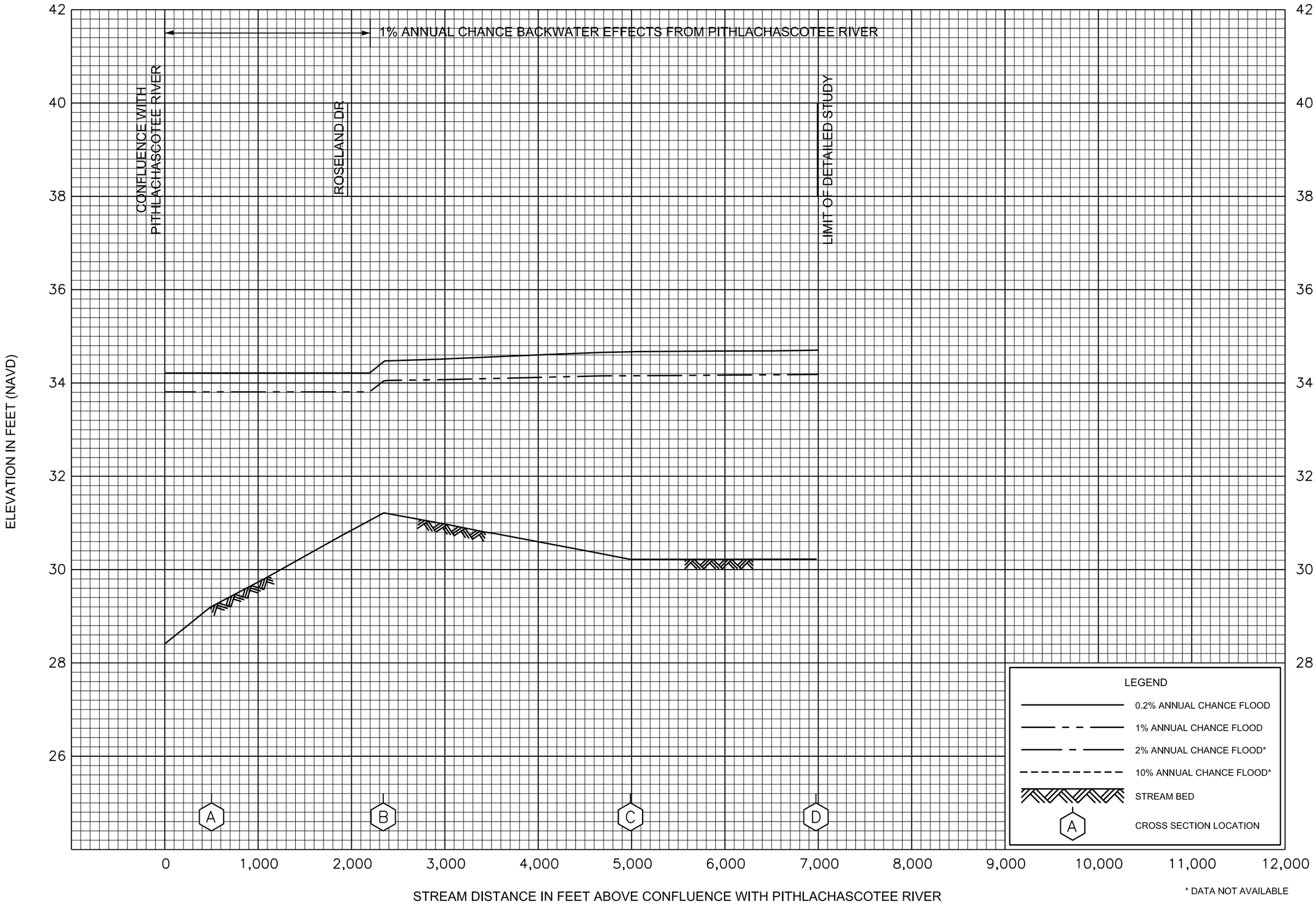
FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL

AND INCORPORATED AREAS

16P



FLOOD PROFILES

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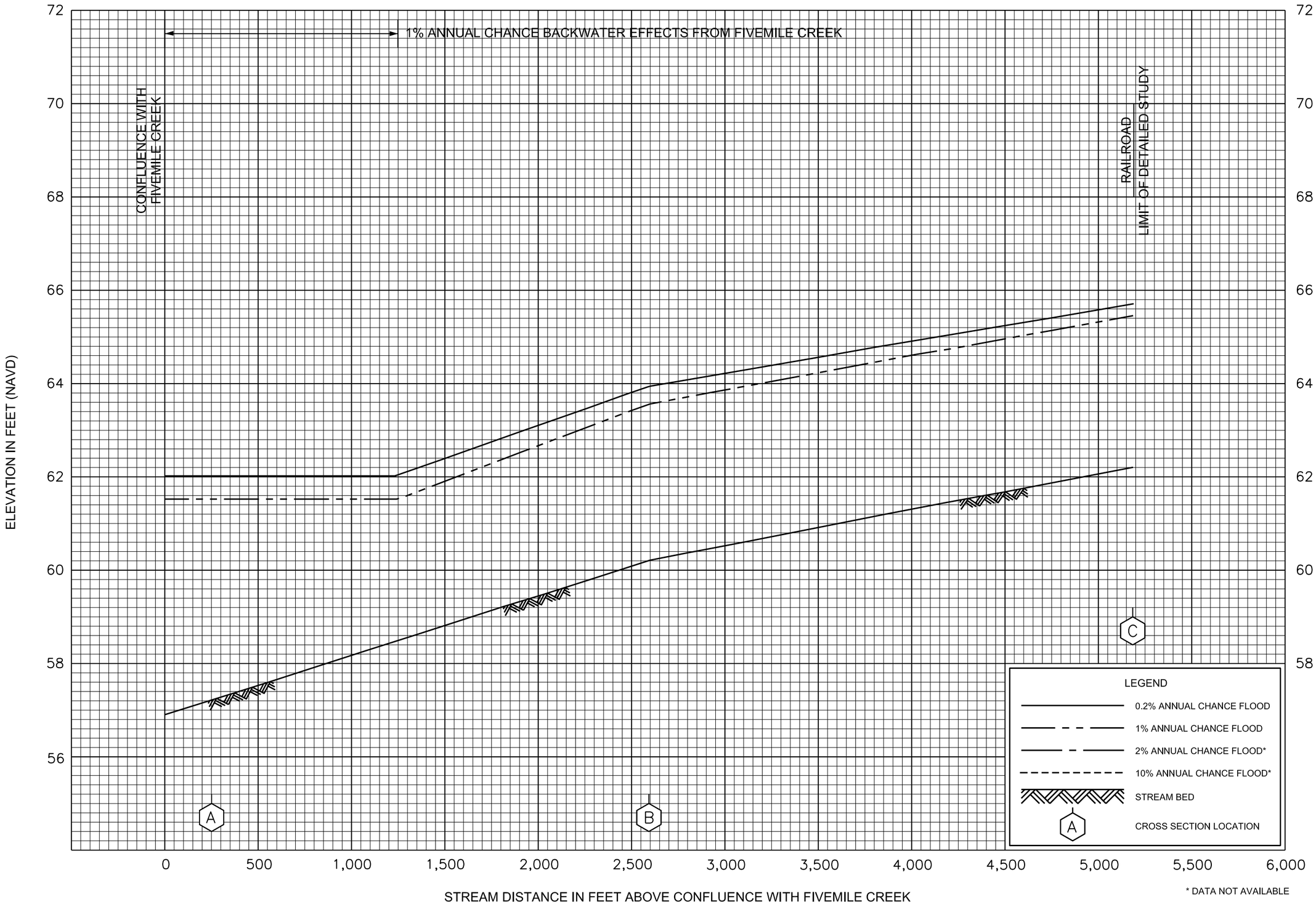
PASCO COUNTY, FL
AND INCORPORATED AREAS

17P



FLOOD PROFILES

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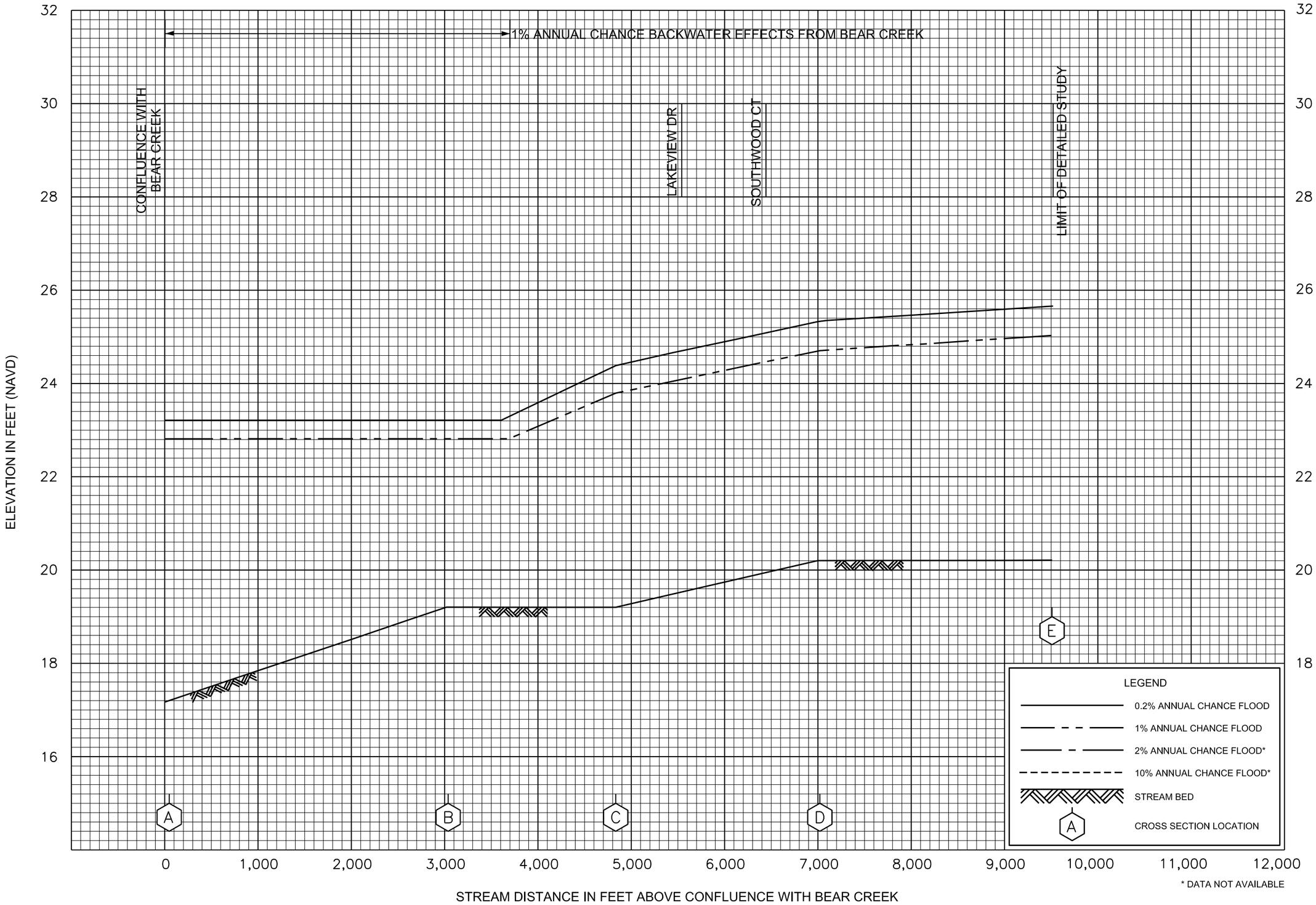
PASCO COUNTY, FL
AND INCORPORATED AREAS

18P



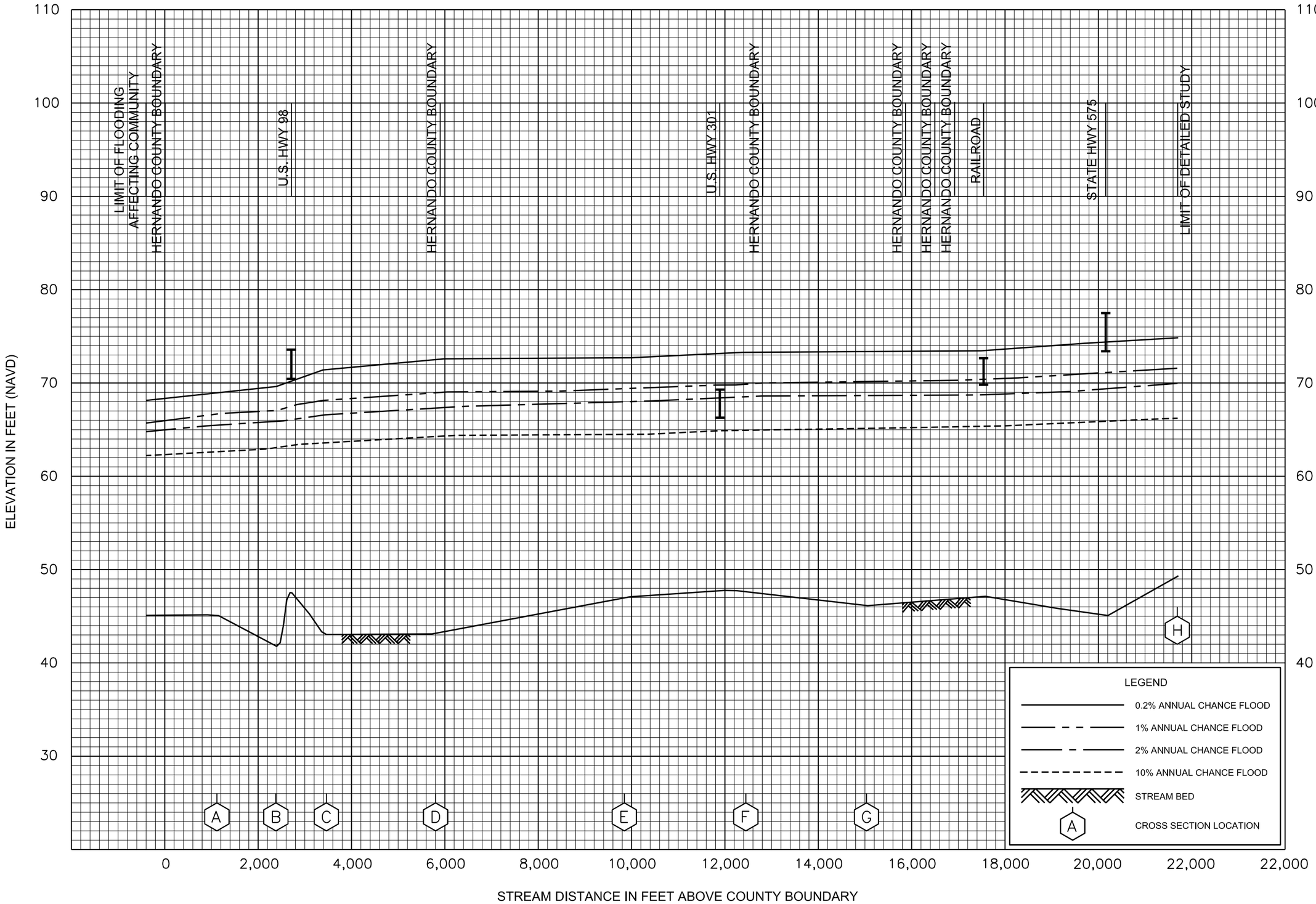
FLOOD PROFILES

TRIBUTARY NO. 25

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

19P



FLOOD PROFILES

WITHLACOOCHEE RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

PASCO COUNTY, FL
AND INCORPORATED AREAS

20P

APPENDIX

Summary of Stillwater Elevations by Watershed and Junction

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM3900	1395218.12	530963.00	48.6
Cypress Creek	3NM4200	1395240.87	525443.31	61.7
Cypress Creek	3NM4300	1395246.00	522234.97	64.2
Cypress Creek	3NM4135	1395344.63	532873.75	48.2
Cypress Creek	3NM4140	1395376.75	532397.88	48.3
Cypress Creek	3NM4160	1395378.50	527931.75	46.6
Cypress Creek	3NM4100	1395412.13	537521.31	49.1
Cypress Creek	3NM4145	1395415.00	532034.62	48.3
Cypress Creek	3NM4280	1395436.25	522220.53	64.2
Cypress Creek	3NM4380	1395437.75	521099.25	64.4
Cypress Creek	3NM4130	1395639.38	531938.94	49.2
Cypress Creek	3NH2040	1395685.38	509871.44	68.5
Cypress Creek	3NR8620	1395685.88	538539.63	49.3
Cypress Creek	3NM3890	1395433.13	531123.00	48.6
Cypress Creek	3NM3895	1395689.25	531140.13	48.6
Cypress Creek	3NM4520	1395704.37	516663.63	66.5
Cypress Creek	3NM4480	1395643.63	517601.12	66.5
Cypress Creek	3NH2020	1395677.25	509591.38	68.5
Cypress Creek	3NM4190	1395728.25	524823.62	62.9
Cypress Creek	3NM4240	1395816.13	522537.72	64.2
Cypress Creek	3NM4500	1395843.38	517028.19	66.5
Cypress Creek	3NM4120	1395956.00	535276.19	49.0
Cypress Creek	3NM4170	1395986.75	526126.37	62.8
Cypress Creek	3NM4080	1396131.00	536596.69	50.3
Cypress Creek	3NM4260	1396154.75	522164.44	64.3
Cypress Creek	3NM3490	1396051.62	532810.75	49.8
Cypress Creek	3NM3495	1396254.38	532848.25	49.0
Cypress Creek	3NM3860	1396263.00	528528.19	49.1
Cypress Creek	3NM4220	1396140.00	523613.03	64.2
Cypress Creek	3NR8610	1396280.50	537827.13	50.0
Cypress Creek	3NM1460	1396382.75	514083.75	68.9
Cypress Creek	3NM4440	1396383.00	519281.62	65.8
Cypress Creek	3NM1440	1396408.75	513441.38	69.0
Cypress Creek	3NM4460	1396486.50	518024.97	66.6
Cypress Creek	3NM3510	1396132.00	530963.31	49.0
Cypress Creek	3NM3515	1396547.00	531358.25	49.0
Cypress Creek	3NM3470	1396547.00	531896.94	49.0
Cypress Creek	3NM3480	1396354.87	532008.37	49.0
Cypress Creek	3NH1740	1396528.75	506654.44	69.4
Cypress Creek	3NH1760	1396824.38	506877.16	68.8
Cypress Creek	3NM3760	1396837.75	523534.81	64.2
Cypress Creek	3NM4360	1396981.25	521082.16	64.4
Cypress Creek	3NM3850	1397100.25	526717.00	61.1
Cypress Creek	3NM1600	1397123.75	517950.66	66.5
Cypress Creek	3NM3780	1397144.25	524256.47	63.6
Cypress Creek	3NM3820	1397171.12	525219.06	61.4
Cypress Creek	3NM2880	1397180.50	527645.81	51.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM3840	1397192.75	525886.94	61.1
Cypress Creek	3NM4060	1397024.00	537692.88	49.2
Cypress Creek	3NM3420	1397450.38	534924.63	49.0
Cypress Creek	3NM4340	1397329.75	521732.66	65.0
Cypress Creek	3NM4420	1397480.75	518764.72	66.8
Cypress Creek	3NM3520	1397494.88	531699.94	49.0
Cypress Creek	3NM4400	1397538.87	520013.44	66.2
Cypress Creek	3NM4040	1397497.37	537553.56	49.1
Cypress Creek	3NM3845	1397582.50	526876.63	61.1
Cypress Creek	3NM2900	1397631.00	528408.31	50.4
Cypress Creek	3NM3740	1397640.38	524163.53	64.1
Cypress Creek	3NM1500	1397575.13	513369.34	66.6
Cypress Creek	3NM3500	1397709.25	531326.75	49.0
Cypress Creek	3NM3660	1397774.13	522668.41	64.8
Cypress Creek	3NM2920	1397827.12	529419.88	50.4
Cypress Creek	3NH1780	1397838.37	507503.19	68.5
Cypress Creek	3NH1700	1397872.00	506782.47	68.6
Cypress Creek	3NH1800	1397067.13	508133.91	68.5
Cypress Creek	3NM3440	1398033.87	534061.44	49.0
Cypress Creek	3NM4320	1398044.13	521889.47	64.7
Cypress Creek	3NM1560	1398078.63	515070.72	66.5
Cypress Creek	3NM1540	1398042.00	514541.88	68.3
Cypress Creek	3NH1720	1398135.50	506158.59	70.6
Cypress Creek	3NM2980	1398182.00	531398.25	49.0
Cypress Creek	3NM3720	1398187.62	523100.00	64.3
Cypress Creek	3NM1520	1398205.63	514161.88	68.4
Cypress Creek	3NM4397	1398267.13	519915.22	71.6
Cypress Creek	3NM3800	1398276.38	525545.75	62.7
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Cypress Creek	3NM4020	1398477.13	538208.50	52.3
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Cypress Creek	3NM3680	1398230.75	523714.31	64.3
Cypress Creek	3NH2080	1398564.13	510176.59	68.5
Cypress Creek	3NH1820	1396323.00	507712.50	68.5
Cypress Creek	3NH2000	1395868.62	509344.00	68.5
Cypress Creek	3NH2060	1396287.13	510019.97	68.5
Cypress Creek	3NH1980	1397211.00	511483.97	68.5
Cypress Creek	3NH1840	1398578.88	514270.53	69.4
Cypress Creek	3NH1860	1398509.50	513562.91	69.3
Cypress Creek	3NM3020	1398805.63	532293.06	49.0
Cypress Creek	3NM3540	1398843.37	525008.31	63.9
Cypress Creek	3NM1620	1398938.00	518082.87	66.5
Cypress Creek	3NM2940	1399013.75	529495.69	51.1
Cypress Creek	3NM4395	1398905.75	519216.28	79.2
Cypress Creek	3NM3580	1399143.87	523793.94	64.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM4385	1399201.63	519279.09	79.2
Cypress Creek	3NM3000	1399208.75	530936.13	49.1
Cypress Creek	3NM2960	1399233.88	530684.25	49.7
Cypress Creek	3NM3640	1399245.00	522798.13	65.4
Cypress Creek	3NM4390	1399284.88	519557.22	79.2
Cypress Creek	3NM3620	1399279.75	521895.34	65.7
Cypress Creek	3NH1880	1399361.63	513180.44	68.5
Cypress Creek	3NM3360	1399412.00	537440.38	48.5
Cypress Creek	3NM3560	1399418.88	524750.25	64.1
Cypress Creek	3NS5400	1399381.75	539304.81	52.5
Cypress Creek	3NM1580	1399241.88	515690.78	69.2
Cypress Creek	3NM1640	1399519.50	516424.91	66.5
Cypress Creek	3NH2065	1399118.63	511281.06	72.8
Cypress Creek	3NM3040	1399542.75	532140.31	49.0
Cypress Creek	3NM3600	1399557.50	523258.19	64.3
Cypress Creek	3NM2680	1399571.25	525592.25	64.0
Cypress Creek	3NM2935	1399597.00	529187.00	50.5
Cypress Creek	3NM2035	1399438.62	519198.47	80.0
Cypress Creek	3NM2040	1399722.00	519694.44	77.1
Cypress Creek	3NH1320	1399818.75	514295.19	68.8
Cypress Creek	3NM3630	1399825.50	522576.72	73.0
Cypress Creek	3NM3610	1399856.25	521876.19	73.3
Cypress Creek	3NM3400	1399875.00	533823.94	49.0
Cypress Creek	3NM2060	1399880.63	520572.25	70.0
Cypress Creek	3NH2070	1399881.50	511109.72	69.5
Cypress Creek	3NM2930	1399928.63	529010.75	51.4
Cypress Creek	3NH1960	1399966.87	512000.59	68.5
Cypress Creek	3NS5200	1399974.12	539063.32	52.5
Cypress Creek	3NM2945	1399993.25	529778.38	49.9
Cypress Creek	3NH1900	1400015.00	512724.34	70.0
Cypress Creek	3NM2700	1400095.88	525643.06	64.0
Cypress Creek	3NM2030	1400098.00	519028.84	79.0
Cypress Creek	3NH1580	1399038.12	507122.06	69.9
Cypress Creek	3NH1660	1400154.00	507308.16	69.2
Cypress Creek	3NH1950	1400190.25	511508.00	69.6
Cypress Creek	3NM2840	1400224.62	527744.25	53.2
Cypress Creek	3NM2838	1400251.88	528566.31	52.6
Cypress Creek	3NH1600	1399808.87	506202.28	69.3
Cypress Creek	3NM2950	1400337.75	531111.38	49.7
Cypress Creek	3NM3380	1400380.00	536090.75	48.5
Cypress Creek	3NH2075	1400396.88	511189.12	71.1
Cypress Creek	3NM2720	1400511.50	526214.56	60.6
Cypress Creek	3NM3350	1400589.50	536323.13	49.4
Cypress Creek	3NS5010	1400042.63	538706.75	52.5
Cypress Creek	3NM3300	1400613.62	534778.25	51.7
Cypress Creek	3NH1680	1400513.50	509152.50	68.9
Cypress Creek	3NM1660	1400712.63	517182.09	66.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM2740	1400143.12	526479.63	54.5
Cypress Creek	3NM2760	1400760.00	526728.25	53.6
Cypress Creek	3NH1340	1400793.87	513922.16	68.8
Cypress Creek	3NM1760	1400734.88	515902.56	69.1
Cypress Creek	3NM1780	1400808.25	516336.47	68.2
Cypress Creek	3NM3390	1400821.25	535013.31	49.0
Cypress Creek	3NH1940	1400855.38	512274.38	69.6
Cypress Creek	3NH1920	1400786.50	512852.31	69.6
Cypress Creek	3NM3385	1400880.63	534488.12	49.0
Cypress Creek	3NH1490	1400993.75	510610.81	68.8
Cypress Creek	3NM2660	1401004.50	526533.31	53.9
Cypress Creek	3NM1820	1401032.88	517770.34	66.9
Cypress Creek	3NH1640	1401073.88	507934.72	69.2
Cypress Creek	3NM3200	1401093.50	532438.38	49.0
Cypress Creek	3NM1740	1401168.50	515702.00	71.7
Cypress Creek	3NM3340	1401200.00	536563.31	50.3
Cypress Creek	3NM3320	1400861.50	537414.00	50.3
Cypress Creek	3NM2640	1401268.62	526259.62	54.2
Cypress Creek	3NH1620	1401298.25	507443.59	69.2
Cypress Creek	3NM3220	1401310.75	532937.38	49.0
Cypress Creek	3NM2820	1401369.63	527826.69	56.6
Cypress Creek	3NM2620	1401371.00	526181.81	55.5
Cypress Creek	3NM2545	1400712.13	522451.38	63.6
Cypress Creek	3NM2560	1401385.00	523373.78	60.1
Cypress Creek	3NM1800	1401421.13	516613.59	68.1
Cypress Creek	3NM1790	1400911.88	517018.53	68.9
Cypress Creek	3NM1880	1401445.25	517833.09	66.1
Cypress Creek	3NM1860	1401242.13	518289.72	67.2
Cypress Creek	3NM1840	1401462.62	518874.75	68.6
Cypress Creek	3NM3330	1401537.63	536689.00	51.1
Cypress Creek	3NM2100	1401562.00	520275.19	68.4
Cypress Creek	3NM2120	1401570.13	521246.09	68.3
Cypress Creek	3NM3210	1401574.38	533227.63	49.0
Cypress Creek	3NM3325	1401597.25	536197.75	51.0
Cypress Creek	3NM2080	1401344.50	521972.91	71.0
Cypress Creek	3NM1795	1401659.50	516911.19	69.7
Cypress Creek	3NM3280	1401670.00	534405.63	49.0
Cypress Creek	3NM3240	1401699.00	533769.81	52.6
Cypress Creek	3NH1480	1401702.88	511685.59	69.6
Cypress Creek	3NM2540	1401704.50	522981.97	55.5
Cypress Creek	3NH1280	1401717.38	510506.75	69.2
Cypress Creek	3NH1380	1401713.13	514855.38	79.4
Cypress Creek	3NH1400	1401721.88	514521.19	75.5
Cypress Creek	3NM2110	1401750.63	520479.84	68.3
Cypress Creek	3NS4270	1401794.12	537710.94	52.5
Cypress Creek	3NH1560	1401810.00	506663.88	69.6
Cypress Creek	3NH1360	1401839.00	514260.75	69.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM3270	1401872.25	534750.19	50.0
Cypress Creek	3NH1520	1401764.87	506174.28	70.3
Cypress Creek	3NM2970	1401925.37	531392.63	53.8
Cypress Creek	3NM3260	1402081.50	535144.12	50.4
Cypress Creek	3NM3255	1401669.38	535105.75	50.4
Cypress Creek	3NM3252	1401488.13	535710.44	50.4
Cypress Creek	3NM1720	1402088.87	515950.94	75.1
Cypress Creek	3NM1700	1402106.12	515640.22	82.3
Cypress Creek	3NS4220	1402120.12	536777.31	52.6
Cypress Creek	3NM3180	1402131.00	532613.38	49.0
Cypress Creek	3NM3258	1402152.25	535350.75	50.5
Cypress Creek	3NH1300	1402192.25	510990.34	68.8
Cypress Creek	3NM1920	1402240.38	518189.75	64.2
Cypress Creek	3NM2780	1402223.13	527944.56	58.5
Cypress Creek	3NM2836	1402414.50	528650.31	54.3
Cypress Creek	3NH1440	1402473.38	513261.81	69.7
Cypress Creek	3NH1420	1401191.13	512657.25	68.9
Cypress Creek	3NM2140	1402486.25	520603.56	63.7
Cypress Creek	3NH1540	1402563.50	507601.38	70.8
Cypress Creek	3NM1680	1402655.13	516156.06	82.1
Cypress Creek	3NM2600	1402657.25	524621.56	55.5
Cypress Creek	3NM2580	1401075.38	524061.31	56.8
Cypress Creek	3NH1270	1402627.13	509648.53	68.9
Cypress Creek	3NM3248	1402698.63	535087.81	51.6
Cypress Creek	3NM3100	1402708.00	531426.31	53.3
Cypress Creek	3NM2833	1402735.00	528674.63	54.3
Cypress Creek	3NM2520	1402560.13	523132.00	55.5
Cypress Creek	3NH1200	1402804.38	507740.94	70.8
Cypress Creek	3NH1240	1402861.50	508165.53	70.8
Cypress Creek	3NH1260	1402876.00	508992.34	70.8
Cypress Creek	3NM1900	1402884.75	517130.22	75.7
Cypress Creek	3NH1460	1402900.25	512703.25	69.7
Cypress Creek	3NH1220	1402951.37	507793.44	70.8
Cypress Creek	3NH1255	1402973.63	509174.53	70.6
Cypress Creek	3NM2180	1402986.88	519483.75	62.5
Cypress Creek	3NM3246	1403043.75	535557.94	52.9
Cypress Creek	3NM3170	1403048.25	533499.19	51.7
Cypress Creek	3NM3140	1403060.75	532442.56	50.1
Cypress Creek	3NM2020	1403096.87	518749.00	63.0
Cypress Creek	3NM3120	1403202.63	532139.38	50.8
Cypress Creek	3NH1470	1403213.63	510575.47	69.6
Cypress Creek	3NM3153	1403117.62	535014.56	53.2
Cypress Creek	3NM3156	1403218.13	534793.12	52.7
Cypress Creek	3NM3243	1403291.88	535545.63	54.1
Cypress Creek	3NH1230	1403333.75	508259.75	71.0
Cypress Creek	3NM3145	1403324.13	533539.88	52.7
Cypress Creek	3NM3160	1403421.00	533994.19	52.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM3150	1403027.87	533897.44	52.6
Cypress Creek	3NM2160	1403459.88	520469.72	62.5
Cypress Creek	3NM3090	1403467.88	531370.25	55.7
Cypress Creek	3NH1215	1403470.13	506665.41	73.2
Cypress Creek	3NM3085	1403533.25	531008.56	55.7
Cypress Creek	3NM2200	1403658.75	519334.44	62.5
Cypress Creek	3NH1210	1403681.88	507026.72	73.2
Cypress Creek	3NH1205	1403756.62	506806.53	73.2
Cypress Creek	3NM2220	1403787.25	519367.63	62.5
Cypress Creek	3NM2240	1403844.50	519393.78	62.4
Cypress Creek	3NM2460	1404106.50	522712.06	55.5
Cypress Creek	3NM2260	1404120.00	519476.38	59.5
Cypress Creek	3NM2000	1404161.63	517754.97	74.4
Cypress Creek	3NM2280	1404175.63	519493.53	57.8
Cypress Creek	3NM3142	1403935.00	533203.00	52.6
Cypress Creek	3NM3143	1404201.13	533603.50	52.6
Cypress Creek	3NH1160	1404027.38	510972.13	72.2
Cypress Creek	3NH1140	1404237.25	510140.81	71.4
Cypress Creek	3NM2550	1404373.88	527592.25	64.2
Cypress Creek	3NM2830	1404522.00	528911.75	54.2
Cypress Creek	3NM2440	1404588.25	520947.44	55.5
Cypress Creek	3NH1000	1404815.75	516206.78	85.7
Cypress Creek	3NM1960	1404817.13	516394.41	85.6
Cypress Creek	3NH1020	1404850.63	514466.75	84.5
Cypress Creek	3NM2823	1404898.12	528679.44	56.7
Cypress Creek	3NM1989	1404922.87	518021.56	77.9
Cypress Creek	3NM1995	1405044.75	517377.84	86.5
Cypress Creek	3NS3400	1405133.25	534107.00	52.6
Cypress Creek	3NM1992	1405173.75	518373.22	82.7
Cypress Creek	3NM2826	1405399.12	529430.94	54.2
Cypress Creek	3NM1940	1405597.00	516540.44	88.2
Cypress Creek	3NM1360	1405649.87	524303.56	55.6
Cypress Creek	3NM1986	1405705.12	517092.78	84.6
Cypress Creek	3NM1983	1405785.00	517088.37	85.7
Cypress Creek	3NH1060	1405819.13	514454.34	84.1
Cypress Creek	3NH1040	1405408.87	514697.41	84.7
Cypress Creek	3NH1080	1405833.13	513141.75	80.7
Cypress Creek	3NH1100	1405124.50	513146.38	80.4
Cypress Creek	3NS3200	1405836.63	533723.62	52.6
Cypress Creek	3NM2420	1405836.88	518899.97	73.8
Cypress Creek	3NM1980	1405864.00	517049.13	86.8
Cypress Creek	3NM2400	1406001.63	518514.06	81.4
Cypress Creek	3NM2480	1406030.12	526693.50	55.6
Cypress Creek	3NM1420	1406067.62	522601.81	55.5
Cypress Creek	3NH1120	1406147.88	510172.87	72.2
Cypress Creek	3NM2300	1406213.12	516603.00	87.4
Cypress Creek	3NM1400	1406227.75	522728.03	55.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NH0980	1406312.50	514153.19	85.1
Cypress Creek	3NH0950	1406581.63	515460.28	85.6
Cypress Creek	3NH1180	1406600.50	507838.81	71.6
Cypress Creek	3NM0700	1406670.13	520522.12	58.0
Cypress Creek	3NM1320	1406671.88	526162.38	55.6
Cypress Creek	3NM2380	1406689.37	518203.00	85.4
Cypress Creek	3NM2320	1406742.38	517535.59	86.2
Cypress Creek	3NM2360	1406800.63	517696.44	86.0
Cypress Creek	3NM0640	1406464.25	518888.19	72.0
Cypress Creek	3NM0660	1406837.25	519081.94	68.0
Cypress Creek	3NM2340	1406904.75	517607.91	86.2
Cypress Creek	3NM1260	1406981.63	526639.81	55.6
Cypress Creek	3NM2370	1407091.63	516581.94	85.7
Cypress Creek	3NH0940	1407126.38	516400.47	83.8
Cypress Creek	3NH0960	1407126.63	514107.81	84.1
Cypress Creek	3NH0970	1407126.75	514074.06	81.9
Cypress Creek	3NM1240	1407187.00	526523.06	55.6
Cypress Creek	3NM1340	1407320.13	525737.06	55.6
Cypress Creek	3NM1280	1407354.87	526288.25	55.6
Cypress Creek	3NM1300	1407571.88	525902.00	55.6
Cypress Creek	3NH0860	1407598.75	510863.34	72.2
Cypress Creek	3NH0840	1407641.75	511300.84	75.5
Cypress Creek	3NM0680	1407956.50	519380.66	65.4
Cypress Creek	3NM0720	1407835.25	520161.28	62.2
Cypress Creek	3NM0620	1407911.38	518132.13	77.6
Cypress Creek	3NM1380	1408069.00	523391.00	55.6
Cypress Creek	3NH0800	1408137.38	511387.25	76.8
Cypress Creek	3NH0930	1408276.50	515511.88	83.4
Cypress Creek	3NH0920	1408484.13	515615.72	83.1
Cypress Creek	3NH0900	1408186.12	515999.06	86.0
Cypress Creek	3NM0760	1408588.38	520406.44	60.6
Cypress Creek	3NM0740	1408444.63	521000.41	60.4
Cypress Creek	3NH0820	1408822.62	514513.22	78.6
Cypress Creek	3NM0960	1408704.63	528259.19	62.1
Cypress Creek	3NM0940	1409046.38	528752.31	58.2
Cypress Creek	3NM0920	1408391.50	528764.19	61.1
Cypress Creek	3NM0980	1409158.50	529015.69	56.7
Cypress Creek	3NS2620	1408731.00	529221.00	56.7
Cypress Creek	3NM1060	1408937.13	526754.56	61.5
Cypress Creek	3NM1080	1409164.12	526945.12	59.9
Cypress Creek	3NM1040	1408242.25	527455.06	62.3
Cypress Creek	3NH0880	1409261.50	515899.72	82.5
Cypress Creek	3NM0500	1409096.75	516871.84	86.7
Cypress Creek	3NM0520	1409287.25	517099.12	86.2
Cypress Creek	3NM1000	1409332.12	527712.81	56.8
Cypress Creek	3NM1100	1409337.75	527295.31	58.3
Cypress Creek	3NM0780	1409384.88	519693.31	60.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM1160	1409414.75	526398.81	58.3
Cypress Creek	3NM0580	1408795.00	517567.31	85.4
Cypress Creek	3NM0600	1409193.13	518871.91	63.2
Cypress Creek	3NM0480	1409584.88	516075.47	81.6
Cypress Creek	3NM0540	1409618.38	517101.09	85.6
Cypress Creek	3NM0800	1409702.13	519543.94	60.6
Cypress Creek	3NM0560	1409705.25	517064.19	76.6
Cypress Creek	3NH0780	1409746.50	512062.09	77.0
Cypress Creek	3NM0840	1409768.13	528901.12	56.4
Cypress Creek	3NM0820	1409877.75	522585.69	55.6
Cypress Creek	3NM1180	1409881.88	526403.44	56.0
Cypress Creek	3NM0860	1410011.12	529100.75	56.4
Cypress Creek	3NH0760	1409942.38	510898.59	77.2
Cypress Creek	3NH0750	1410132.25	508319.94	76.2
Cypress Creek	3NM0880	1410384.37	528766.56	56.4
Cypress Creek	3NM0240	1410398.50	514738.44	82.0
Cypress Creek	3NM0260	1409962.62	515733.66	80.7
Cypress Creek	3NM1220	1410492.87	525585.13	55.6
Cypress Creek	3NM0300	1410701.00	516013.88	68.3
Cypress Creek	3NS1400	1410771.88	530326.19	53.9
Cypress Creek	3NM0900	1410951.12	527593.13	55.6
Cypress Creek	3NS1030	1410730.50	529846.25	56.1
Cypress Creek	3NM1200	1410973.87	526371.56	55.6
Cypress Creek	3NM0280	1411245.00	515708.06	72.6
Cypress Creek	3NH1165	1411262.75	508514.34	73.1
Cypress Creek	3NM0340	1411346.63	517210.06	62.9
Cypress Creek	3NM0420	1410432.88	518244.03	55.7
Cypress Creek	3NM0460	1411370.38	521931.75	55.6
Cypress Creek	3NH0700	1411385.38	510310.97	73.2
Cypress Creek	3NH0680	1411372.25	510545.34	78.2
Cypress Creek	3NH1170	1411506.00	508866.53	71.6
Cypress Creek	3NH0660	1411718.63	510935.97	79.6
Cypress Creek	3NM0320	1411820.25	517067.75	64.1
Cypress Creek	3NH0730	1412241.00	506639.59	77.5
Cypress Creek	3NH0740	1412299.62	507816.31	75.9
Cypress Creek	3NM0020	1412417.63	513162.94	82.7
Cypress Creek	3NM0040	1412419.50	513285.59	82.7
Cypress Creek	3NM0015	1412701.63	512818.47	82.8
Cypress Creek	3NM0440	1412794.37	520819.44	55.6
Cypress Creek	3NM0013	1412845.88	512576.34	82.8
Cypress Creek	3NM0060	1412889.88	513941.94	79.0
Cypress Creek	3NM0360	1412984.75	517256.47	61.8
Cypress Creek	3NM0012	1413217.88	512589.47	83.0
Cypress Creek	3NM0010	1413245.25	512277.91	83.4
Cypress Creek	3NM0080	1413335.63	514562.72	77.2
Cypress Creek	3NM0430	1413438.12	518230.41	55.7
Cypress Creek	3NM0190	1413327.13	515822.56	69.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NM0200	1413481.38	515747.53	69.0
Cypress Creek	3NM0180	1412298.87	515275.81	82.1
Cypress Creek	3NH0720	1413620.37	510084.47	73.5
Cypress Creek	3NM0140	1413781.25	515156.97	75.6
Cypress Creek	3NM0120	1413571.62	514814.75	75.6
Cypress Creek	3NM0100	1413972.25	514825.34	75.6
Cypress Creek	3NL2580	1413739.25	524762.25	55.0
Cypress Creek	3NH0405	1414202.63	504878.09	76.7
Cypress Creek	3NH0410	1414211.38	505056.06	75.6
Cypress Creek	3NH0415	1414111.87	505326.94	75.6
Cypress Creek	3NM0160	1414219.25	515751.87	72.2
Cypress Creek	3NH0480	1414320.38	507092.53	73.5
Cypress Creek	3NH0710	1414400.75	511961.03	76.2
Cypress Creek	3NH0705	1414456.37	512265.63	80.3
Cypress Creek	3NM0380	1414495.63	518666.59	58.7
Cypress Creek	3NL2600	1414507.88	522267.31	55.7
Cypress Creek	3NH0385	1414640.63	504713.19	79.3
Cypress Creek	3NM0220	1414779.13	516155.53	69.2
Cypress Creek	3NH0420	1414830.13	505461.50	74.0
Cypress Creek	3NH0640	1415341.00	508844.88	73.1
Cypress Creek	3NH0465	1415432.63	506033.19	75.4
Cypress Creek	3NH0620	1415511.50	508215.75	73.2
Cypress Creek	3NH0445	1415880.50	504720.69	77.7
Cypress Creek	3NH0450	1415411.75	505027.97	76.0
Cypress Creek	3NH0380	1415897.00	508885.78	75.3
Cypress Creek	3NL2200	1415950.50	525215.13	55.8
Cypress Creek	3NS0205	1415813.50	526499.19	54.7
Cypress Creek	3NM0400	1415461.50	518222.00	60.7
Cypress Creek	3NL2460	1415961.25	519542.50	55.7
Cypress Creek	3NH0460	1415963.63	505569.53	73.9
Cypress Creek	3NH0475	1416312.75	506720.69	73.5
Cypress Creek	3NH0470	1416505.50	506621.72	75.6
Cypress Creek	3NH0600	1416512.38	508419.69	73.2
Cypress Creek	3NL2280	1416046.37	516272.69	71.9
Cypress Creek	3NL2300	1416569.75	516277.91	70.7
Cypress Creek	3NL2440	1416632.75	518861.88	61.3
Cypress Creek	3NH0400	1416638.63	511072.97	74.1
Cypress Creek	3NH0395	1415430.63	512197.59	76.1
Cypress Creek	3NL2240	1416102.63	514978.78	80.0
Cypress Creek	3NL2260	1416747.38	514527.19	76.4
Cypress Creek	3NL2220	1416753.88	523765.50	55.0
Cypress Creek	3NH0580	1416791.75	508218.06	73.2
Cypress Creek	3NH0540	1416822.38	507234.00	73.2
Cypress Creek	3NH0560	1416919.63	507993.00	73.2
Cypress Creek	3NH0440	1416937.00	506316.03	75.6
Cypress Creek	3NL2320	1417161.13	516493.81	65.2
Cypress Creek	3NL2420	1417278.75	520456.97	55.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL2380	1417185.37	518147.50	61.9
Cypress Creek	3NH0430	1417536.75	505637.34	75.7
Cypress Creek	3NH0425	1416760.75	505600.91	78.0
Cypress Creek	3NS0200	1417141.50	527210.63	56.6
Cypress Creek	3NH0520	1417635.75	507409.47	74.3
Cypress Creek	3NH0360	1418010.50	513687.19	74.1
Cypress Creek	3NL2560	1418031.62	521846.66	55.8
Cypress Creek	3NL2400	1418032.37	519493.31	54.9
Cypress Creek	3NH0500	1418050.50	506917.03	76.5
Cypress Creek	3NL2340	1418123.50	517091.31	70.6
Cypress Creek	3NH0340	1418407.13	512425.75	74.1
Cypress Creek	3NE4140	1418182.37	524498.06	57.1
Cypress Creek	3NL2360	1418532.38	517151.22	68.5
Cypress Creek	3NH0260	1418899.13	509325.63	74.1
Cypress Creek	3NL2180	1418948.63	523394.19	57.1
Cypress Creek	3NE4060	1418966.00	527368.38	57.4
Cypress Creek	3NE3690	1418766.00	530361.94	68.2
Cypress Creek	3NE3700	1418881.50	531079.75	67.8
Cypress Creek	3NH0330	1419056.88	512957.94	76.8
Cypress Creek	3NE4020	1419069.75	529577.00	63.3
Cypress Creek	3NH0240	1419127.63	508890.44	75.0
Cypress Creek	3NH0300	1419232.25	510440.47	74.1
Cypress Creek	3NE4030	1419288.38	529225.94	62.4
Cypress Creek	3NE3660	1419325.75	532055.50	65.7
Cypress Creek	3NT2380	1417983.00	532564.19	63.6
Cypress Creek	3NL2540	1419372.38	520666.03	56.1
Cypress Creek	3NE3720	1419459.00	530980.75	65.7
Cypress Creek	3NL2500	1419373.13	517848.84	61.6
Cypress Creek	3NL2520	1419625.25	518870.66	56.1
Cypress Creek	3NL2140	1419688.75	522392.22	54.9
Cypress Creek	3NE4080	1419800.75	527471.31	58.3
Cypress Creek	3NE4040	1419090.50	528163.88	60.4
Cypress Creek	3NT2320	1419888.38	532615.38	65.7
Cypress Creek	3NE3680	1419897.00	531551.19	65.7
Cypress Creek	3NH0280	1419848.12	511358.19	73.9
Cypress Creek	3NH0320	1420034.75	512521.22	74.1
Cypress Creek	3NE3760	1420110.75	529677.19	65.7
Cypress Creek	3NE3800	1420140.00	530724.81	65.7
Cypress Creek	3NL2020	1419546.25	517111.00	64.8
Cypress Creek	3NL2040	1419942.63	516433.78	62.9
Cypress Creek	3NE4120	1420233.38	525239.94	58.0
Cypress Creek	3ND0980	1420242.00	552779.94	104.8
Cypress Creek	3NR2180	1418209.75	553708.63	86.4
Cypress Creek	3NL2000	1419019.75	517413.12	64.3
Cypress Creek	3NE3780	1420465.62	530328.94	65.7
Cypress Creek	3NE2200	1420312.75	538114.25	75.1
Cypress Creek	3NE2210	1420567.88	537586.44	73.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL1950	1420262.13	514190.50	72.5
Cypress Creek	3NL1960	1420603.00	514522.75	69.9
Cypress Creek	3NL1940	1419143.63	515218.41	69.9
Cypress Creek	3NL1980	1420713.00	515703.38	68.8
Cypress Creek	3NL2480	1420784.88	519443.44	58.3
Cypress Creek	3NL2060	1420521.13	517880.59	58.4
Cypress Creek	3NE3340	1420817.62	535371.44	69.1
Cypress Creek	3NT0100	1420111.75	535262.31	69.1
Cypress Creek	3NL1815	1420347.00	512896.03	75.5
Cypress Creek	3NL1840	1420894.13	513098.56	75.5
Cypress Creek	3NL1825	1420617.25	513286.72	75.5
Cypress Creek	3NT2310	1420630.75	532865.25	66.2
Cypress Creek	3NE3870	1420950.50	532763.75	66.2
Cypress Creek	3NL1860	1420963.50	513532.59	75.0
Cypress Creek	3NE2230	1420986.12	537109.62	72.9
Cypress Creek	3NE3840	1420990.75	530840.25	64.8
Cypress Creek	3NE3820	1420368.38	531237.69	64.8
Cypress Creek	3NE4000	1420991.50	529575.37	63.2
Cypress Creek	3NL1835	1421025.13	513244.41	75.5
Cypress Creek	3NL2470	1421064.38	518664.22	57.6
Cypress Creek	3ND1000	1421136.37	552528.25	96.3
Cypress Creek	3NE3470	1420822.25	534444.13	68.7
Cypress Creek	3NE2240	1421252.63	537128.00	72.9
Cypress Creek	3NE3360	1421261.38	535329.81	69.1
Cypress Creek	3NH0220	1421322.00	510438.91	74.1
Cypress Creek	3NL1830	1421322.50	512938.41	75.5
Cypress Creek	3NE3600	1421378.75	533099.38	66.5
Cypress Creek	3NT2330	1420113.50	533121.81	66.2
Cypress Creek	3NG2120	1445312.50	550623.75	88.5
Cypress Creek	3NG2100	1445371.38	550367.69	88.5
Cypress Creek	3NK1440	1445384.38	520390.22	74.6
Cypress Creek	3NK0900	1445468.13	521476.69	74.5
Cypress Creek	3NG2410	1445485.50	548677.13	80.1
Cypress Creek	3NG2340	1445544.63	549636.69	84.7
Cypress Creek	3NB1600	1445614.50	569458.00	104.7
Cypress Creek	3NB1680	1445618.62	568986.50	105.0
Cypress Creek	3NB2580	1445620.38	559225.37	102.7
Cypress Creek	3NK0840	1445670.50	525768.19	72.4
Cypress Creek	3NB1620	1445688.13	571400.56	110.8
Cypress Creek	3NK0920	1445743.12	523248.91	74.4
Cypress Creek	3NG2320	1445759.00	549892.81	85.3
Cypress Creek	3NJ2450	1445760.87	531946.50	70.8
Cypress Creek	3NK0940	1445788.75	523340.44	74.4
Cypress Creek	3NJ2440	1445802.50	531950.44	71.4
Cypress Creek	3NK0980	1445816.50	523998.09	74.5
Cypress Creek	3NG2140	1445972.00	550216.87	88.5
Cypress Creek	3NG2060	1446014.13	551273.31	88.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NG2160	1446105.63	549325.19	84.1
Cypress Creek	3NG2260	1445846.25	548585.94	80.3
Cypress Creek	3NG2430	1445581.38	547970.81	79.9
Cypress Creek	3NG2940	1446109.50	547672.88	79.9
Cypress Creek	3NG2960	1446137.88	547541.88	77.1
Cypress Creek	3NB1580	1446139.00	569987.44	104.9
Cypress Creek	3NB1920	1446154.50	566907.13	102.6
Cypress Creek	3NG2300	1446042.88	548566.87	80.9
Cypress Creek	3NG3340	1446210.25	535526.50	73.9
Cypress Creek	3NG1940	1446228.37	550374.62	89.5
Cypress Creek	3NB1560	1446265.25	570031.13	105.6
Cypress Creek	3NB1950	1445351.50	564713.25	108.5
Cypress Creek	3NB1960	1445871.50	566102.94	101.2
Cypress Creek	3NG1980	1446133.38	553440.69	97.8
Cypress Creek	3NG2000	1446370.88	553080.25	97.6
Cypress Creek	3NB2680	1446373.88	558860.13	102.7
Cypress Creek	3NG2005	1446238.25	552832.94	96.2
Cypress Creek	3NG3060	1446380.12	544432.44	75.8
Cypress Creek	3NC0080	1446401.75	554521.00	97.9
Cypress Creek	3NB1940	1446411.25	566882.00	100.8
Cypress Creek	3NB2620	1446415.75	559393.87	102.7
Cypress Creek	3NK0600	1446482.00	527274.19	73.1
Cypress Creek	3NB1980	1446578.25	566856.38	100.5
Cypress Creek	3NK1740	1446615.75	512320.53	76.7
Cypress Creek	3NG2280	1446624.00	548169.69	82.6
Cypress Creek	3NK0960	1446637.50	523585.00	75.0
Cypress Creek	3NG2040	1446639.88	551680.12	90.3
Cypress Creek	3NJ2380	1446658.25	529171.75	74.0
Cypress Creek	3NG1860	1446370.88	550928.31	89.6
Cypress Creek	3NG1880	1446658.38	551042.94	89.6
Cypress Creek	3NG2020	1445459.38	553177.31	95.0
Cypress Creek	3NC0020	1446127.38	555730.75	100.7
Cypress Creek	3NC0040	1446718.87	555253.81	98.8
Cypress Creek	3NG1920	1446750.12	550863.75	89.5
Cypress Creek	3NB2700	1446815.38	558901.81	102.7
Cypress Creek	3NG1840	1446821.13	551224.25	89.6
Cypress Creek	3NB1900	1446610.25	567947.44	107.9
Cypress Creek	3NG1820	1446896.37	551336.94	89.6
Cypress Creek	3NG1900	1446926.25	550854.69	89.5
Cypress Creek	3NG1800	1446950.75	550568.00	90.4
Cypress Creek	3NJ2220	1446683.00	533468.12	73.7
Cypress Creek	3NJ2240	1446975.50	532508.00	71.6
Cypress Creek	3NG3320	1447006.00	535871.00	76.5
Cypress Creek	3NJ2360	1447058.50	530521.50	73.7
Cypress Creek	3NG2240	1447161.38	549425.44	87.7
Cypress Creek	3NG2220	1446506.00	549342.69	89.0
Cypress Creek	3NG2200	1446793.13	549671.88	90.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NB2600	1447180.13	560054.37	102.9
Cypress Creek	3NG1760	1447205.00	550701.12	90.4
Cypress Creek	3NG3040	1447223.25	543905.00	75.8
Cypress Creek	3NB1540	1447271.38	570429.63	105.7
Cypress Creek	3NB1490	1447269.38	570990.00	105.7
Cypress Creek	3NK0820	1447294.75	525405.13	73.8
Cypress Creek	3NK1380	1447312.25	517535.06	75.3
Cypress Creek	3NB1520	1447392.75	570405.37	105.7
Cypress Creek	3NK0800	1447405.50	525408.50	75.1
Cypress Creek	3NG0140C	1446425.62	509931.28	77.4
Cypress Creek	3NB2660	1447471.63	557711.06	102.7
Cypress Creek	3NG3020	1447491.88	543174.37	75.8
Cypress Creek	3NB2640	1447590.88	556762.00	102.7
Cypress Creek	3NG1780	1447609.63	550574.31	90.4
Cypress Creek	3NC0100	1447622.75	554437.25	98.0
Cypress Creek	3NG3300	1447632.63	536007.94	76.5
Cypress Creek	3NJ2160	1447678.13	534412.06	73.8
Cypress Creek	3NG2180	1447692.50	549512.13	92.4
Cypress Creek	3NE3590	1421400.63	533440.75	66.7
Cypress Creek	3NH0209	1421481.75	511996.03	74.9
Cypress Creek	3NE3980	1421495.00	529288.94	63.8
Cypress Creek	3NL2160	1421545.13	523268.44	57.9
Cypress Creek	3NE3320	1421575.88	536408.38	72.5
Cypress Creek	3NE3380	1421576.88	535330.44	69.5
Cypress Creek	3NE3240	1421578.38	536868.31	72.9
Cypress Creek	3NE2250	1421578.75	537106.69	73.7
Cypress Creek	3NE3580	1421582.88	532735.69	66.6
Cypress Creek	3NE3620	1421582.88	532649.94	66.2
Cypress Creek	3NE3480	1421586.13	534563.50	68.7
Cypress Creek	3NE3570	1421589.63	533341.94	66.8
Cypress Creek	3NE3860	1421592.13	531888.56	66.1
Cypress Creek	3ND1020	1421595.88	552564.69	95.0
Cypress Creek	3NE3880	1421613.87	530967.81	65.7
Cypress Creek	3NE3900	1421610.37	530879.75	65.1
Cypress Creek	3NE3920	1421617.37	529439.94	63.0
Cypress Creek	3NE3940	1421616.12	529282.06	62.6
Cypress Creek	3NE3960	1421628.62	529110.81	62.1
Cypress Creek	3ND1040	1421678.75	552441.38	94.3
Cypress Creek	3NL1800	1421706.13	515894.66	71.3
Cypress Creek	3NL1880	1421743.63	513862.41	75.0
Cypress Creek	3NL1820	1421779.75	516507.41	66.1
Cypress Creek	3NE3300	1421813.75	536375.13	73.4
Cypress Creek	3NE3460	1421828.75	534554.00	72.0
Cypress Creek	3NL1870	1421862.88	513630.69	75.0
Cypress Creek	3NH0206	1421873.75	510984.75	74.1
Cypress Creek	3NL1875	1421925.75	514010.47	75.0
Cypress Creek	3ND0820	1423204.00	555997.75	94.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NE1700	1423091.12	540453.56	84.9
Cypress Creek	3NE1720	1423548.25	540508.63	83.7
Cypress Creek	3NE2080	1423567.25	538023.63	81.7
Cypress Creek	3NL1620	1423285.50	514517.53	72.2
Cypress Creek	3ND0900	1423605.62	554659.75	92.6
Cypress Creek	3NH0120	1423604.75	508762.13	76.3
Cypress Creek	3ND1180	1423645.75	549965.94	85.6
Cypress Creek	3NE1620	1423721.13	541084.13	82.2
Cypress Creek	3ND0860	1423744.50	555182.56	94.9
Cypress Creek	3ND0720	1423818.38	556186.81	94.4
Cypress Creek	3NL1780	1423893.88	517695.50	58.4
Cypress Creek	3NE1660	1423913.75	540777.56	82.6
Cypress Creek	3NE1740	1423927.50	540460.00	82.7
Cypress Creek	3NH0100	1423970.25	507973.44	77.3
Cypress Creek	3ND1100	1423971.88	550853.38	93.0
Cypress Creek	3NL1640	1423996.38	515204.19	72.2
Cypress Creek	3ND0740	1424132.75	557266.56	102.6
Cypress Creek	3NL1580	1424139.25	513916.41	72.1
Cypress Creek	3NE3220	1424158.75	529345.69	62.9
Cypress Creek	3NE2100	1424162.63	538679.06	81.7
Cypress Creek	3NE3520	1424184.00	533024.50	68.7
Cypress Creek	3NE3500	1424176.63	533137.44	68.7
Cypress Creek	3NE2120	1424186.38	538780.75	81.7
Cypress Creek	3NE2680	1424235.87	535791.94	69.3
Cypress Creek	3NE2700	1424231.75	534780.56	69.1
Cypress Creek	3NE2660	1424235.87	535905.44	70.4
Cypress Creek	3NH0080	1424240.00	507235.16	76.9
Cypress Creek	3ND1280	1424052.00	546220.06	84.0
Cypress Creek	3ND1300	1424255.12	546483.13	84.0
Cypress Creek	3NE1680	1424300.13	540601.06	79.7
Cypress Creek	3NE1780	1423473.50	539058.12	83.4
Cypress Creek	3ND1420	1423817.88	543540.81	83.3
Cypress Creek	3ND1440	1424346.00	543277.19	79.0
Cypress Creek	3NE1640	1424395.38	540930.06	81.0
Cypress Creek	3NL2120	1424408.75	523434.81	58.4
Cypress Creek	3NE1800	1424420.87	540172.88	80.1
Cypress Creek	3NE3200	1424459.63	527184.94	58.9
Cypress Creek	3NE2640	1424487.63	536006.56	70.4
Cypress Creek	3NE2720	1424543.38	533961.19	69.1
Cypress Creek	3NE2760	1424599.37	534774.31	69.2
Cypress Creek	3NE2800	1424522.38	533315.56	69.1
Cypress Creek	3NE2820	1424607.62	533312.44	69.1
Cypress Creek	3NE2620	1424611.50	536014.81	70.4
Cypress Creek	3NE2740	1424633.00	533925.19	69.1
Cypress Creek	3NE3020	1424640.00	531275.44	65.3
Cypress Creek	3NH0060	1424710.50	509628.75	76.9
Cypress Creek	3NH0020	1424734.87	507174.69	78.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL1060	1424615.63	510965.41	77.0
Cypress Creek	3NE2280	1424740.00	537131.44	74.2
Cypress Creek	3NE1820	1424743.12	540540.56	78.9
Cypress Creek	3ND1320	1424829.25	547064.88	84.0
Cypress Creek	3ND1340	1424900.12	547064.88	84.0
Cypress Creek	3ND1220	1424949.00	549354.25	84.2
Cypress Creek	3NE2600	1425030.50	535907.50	70.3
Cypress Creek	3NE2780	1425039.25	534621.62	69.2
Cypress Creek	3NE2140	1425064.25	538570.56	80.5
Cypress Creek	3NL1420	1425132.75	515690.28	72.6
Cypress Creek	3NL1440	1424685.13	516143.53	71.3
Cypress Creek	3NL1560	1425146.13	514376.47	72.7
Cypress Creek	3NE1840	1425154.00	540731.81	78.8
Cypress Creek	3NE2160	1425162.63	538553.62	76.7
Cypress Creek	3NL1540	1425180.88	513256.69	74.1
Cypress Creek	3NE2860	1425184.00	533623.19	69.1
Cypress Creek	3ND1250	1425249.12	548209.56	84.1
Cypress Creek	3NE2580	1425251.25	536295.50	70.5
Cypress Creek	3ND1260	1425293.37	548121.31	84.1
Cypress Creek	3NH0040	1425300.25	507911.78	77.5
Cypress Creek	3NE2560	1425342.13	536378.06	70.5
Cypress Creek	3ND1460	1425368.75	543955.50	76.6
Cypress Creek	3ND1400	1425320.25	544057.19	78.2
Cypress Creek	3NE3180	1425426.12	527342.88	60.2
Cypress Creek	3NE3030	1425441.75	531316.13	63.7
Cypress Creek	3ND1360	1425516.25	546577.75	84.0
Cypress Creek	3ND1380	1425549.87	546354.50	83.0
Cypress Creek	3ND1240	1425550.37	548722.31	84.2
Cypress Creek	3NE3150	1425561.00	529713.87	63.6
Cypress Creek	3NE3155	1425031.50	528377.06	61.7
Cypress Creek	3NE2540	1425602.13	535973.56	70.5
Cypress Creek	3NL1460	1425618.88	516692.88	69.5
Cypress Creek	3NE3160	1425620.00	527464.56	60.3
Cypress Creek	3NE2300	1425632.38	537141.50	70.5
Cypress Creek	3NL1080	1425671.75	510485.91	77.0
Cypress Creek	3NE2520	1425693.00	536056.13	70.5
Cypress Creek	3NE1860	1425765.88	540948.00	75.8
Cypress Creek	3NL1200	1425819.25	511221.69	77.0
Cypress Creek	3NE2880	1425869.75	533569.38	68.2
Cypress Creek	3NE2840	1425885.25	534066.50	69.1
Cypress Creek	3NE2180	1425905.62	538483.63	71.8
Cypress Creek	3NE2900	1425954.38	533541.31	68.2
Cypress Creek	3NE1880	1425960.00	540963.13	75.1
Cypress Creek	3NE1900	1425978.63	541057.31	75.0
Cypress Creek	3NE1920	1426040.87	541095.63	74.7
Cypress Creek	3NE2920	1426074.62	532633.19	67.2
Cypress Creek	3NE2940	1426099.50	532544.69	67.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3ND1350	1426124.50	547583.50	84.0
Cypress Creek	3ND1480	1426176.25	542158.31	75.2
Cypress Creek	3NL1480	1426176.88	517487.44	62.6
Cypress Creek	3NE1520	1426204.50	542040.00	75.2
Cypress Creek	3NE2320	1426219.50	537129.81	70.5
Cypress Creek	3NE2960	1426246.50	532218.31	66.0
Cypress Creek	3NE2980	1426267.13	532116.06	64.3
Cypress Creek	3NE1980	1426335.75	540125.81	73.9
Cypress Creek	3NE2000	1426349.00	540007.94	73.9
Cypress Creek	3NE1940	1426392.00	541201.56	74.7
Cypress Creek	3NE1550	1426328.63	541659.06	75.0
Cypress Creek	3NE1960	1426394.00	540987.44	74.6
Cypress Creek	3NL1220	1426408.62	512364.16	71.1
Cypress Creek	3NE1540	1426418.88	541759.75	75.0
Cypress Creek	3ND0460	1426232.50	555956.87	109.5
Cypress Creek	3ND0480	1426419.13	555570.56	108.4
Cypress Creek	3NL1160	1426419.38	511418.50	77.0
Cypress Creek	3NL1180	1426424.25	511348.31	77.0
Cypress Creek	3NE3040	1426431.75	530867.44	63.7
Cypress Creek	3ND0700	1426437.50	550016.75	84.2
Cypress Creek	3ND0695	1426140.13	551876.31	99.5
Cypress Creek	3NL1500	1426448.13	518407.91	58.5
Cypress Creek	3NE1560	1426449.25	541672.06	74.9
Cypress Creek	3NE1990	1426534.75	539863.00	73.9
Cypress Creek	3NE1970	1426592.25	539966.87	74.1
Cypress Creek	3NE2340	1426613.38	536493.69	70.5
Cypress Creek	3NE2360	1426643.63	536400.00	70.5
Cypress Creek	3NL1140	1426656.63	510959.06	77.0
Cypress Creek	3NE1500	1426666.50	541239.75	74.7
Cypress Creek	3NE2380	1426674.00	536175.94	70.5
Cypress Creek	3NE3110	1426676.63	529344.00	62.8
Cypress Creek	3NE3055	1426307.50	530026.37	63.8
Cypress Creek	3ND0500	1425759.37	555609.63	106.9
Cypress Creek	3ND0520	1426768.63	554865.88	103.9
Cypress Creek	3ND0685	1426804.13	551623.44	90.3
Cypress Creek	3ND0560	1426812.25	554058.00	98.4
Cypress Creek	3NE2170	1426814.12	539268.13	72.7
Cypress Creek	3NE1460	1426840.75	541526.62	75.1
Cypress Creek	3NE2130	1426907.87	539761.94	73.3
Cypress Creek	3NE2150	1426934.50	539259.63	73.7
Cypress Creek	3NL1020	1426040.62	509241.47	80.2
Cypress Creek	3NL1040	1426937.50	509507.44	77.3
Cypress Creek	3ND0540	1426978.25	554780.75	99.5
Cypress Creek	3ND0570	1426199.63	552935.63	102.2
Cypress Creek	3ND0580	1426978.88	553909.75	97.1
Cypress Creek	3ND0440	1427000.00	557411.00	108.9
Cypress Creek	3ND0420	1426836.00	557444.50	109.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NE1480	1427022.88	541186.37	74.9
Cypress Creek	3NE3140	1427155.25	527794.25	61.2
Cypress Creek	3NE3090	1427187.00	530363.25	63.5
Cypress Creek	3NE2500	1427190.75	534145.69	68.2
Cypress Creek	3NE3010	1427191.37	531788.31	64.7
Cypress Creek	3NE3000	1427191.62	531924.81	64.9
Cypress Creek	3NF0400	1427191.87	544932.81	76.0
Cypress Creek	3NF0380	1427018.63	546376.63	81.3
Cypress Creek	3NE2480	1427195.87	534956.37	69.4
Cypress Creek	3NE3120	1427196.12	529403.62	62.8
Cypress Creek	3NE1950	1427221.87	540023.94	74.8
Cypress Creek	3ND0400	1427234.12	554978.62	102.5
Cypress Creek	3NF0360	1427308.38	546994.44	88.7
Cypress Creek	3NE1330	1427390.75	538723.44	73.3
Cypress Creek	3NL1030	1427470.75	509217.44	77.9
Cypress Creek	3ND0380	1427589.00	554978.62	103.3
Cypress Creek	3ND0600	1427613.25	553706.69	95.3
Cypress Creek	3NE2990	1427562.62	532996.37	72.2
Cypress Creek	3NL1000	1427668.75	510119.66	79.4
Cypress Creek	3NE3080	1427692.25	530416.94	63.4
Cypress Creek	3ND0360	1427698.37	554981.81	103.7
Cypress Creek	3NE3070	1427707.87	531062.75	64.0
Cypress Creek	3NE3100	1427723.50	529469.00	62.2
Cypress Creek	3ND0620	1427747.00	553708.75	95.0
Cypress Creek	3NE1360	1427869.50	536980.50	70.5
Cypress Creek	3NE1340	1427865.87	537705.81	70.5
Cypress Creek	3NF0440	1427874.87	543993.19	73.7
Cypress Creek	3ND0320	1427881.12	556080.81	110.0
Cypress Creek	3ND0340	1427879.12	555949.56	106.5
Cypress Creek	3NL1520	1427901.63	522236.03	58.5
Cypress Creek	3ND0680	1427933.63	551123.50	84.2
Cypress Creek	3NE1420	1428075.13	541634.31	74.6
Cypress Creek	3NE1400	1427800.63	541618.31	75.1
Cypress Creek	3ND0640	1428120.50	553210.62	93.6
Cypress Creek	3NF0420	1428122.88	542736.75	74.6
Cypress Creek	3ND0300	1428174.87	556314.13	110.8
Cypress Creek	3ND0660	1428184.12	552785.50	89.3
Cypress Creek	3NE2460	1428272.75	534934.50	69.4
Cypress Creek	3NL1400	1427777.00	516481.00	68.2
Cypress Creek	3ND0080	1428288.75	554297.25	100.3
Cypress Creek	3ND0100	1428270.13	554185.50	99.6
Cypress Creek	3NL0750	1428296.38	526090.94	60.9
Cypress Creek	3ND0280	1428302.00	556320.38	113.6
Cypress Creek	3ND0060	1428321.75	555753.38	107.7
Cypress Creek	3NE0770	1427818.50	532592.31	70.7
Cypress Creek	3NE0790	1428303.75	531676.94	64.9
Cypress Creek	3ND0160	1428369.00	553184.25	93.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NE0780	1428360.25	532430.81	66.8
Cypress Creek	3NE2420	1428395.00	534934.31	69.9
Cypress Creek	3NB0020	1428113.63	569870.75	118.5
Cypress Creek	3NB0040	1428402.25	570396.12	118.5
Cypress Creek	3NL0990	1428509.62	510453.00	78.6
Cypress Creek	3ND0050	1428516.50	555265.31	111.1
Cypress Creek	3ND0070	1428529.50	554771.13	107.3
Cypress Creek	3NE2400	1428536.12	533807.31	71.7
Cypress Creek	3ND0140	1428563.50	553593.50	95.2
Cypress Creek	3ND0220	1428587.38	557197.50	116.0
Cypress Creek	3ND0240	1428585.38	557068.31	115.8
Cypress Creek	3ND0260	1428587.38	556651.63	115.8
Cypress Creek	3ND0120	1428596.00	553693.62	95.2
Cypress Creek	3NE1380	1428619.88	541580.56	74.7
Cypress Creek	3NL1120	1428620.25	511050.69	77.2
Cypress Creek	3NE1280	1428711.25	538547.00	70.5
Cypress Creek	3NE1300	1428395.13	537374.63	70.5
Cypress Creek	3NL0760	1428715.50	525294.75	59.6
Cypress Creek	3NF0340	1428751.13	548197.56	109.1
Cypress Creek	3NL1380	1428672.25	516768.66	62.0
Cypress Creek	3ND0200	1428889.50	556649.56	116.2
Cypress Creek	3NE0760	1428891.25	532073.94	64.9
Cypress Creek	3NE1260	1428896.00	538541.25	70.5
Cypress Creek	3ND0180	1428985.38	556645.37	116.2
Cypress Creek	3NE0800	1428996.75	530496.19	62.7
Cypress Creek	3NL1240	1427752.50	512154.87	74.8
Cypress Creek	3NL1260	1429002.00	512715.25	69.0
Cypress Creek	3NE0820	1429050.75	529659.69	62.4
Cypress Creek	3NE0640	1429085.25	531445.38	64.9
Cypress Creek	3NF0460	1429118.00	543269.88	73.1
Cypress Creek	3NE0580	1429133.88	533260.44	70.0
Cypress Creek	3NE0740	1429252.25	532317.13	65.4
Cypress Creek	3NE0840	1429273.38	528368.00	62.2
Cypress Creek	3NL1360	1429348.12	517650.91	58.5
Cypress Creek	3NE0560	1429392.13	533952.75	70.0
Cypress Creek	3NE3280	1422099.75	536386.06	73.7
Cypress Creek	3NE4100	1422111.25	526982.44	58.4
Cypress Creek	3NE3440	1422113.37	534557.63	72.9
Cypress Creek	3NH0180	1422119.87	509576.34	73.7
Cypress Creek	3NH0215	1422089.50	512460.44	75.7
Cypress Creek	3NH0218	1422080.75	512295.53	74.4
Cypress Creek	3ND0800	1422194.63	556215.63	96.2
Cypress Creek	3NR2060	1420648.37	555499.06	94.9
Cypress Creek	3ND0870	1422202.25	553761.19	95.7
Cypress Creek	3ND0910	1422213.00	553882.13	93.1
Cypress Creek	3ND0890	1422207.88	554182.50	100.0
Cypress Creek	3NH0203	1422290.00	510982.59	75.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL1865	1422309.87	513266.09	75.0
Cypress Creek	3ND0850	1422155.88	553262.44	92.4
Cypress Creek	3ND0930	1422374.13	553520.75	91.2
Cypress Creek	3NE3560	1422416.25	533365.19	68.5
Cypress Creek	3NE2060	1422489.75	538272.12	81.8
Cypress Creek	3NE1580	1422192.88	539845.31	85.9
Cypress Creek	3NE2040	1422306.50	538777.00	81.8
Cypress Creek	3NE2020	1422497.50	538901.12	82.1
Cypress Creek	3NL1660	1422414.50	515996.28	68.9
Cypress Creek	3NL1680	1422502.00	516203.84	64.4
Cypress Creek	3NH0160	1422526.12	508247.72	74.3
Cypress Creek	3ND1060	1422537.75	551945.63	89.3
Cypress Creek	3NE3420	1422546.00	534560.19	74.1
Cypress Creek	3NE3640	1422546.25	531793.50	65.7
Cypress Creek	3NE3260	1422548.13	536284.44	74.6
Cypress Creek	3NL1740	1422609.75	516371.88	59.0
Cypress Creek	3NE3400	1422660.75	535194.75	76.1
Cypress Creek	3NE1600	1422652.88	540946.00	85.7
Cypress Creek	3NH0212	1422672.75	512121.25	74.4
Cypress Creek	3NH0196	1422832.50	510999.94	75.3
Cypress Creek	3ND1140	1422743.50	550315.75	89.3
Cypress Creek	3ND1080	1422845.25	550572.81	87.9
Cypress Creek	3ND0960	1422911.75	553022.12	90.6
Cypress Creek	3ND0780	1422928.87	556936.25	98.3
Cypress Creek	3ND0940	1422939.00	553114.25	91.2
Cypress Creek	3NE2260	1422983.38	537143.81	75.5
Cypress Creek	3NE3540	1423012.13	533289.31	68.5
Cypress Creek	3ND1160	1423106.37	550444.88	86.6
Cypress Creek	3NL1590	1423015.13	512470.94	75.1
Cypress Creek	3NL1600	1423184.38	513013.63	72.9
Cypress Creek	3NH0200	1423193.75	511730.56	75.3
Cypress Creek	3NL1760	1423203.38	517604.47	58.4
Cypress Creek	3NH0140	1423214.50	507865.59	76.3
Cypress Creek	3NH0190	1423235.75	511469.03	75.3
Cypress Creek	3ND1120	1423269.25	551046.75	90.2
Cypress Creek	3ND0920	1423366.13	555065.19	91.6
Cypress Creek	3NH0193	1423360.63	510973.44	77.0
Cypress Creek	3NL1720	1423389.50	516327.38	68.4
Cypress Creek	3NL2100	1423399.50	519089.56	58.4
Cypress Creek	3NL2080	1421133.87	520825.66	59.2
Cypress Creek	3NH0185	1423401.50	511820.81	75.6
Cypress Creek	3ND0880	1423406.38	555143.44	93.0
Cypress Creek	3ND0760	1423431.87	557907.19	103.6
Cypress Creek	3ND0840	1423491.50	556306.87	93.0
Cypress Creek	3NB0300	1432881.63	576133.94	137.6
Cypress Creek	3NB0320	1432627.37	574938.75	112.1
Cypress Creek	3NE0400	1432897.38	526143.94	61.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NG0420	1432933.37	560961.19	120.0
Cypress Creek	3NE0040	1433063.50	531049.81	66.4
Cypress Creek	3NG0240	1433069.25	565982.37	111.4
Cypress Creek	3NF1240	1433091.75	534688.63	70.1
Cypress Creek	3ND0010	1433098.37	553793.50	123.4
Cypress Creek	3NL0790	1433111.87	510948.66	73.4
Cypress Creek	3NG0520	1433194.13	562913.38	112.6
Cypress Creek	3NG0540	1433189.75	563001.12	109.0
Cypress Creek	3NL0560	1433250.63	518342.81	64.8
Cypress Creek	3NL0520	1433349.50	516504.63	72.7
Cypress Creek	3NL0800	1433359.50	511460.13	73.4
Cypress Creek	3NF0180	1433455.62	550609.06	84.0
Cypress Creek	3NF0020	1433237.38	551220.12	92.2
Cypress Creek	3NF0920	1433497.00	536719.25	70.2
Cypress Creek	3NE0860	1433506.37	540842.38	72.3
Cypress Creek	3NE0030	1433331.38	529661.31	70.3
Cypress Creek	3NL0540	1433653.87	517764.31	68.3
Cypress Creek	3NB0180	1433682.12	578052.56	150.4
Cypress Creek	3NL0100	1433710.75	521826.31	58.8
Cypress Creek	3NF1200	1433724.13	534835.50	69.4
Cypress Creek	3NF1180	1433148.88	535321.00	70.6
Cypress Creek	3NG0260	1433767.25	565017.88	109.2
Cypress Creek	3NF0200	1433773.25	549039.63	83.1
Cypress Creek	3NF0220	1433800.75	548873.94	78.9
Cypress Creek	3NL0785	1433829.38	510536.37	76.5
Cypress Creek	3NF0230	1432151.75	548072.31	84.7
Cypress Creek	3NF0240	1433811.50	547071.44	76.1
Cypress Creek	3NB0280	1433928.62	577051.75	149.0
Cypress Creek	3NF0880	1433967.50	537901.81	70.3
Cypress Creek	3NB0260	1433991.63	577182.25	150.6
Cypress Creek	3NL0020	1434078.75	524355.25	60.3
Cypress Creek	3NL0500	1434117.87	516511.69	76.0
Cypress Creek	3NF0760	1434119.50	540596.19	72.9
Cypress Creek	3NL0480	1434149.63	517723.84	69.9
Cypress Creek	3NJ2945	1434196.75	524432.69	62.9
Cypress Creek	3NB0340	1434174.25	566609.69	116.1
Cypress Creek	3NF0700	1434244.37	541698.31	73.1
Cypress Creek	3NF0780	1434256.12	540548.31	72.8
Cypress Creek	3NG0340	1434363.75	564197.56	109.1
Cypress Creek	3NF0720	1434398.75	541697.12	73.1
Cypress Creek	3NJ2820	1434409.50	530682.19	66.4
Cypress Creek	3NB0160	1434420.25	579035.38	155.2
Cypress Creek	3NB0140	1434468.75	579125.06	155.2
Cypress Creek	3NG0940	1434541.75	553187.37	100.5
Cypress Creek	3NL0080	1434207.13	519041.00	67.4
Cypress Creek	3NL0160	1434561.38	512293.72	74.9
Cypress Creek	3NL0180	1434110.50	513503.56	74.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL0300	1434614.25	516478.75	75.3
Cypress Creek	3NL0460	1434654.25	517643.69	69.9
Cypress Creek	3NF1260	1434677.88	534071.88	68.8
Cypress Creek	3NL0280	1434719.75	516310.34	75.7
Cypress Creek	3NF0790	1434739.75	540376.31	71.4
Cypress Creek	3NF0730	1434748.37	541721.81	71.5
Cypress Creek	3NK0120	1454102.50	527117.00	76.7
Cypress Creek	3NJ0480	1454167.38	536055.88	78.1
Cypress Creek	3ND0500C	1454180.50	519606.84	75.9
Cypress Creek	3NC0720	1454495.38	540995.75	81.1
Cypress Creek	3NC0680	1454559.63	541114.63	83.1
Cypress Creek	3NC0700	1452833.13	541400.63	92.4
Cypress Creek	3NC0545	1454567.00	549922.44	91.0
Cypress Creek	3NJ0360	1454583.50	537025.94	78.7
Cypress Creek	3NJ0380	1454655.88	536544.94	78.5
Cypress Creek	3NK0460	1454781.00	525214.75	76.7
Cypress Creek	3NJ0420	1454793.37	535788.31	78.3
Cypress Creek	3NA1325	1454859.00	564198.13	118.1
Cypress Creek	3NA1340	1454793.12	563285.88	109.1
Cypress Creek	3NJ0520	1454905.38	535645.06	78.2
Cypress Creek	3NB2160	1455108.00	566699.38	134.1
Cypress Creek	3NA1810	1452941.38	552120.44	96.1
Cypress Creek	3NA1800	1455120.75	552203.56	93.8
Cypress Creek	3NA1335	1455127.25	563885.94	120.5
Cypress Creek	3NA1820	1455149.00	551896.25	93.3
Cypress Creek	3NA1315	1455150.88	564684.12	138.3
Cypress Creek	3NA1360	1455162.75	561663.69	102.1
Cypress Creek	3NJ0400	1455195.13	535957.31	78.3
Cypress Creek	3NA1370	1455225.38	561638.88	102.1
Cypress Creek	3NJ0320	1455332.50	538586.37	79.4
Cypress Creek	3NJ1840	1455394.25	531597.50	76.5
Cypress Creek	3NJ0340	1455402.00	537354.88	78.4
Cypress Creek	3NC0580	1455406.75	544950.87	83.1
Cypress Creek	3NC0575	1451740.25	546420.69	83.4
Cypress Creek	3ND0670C	1460543.63	516048.31	75.5
Cypress Creek	3NI1870	1463817.00	546271.00	90.7
Cypress Creek	3NI1660	1464042.00	548748.06	87.4
Cypress Creek	3ND0715C	1464042.25	515105.91	75.1
Cypress Creek	3NI1640	1464047.25	548888.69	87.5
Cypress Creek	3NA0610	1464122.25	563275.19	131.9
Cypress Creek	3NI1830	1464127.75	547131.37	88.0
Cypress Creek	3NI1620	1464130.12	549319.69	87.9
Cypress Creek	3NI1600	1462470.62	550316.56	91.3
Cypress Creek	3NJ0760	1464170.38	540344.44	104.7
Cypress Creek	3NA0600	1464218.25	563239.69	134.4
Cypress Creek	3NI1575	1464235.00	548148.69	88.8
Cypress Creek	3NJ0780	1464246.38	540347.94	103.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NI1580	1464250.50	549349.75	88.5
Cypress Creek	3NA0260	1464276.75	560615.63	114.8
Cypress Creek	3NA0280	1464266.50	560422.25	113.6
Cypress Creek	3NI1820	1464279.37	547123.94	88.8
Cypress Creek	3NX0100C	1464325.50	528207.81	77.2
Cypress Creek	3NX0210C	1464384.63	523300.06	77.2
Cypress Creek	3NJ0860	1464404.63	537796.88	85.1
Cypress Creek	3NA0290	1464333.75	559258.25	102.9
Cypress Creek	3NX0260C	1464515.88	521639.41	77.1
Cypress Creek	3NJ0940	1464528.88	534686.69	77.5
Cypress Creek	3NJ1360	1464542.50	530580.63	77.4
Cypress Creek	3NA0300	1464569.50	557293.37	102.9
Cypress Creek	3NA0240	1464844.50	561248.81	128.7
Cypress Creek	3NA0110	1464831.88	558054.81	102.9
Cypress Creek	3NJ0800	1464858.00	540428.69	101.4
Cypress Creek	3NI1555	1465079.13	548666.38	88.9
Cypress Creek	3NI1800	1464997.50	544677.63	105.2
Cypress Creek	3NA0220	1465203.13	561820.31	142.4
Cypress Creek	3NJ1120	1465213.00	534602.81	77.5
Cypress Creek	3NA2003C	1465261.75	520828.91	75.9
Cypress Creek	3NJ0740	1465300.63	540948.81	106.7
Cypress Creek	3NI1560	1465300.88	549608.38	88.8
Cypress Creek	3NA0520	1465317.00	566025.19	119.1
Cypress Creek	3NJ0720	1465328.00	541028.88	113.3
Cypress Creek	3NA0200	1465349.13	562009.63	144.7
Cypress Creek	3NJ0820	1465352.63	539913.25	99.0
Cypress Creek	3NI1540	1465444.87	550330.69	88.7
Cypress Creek	3NI1535	1464749.88	551087.44	94.2
Cypress Creek	3NJ1000	1465513.63	535621.25	77.5
Cypress Creek	3NJ0840	1465540.25	539091.62	95.2
Cypress Creek	3NJ0710	1465629.00	541152.38	121.2
Cypress Creek	3NI1550	1465658.50	548202.00	88.9
Cypress Creek	3NJ0980	1465668.63	537362.75	82.2
Cypress Creek	3NA0105	1465778.87	559409.26	111.3
Cypress Creek	3NJ0700	1465813.88	539097.63	95.5
Cypress Creek	3NJ0680	1465885.25	539170.50	95.5
Cypress Creek	3NJ1100	1465894.13	534949.94	77.5
Cypress Creek	3NA0180	1466075.62	561938.88	160.7
Cypress Creek	3NX0200C	1466096.50	527641.25	77.2
Cypress Creek	3NA0160	1466176.38	561980.50	165.8
Cypress Creek	3NJ1140	1466189.88	534505.19	77.5
Cypress Creek	3NJ1380	1466202.13	531630.00	77.4
Cypress Creek	3NA2005C	1466385.63	517479.50	75.9
Cypress Creek	3NJ0660	1466453.25	539153.75	97.2
Cypress Creek	3NX0270C	1466466.25	522309.34	77.1
Cypress Creek	3NI1520	1466497.25	550879.44	90.0
Cypress Creek	3NI1500	1466556.88	550954.13	90.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NA0100	1466567.25	560326.44	131.7
Cypress Creek	3NA0080	1466701.50	560410.00	136.2
Cypress Creek	3NA0500	1466705.88	565624.25	120.6
Cypress Creek	3NA0480	1466715.75	565797.94	124.7
Cypress Creek	3NI1420	1466755.25	553543.63	116.5
Cypress Creek	3NI1440	1466762.00	553260.88	110.4
Cypress Creek	3NI1760	1466777.38	546538.81	96.4
Cypress Creek	3NA0140	1466809.63	562377.25	189.5
Cypress Creek	3NI1460	1466829.13	552523.94	97.8
Cypress Creek	3NI1480	1466829.75	552394.94	97.4
Cypress Creek	3NI1400	1466884.13	549700.88	90.0
Cypress Creek	3NJ0640	1466895.00	539246.81	97.4
Cypress Creek	3NJ1340	1466905.50	530464.19	77.3
Cypress Creek	3NA0120	1466926.25	562417.81	193.4
Cypress Creek	3NA0460	1467012.88	567149.56	160.7
Cypress Creek	3NA0440	1467056.75	567376.88	174.5
Cypress Creek	3NI1380	1467094.87	550512.75	90.0
Cypress Creek	3NJ0600	1467119.88	540939.81	108.0
Cypress Creek	3NJ0580	1467119.88	541023.69	113.8
Cypress Creek	3NJ0530	1466106.87	541137.06	121.5
Cypress Creek	3NJ0550	1466415.25	541128.25	118.9
Cypress Creek	3NJ0570	1466643.63	541261.25	114.0
Cypress Creek	3NJ0620	1467173.63	539003.81	98.8
Cypress Creek	3NI1710	1465980.50	542591.44	120.3
Cypress Creek	3NE0720	1428620.38	533034.38	71.5
Cypress Creek	3NL1340	1429392.00	516450.69	62.2
Cypress Creek	3NE1240	1429481.38	539110.50	70.9
Cypress Creek	3NE0460	1429605.13	528368.19	62.2
Cypress Creek	3ND0015	1429641.63	557570.38	117.9
Cypress Creek	3ND0670	1429679.25	552337.44	116.2
Cypress Creek	3ND0675	1429689.25	552311.81	112.8
Cypress Creek	3NE0650	1429706.25	531562.63	65.1
Cypress Creek	3NE1220	1429711.50	539671.69	71.6
Cypress Creek	3NE0730	1429741.13	532663.25	65.5
Cypress Creek	3ND0610	1429758.50	551343.81	103.3
Cypress Creek	3ND0655	1429774.25	552475.94	116.2
Cypress Creek	3ND0630	1429780.50	551758.50	115.3
Cypress Creek	3NF0260	1429687.75	547521.19	89.2
Cypress Creek	3NF0280	1429798.25	546203.88	76.7
Cypress Creek	3NE0700	1429803.00	529973.63	63.6
Cypress Creek	3NB0080	1429803.63	571066.87	111.7
Cypress Creek	3NE0670	1429828.00	530082.19	63.6
Cypress Creek	3NE1200	1429853.75	538491.50	70.5
Cypress Creek	3NB0060	1428723.37	571362.31	117.3
Cypress Creek	3NL1300	1429896.00	514971.97	67.0
Cypress Creek	3NL1280	1426356.50	515454.44	67.0
Cypress Creek	3NE0680	1429907.13	529766.56	63.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3ND0040	1429922.13	556293.87	117.8
Cypress Creek	3ND0025	1429899.50	556769.19	120.6
Cypress Creek	3ND0645	1429922.50	553024.37	116.3
Cypress Creek	3NE0660	1429942.25	531544.62	65.2
Cypress Creek	3NL0740	1429958.50	525823.25	62.0
Cypress Creek	3ND0036	1429960.00	555893.63	120.1
Cypress Creek	3NF0560	1429697.63	542291.38	73.2
Cypress Creek	3NF0580	1429980.62	542319.69	73.0
Cypress Creek	3NE0600	1430027.50	532992.00	67.8
Cypress Creek	3NE0610	1430031.00	532901.69	67.8
Cypress Creek	3NE0630	1430037.63	532239.44	66.9
Cypress Creek	3NL0720	1430059.25	521801.31	58.5
Cypress Creek	3NE0540	1430091.88	534497.62	70.1
Cypress Creek	3NF0500	1430098.38	540487.50	72.3
Cypress Creek	3NF0520	1430089.75	541054.56	73.1
Cypress Creek	3NF0480	1430133.13	540373.12	72.2
Cypress Creek	3NL0900	1430141.25	511426.66	75.1
Cypress Creek	3NE1320	1430260.13	536992.81	70.5
Cypress Creek	3NE0090	1430260.38	532919.00	67.5
Cypress Creek	3NF0540	1430298.25	541567.69	73.1
Cypress Creek	3NE0620	1430360.38	532470.63	66.9
Cypress Creek	3NE0440	1430391.25	528022.38	62.3
Cypress Creek	3ND0046	1430395.00	554430.06	108.8
Cypress Creek	3NL1320	1430422.50	516692.50	68.9
Cypress Creek	3NE0080	1430543.00	533466.75	67.8
Cypress Creek	3NE0500	1430569.00	535883.94	70.1
Cypress Creek	3NE0520	1430635.25	535596.50	70.1
Cypress Creek	3NE0320	1430662.87	530776.69	63.7
Cypress Creek	3NE0340	1430581.75	530468.44	63.7
Cypress Creek	3ND0043	1430710.13	554534.38	116.4
Cypress Creek	3NL0940	1430766.13	513102.41	72.2
Cypress Creek	3NE0360	1430806.87	530011.63	63.8
Cypress Creek	3NE0100	1430846.00	532750.56	66.9
Cypress Creek	3NF0620	1430906.13	543460.88	71.7
Cypress Creek	3NE0120	1430927.50	532726.25	66.9
Cypress Creek	3NF0600	1430932.00	542080.81	72.5
Cypress Creek	3NE1120	1430932.75	539359.44	71.8
Cypress Creek	3NE0380	1431018.38	529001.31	62.8
Cypress Creek	3NE0060	1431050.63	533693.06	69.4
Cypress Creek	3NE1060	1431058.25	539840.94	71.8
Cypress Creek	3ND0033	1431078.50	555567.56	124.9
Cypress Creek	3NE0180	1431083.75	531782.50	66.9
Cypress Creek	3NE1160	1431105.00	538579.00	71.6
Cypress Creek	3NF0116	1429792.25	550731.87	98.6
Cypress Creek	3NF0120	1431117.50	550995.44	90.8
Cypress Creek	3NF0113	1431035.88	551691.44	102.7
Cypress Creek	3NE1180	1431120.13	537867.38	70.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NF0300	1431161.00	545102.63	76.5
Cypress Creek	3NL0780	1431162.88	516978.47	68.8
Cypress Creek	3NL0775	1431202.50	516879.25	71.6
Cypress Creek	3NL0920	1431206.63	512958.31	73.4
Cypress Creek	3NE0200	1431245.50	531775.13	66.9
Cypress Creek	3NE1000	1431270.38	540790.13	72.0
Cypress Creek	3NE1020	1431270.75	540577.44	72.0
Cypress Creek	3NE0300	1431420.38	530703.75	64.7
Cypress Creek	3NE0280	1431428.25	530817.06	64.7
Cypress Creek	3NF0060	1431462.12	553151.25	114.5
Cypress Creek	3NF0080	1431464.87	553026.81	111.6
Cypress Creek	3NF0110	1431511.63	551826.31	111.1
Cypress Creek	3NF0100	1431516.00	552479.31	111.2
Cypress Creek	3NF0090	1431322.12	552805.63	114.6
Cypress Creek	3NE0980	1431551.00	540996.31	72.0
Cypress Creek	3NE0260	1431624.50	531210.00	65.6
Cypress Creek	3NE0240	1431664.62	531282.56	65.7
Cypress Creek	3NE0420	1431671.13	527042.50	62.2
Cypress Creek	3NE0480	1431711.63	536064.19	70.4
Cypress Creek	3NE1100	1431737.00	539492.25	71.8
Cypress Creek	3NG0280	1431740.75	565195.50	110.8
Cypress Creek	3BNDY23	1429802.75	564067.06	106.0
Cypress Creek	3NF1280	1431745.63	534876.88	70.1
Cypress Creek	3NL0700	1431772.38	521085.50	58.5
Cypress Creek	3NE0920	1431797.87	538458.88	71.6
Cypress Creek	3NF0640	1431814.87	542508.69	72.5
Cypress Creek	3ND0005	1431858.25	557531.88	128.3
Cypress Creek	3NE0220	1431878.25	531729.31	66.4
Cypress Creek	3NE1040	1431848.13	540495.69	71.8
Cypress Creek	3NF0320	1431958.62	544945.19	74.7
Cypress Creek	3NF0040	1431962.37	552577.69	110.4
Cypress Creek	3NL0680	1431844.88	517588.66	70.6
Cypress Creek	3NL0660	1431976.12	517345.50	70.6
Cypress Creek	3NL0040	1432016.25	523161.75	58.8
Cypress Creek	3NL0960	1432026.13	514136.44	71.4
Cypress Creek	3NE0960	1432053.25	540997.50	72.0
Cypress Creek	3NL0980	1432052.38	515016.59	70.9
Cypress Creek	3NF1300	1432083.88	532620.44	67.0
Cypress Creek	3NB0220	1432111.87	577062.06	140.8
Cypress Creek	3NB0240	1431256.63	574407.88	115.6
Cypress Creek	3NL0845	1431243.75	510065.84	75.3
Cypress Creek	3NL0860	1431932.88	510725.25	74.5
Cypress Creek	3NB0200	1432151.00	577175.69	140.9
Cypress Creek	3NE0950	1432152.50	540997.50	72.0
Cypress Creek	3NL0850	1430629.13	509289.94	76.6
Cypress Creek	3NF0140	1430879.12	549385.56	110.3
Cypress Creek	3NF0160	1432208.88	550376.75	90.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NF0680	1432387.13	544011.50	71.6
Cypress Creek	3NB0250	1432401.88	572815.00	111.6
Cypress Creek	3NL0640	1432454.62	516322.75	72.8
Cypress Creek	3NF0660	1432463.87	542381.38	72.2
Cypress Creek	3NF0900	1432500.13	536181.88	70.4
Cypress Creek	3NG0300	1432506.75	564747.00	109.2
Cypress Creek	3NE0940	1432513.00	541016.19	72.0
Cypress Creek	3NL0840	1432526.25	511850.31	73.4
Cypress Creek	3NG0320	1432562.63	564162.75	109.2
Cypress Creek	3NF1220	1432569.50	534962.00	70.7
Cypress Creek	3NE0020	1432594.00	532446.69	66.8
Cypress Creek	3NE0900	1432655.38	539635.38	71.7
Cypress Creek	3NF1320	1432675.38	532607.50	67.0
Cypress Creek	3NL0855	1432684.75	511553.53	73.4
Cypress Creek	3BNDY24	1431606.13	560937.63	111.2
Cypress Creek	3NG0510	1432810.00	561010.56	113.0
Cypress Creek	3NL0820	1432663.50	513012.84	74.3
Cypress Creek	3NB0350	1432393.63	566789.12	111.7
Cypress Creek	3NL0600	1432825.75	517899.41	69.1
Cypress Creek	3NE0880	1432845.00	540131.00	72.3
Cypress Creek	3ND0020	1432853.13	554902.31	123.7
Cypress Creek	3NL0580	1432778.50	517357.94	71.6
Cypress Creek	3NG0440	1434781.50	561005.69	118.8
Cypress Creek	3NG0460	1434802.38	561094.69	114.8
Cypress Creek	3NB0120	1434840.37	579378.00	156.7
Cypress Creek	3NG0560	1434850.63	563033.56	106.6
Cypress Creek	3NG0220	1434857.38	565081.13	111.7
Cypress Creek	3NF1120	1434861.25	532555.50	68.8
Cypress Creek	3NG0480	1434870.50	561678.44	114.1
Cypress Creek	3NG0360	1434913.87	563763.38	106.3
Cypress Creek	3NG0580	1434917.37	562981.00	110.1
Cypress Creek	3NB0100	1434918.37	579412.06	156.7
Cypress Creek	3NG0600	1434922.87	563639.38	106.3
Cypress Creek	3NG0920	1434962.38	551837.56	100.5
Cypress Creek	3NG0660	1434967.25	561704.62	112.8
Cypress Creek	3NB0330	1434999.13	573651.38	111.6
Cypress Creek	3NG0620	1435015.88	563643.63	105.5
Cypress Creek	3NL0440	1435101.62	517756.84	72.7
Cypress Creek	3NF1160	1435161.13	535204.69	69.3
Cypress Creek	3NB0370	1435181.25	571496.13	111.6
Cypress Creek	3NL0140	1435148.63	512249.63	78.0
Cypress Creek	3NL0060	1435183.00	522319.59	59.2
Cypress Creek	3NL0110	1435256.25	519378.16	65.0
Cypress Creek	3NF0860	1434903.87	539546.19	72.6
Cypress Creek	3NF0865	1435284.38	538732.19	70.2
Cypress Creek	3NJ2840	1435448.63	529750.88	66.3
Cypress Creek	3NJ2860	1435286.13	528989.69	65.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NL0420	1435513.13	517312.50	74.5
Cypress Creek	3NB0380	1435570.75	570096.44	111.6
Cypress Creek	3NF0740	1435589.12	543269.31	71.5
Cypress Creek	3NL0400	1435610.50	517147.84	74.5
Cypress Creek	3NG0680	1435692.38	562895.69	107.0
Cypress Creek	3NG1220	1435694.13	551301.75	97.4
Cypress Creek	3NG1240	1435512.88	551045.81	84.3
Cypress Creek	3NF1140	1435795.62	533983.37	68.8
Cypress Creek	3NL0360	1435808.00	518152.97	72.8
Cypress Creek	3NG0640	1435865.50	563529.50	104.2
Cypress Creek	3NG1420	1435948.25	547722.44	85.2
Cypress Creek	3NL0260	1435959.38	515170.25	73.7
Cypress Creek	3NL0240	1434327.50	515343.84	76.1
Cypress Creek	3NL0200	1435652.88	513628.34	73.0
Cypress Creek	3NJ2900	1436142.37	528071.56	65.1
Cypress Creek	3NG0960	1436201.50	553697.31	100.5
Cypress Creek	3NF0940	1436205.38	536155.00	69.6
Cypress Creek	3NF0840	1436211.37	539114.94	71.5
Cypress Creek	3NB0460	1436243.25	575671.44	124.5
Cypress Creek	3NL0380	1436294.00	516484.75	74.5
Cypress Creek	3NJ2800	1436298.88	531162.75	66.8
Cypress Creek	3NK2700	1436313.88	517439.16	74.0
Cypress Creek	3NB0440	1436436.25	577076.94	149.9
Cypress Creek	3NB0430	1436463.63	577182.56	150.2
Cypress Creek	3NG1260	1436538.37	549534.75	81.6
Cypress Creek	3NL0120	1436540.25	512257.16	77.6
Cypress Creek	3NL0340	1436594.50	518854.00	72.1
Cypress Creek	3NB0360	1436647.13	567275.25	123.7
Cypress Creek	3NG1440	1436714.75	546751.69	75.8
Cypress Creek	3NJ2780	1436756.00	530343.25	66.4
Cypress Creek	3NJ2880	1436766.25	529110.25	65.1
Cypress Creek	3NL0320	1436773.38	518626.66	72.2
Cypress Creek	3NG0890	1435681.38	556878.50	101.7
Cypress Creek	3NG0900	1436882.37	555985.94	100.5
Cypress Creek	3NG1280	1436891.50	549532.31	81.6
Cypress Creek	3NK2710	1436920.13	518100.72	73.5
Cypress Creek	3NJ2760	1436939.62	531358.19	68.2
Cypress Creek	3NB0420	1436987.13	578299.81	168.4
Cypress Creek	3NB0400	1436999.63	578395.06	173.1
Cypress Creek	3NB0480	1437042.87	573330.19	111.6
Cypress Creek	3NF1100	1437220.00	532255.63	68.7
Cypress Creek	3NJ2920	1437234.25	527956.25	65.1
Cypress Creek	3NL0220	1437285.63	514017.28	75.9
Cypress Creek	3NG1180	1437294.50	550418.44	81.9
Cypress Creek	3NK2610	1437238.62	516045.16	76.6
Cypress Creek	3NF0800	1437375.62	541377.69	71.4
Cypress Creek	3NG1160	1437407.75	550477.75	83.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK2600	1437440.63	515554.41	76.0
Cypress Creek	3NF1075	1437677.63	535550.56	69.6
Cypress Creek	3NG1200	1437696.00	549555.19	81.6
Cypress Creek	3NF1080	1437738.63	534488.56	68.8
Cypress Creek	3NG1460	1437890.50	543695.38	71.4
Cypress Creek	3NG1300	1437960.50	548395.69	80.3
Cypress Creek	3NG1320	1438072.88	548426.62	79.7
Cypress Creek	3NK2520	1438253.00	514913.81	76.4
Cypress Creek	3NK2540	1438246.13	514995.25	76.1
Cypress Creek	3NJ2720	1438282.63	531180.19	69.0
Cypress Creek	3NK2620	1438332.00	516538.25	76.0
Cypress Creek	3NG1380	1438352.00	547773.06	76.6
Cypress Creek	3NG1400	1438349.62	547701.44	73.9
Cypress Creek	3NK2640	1438353.62	517004.59	73.5
Cypress Creek	3NK2660	1438365.50	517388.53	72.6
Cypress Creek	3NK2780	1438395.25	519704.94	70.6
Cypress Creek	3NK2800	1438362.37	519768.09	65.1
Cypress Creek	3NK2760	1438397.63	519468.13	71.5
Cypress Creek	3NK2740	1438420.75	519401.34	71.6
Cypress Creek	3NG1340	1438430.50	548229.25	79.5
Cypress Creek	3NJ2730	1438452.00	530383.37	68.9
Cypress Creek	3NJ2740	1438144.88	529835.44	68.8
Cypress Creek	3NG1360	1438471.50	548110.06	77.7
Cypress Creek	3NG1140	1438471.50	551306.13	87.4
Cypress Creek	3NG1060	1438503.00	551530.06	87.7
Cypress Creek	3NJ2940	1438619.00	525490.12	65.1
Cypress Creek	3NG0980	1438762.37	555873.56	100.5
Cypress Creek	3NG0975	1437680.25	557287.62	104.0
Cypress Creek	3NG0060	1438233.75	567673.44	113.0
Cypress Creek	3NG0080	1438740.25	567073.00	113.0
Cypress Creek	3NF1055	1438807.00	537690.38	70.3
Cypress Creek	3NF0820	1438821.88	538766.69	70.1
Cypress Creek	3NB0500	1438860.50	573190.87	111.5
Cypress Creek	3NK2480	1438894.25	510463.47	77.5
Cypress Creek	3NY0100C	1438207.12	509951.69	76.7
Cypress Creek	3NY0110C	1438929.13	509647.31	76.7
Cypress Creek	3NG0700	1438953.38	561573.44	104.2
Cypress Creek	3NB0520	1438959.00	573200.31	110.5
Cypress Creek	3NG0100	1439021.50	567041.75	113.0
Cypress Creek	3NJ2700	1439133.63	530867.81	69.2
Cypress Creek	3NF1060	1439180.00	534101.69	70.1
Cypress Creek	3NG3260	1439194.50	545898.69	71.6
Cypress Creek	3NK2500	1439329.12	512980.50	76.7
Cypress Creek	3NJ2680	1439385.25	529075.19	65.1
Cypress Creek	3NG1020	1439420.00	554857.94	98.2
Cypress Creek	3NG0720	1439485.75	558693.44	103.8
Cypress Creek	3NG0740	1439549.00	558369.06	102.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NF1040	1439559.25	531832.81	70.1
Cypress Creek	3NG0760	1439568.13	558289.44	101.0
Cypress Creek	3NF1020	1439784.38	537167.06	70.8
Cypress Creek	3NB0970	1439888.88	572902.75	108.8
Cypress Creek	3NB0980	1439953.75	572743.00	108.8
Cypress Creek	3NG0840	1439986.12	557071.06	100.5
Cypress Creek	3NK2000	1439989.25	514857.13	76.3
Cypress Creek	3NB1000	1440019.25	572642.69	108.8
Cypress Creek	3NG3240	1440037.50	547885.88	80.2
Cypress Creek	3NK2040	1440044.38	516184.47	75.9
Cypress Creek	3NG0120	1440072.25	567371.94	109.7
Cypress Creek	3NG1040	1440088.75	553068.56	90.9
Cypress Creek	3NG3220	1440124.63	547982.69	80.3
Cypress Creek	3NG1120	1439945.00	550002.38	88.9
Cypress Creek	3NY0430C	1440146.62	509321.69	77.3
Cypress Creek	3NB0760	1440246.88	577091.19	187.4
Cypress Creek	3NB0780	1440242.13	575848.75	177.3
Cypress Creek	3NB0800	1440261.50	575754.75	175.3
Cypress Creek	3NK2360	1440259.63	519599.72	70.7
Cypress Creek	3NK2380	1440262.50	519875.75	70.5
Cypress Creek	3NB0900	1440261.75	573579.63	113.4
Cypress Creek	3NB0910	1440264.13	573436.56	113.3
Cypress Creek	3NB0880	1440273.00	573664.81	116.6
Cypress Creek	3NB0740	1440282.88	577253.88	191.3
Cypress Creek	3NB0960	1440295.13	573105.44	110.3
Cypress Creek	3NG0820	1440316.25	557696.00	100.5
Cypress Creek	3NK2340	1440343.37	519298.41	72.9
Cypress Creek	3NY0440C	1440373.13	507955.47	76.8
Cypress Creek	3NK2410	1440399.25	521585.22	68.2
Cypress Creek	3NG0880	1440436.00	556778.19	101.9
Cypress Creek	3NK2400	1440441.88	521508.16	68.5
Cypress Creek	3NG1100	1440493.75	550293.38	92.7
Cypress Creek	3NK2460	1440571.88	512150.37	76.7
Cypress Creek	3NK2020	1440580.88	515421.47	76.3
Cypress Creek	3NK1980	1440603.63	514127.47	76.3
Cypress Creek	3NB0860	1440654.37	574378.88	130.9
Cypress Creek	3NB0840	1440684.62	574535.56	133.0
Cypress Creek	3NB0820	1440670.63	574695.13	137.3
Cypress Creek	3NK1240	1440783.25	521824.31	68.3
Cypress Creek	3NK2280	1440898.00	519813.13	70.7
Cypress Creek	3NK2320	1440978.00	518041.91	73.1
Cypress Creek	3NF0960	1440541.38	536728.19	71.0
Cypress Creek	3NF0980	1440969.37	536033.19	70.8
Cypress Creek	3NK2260	1441003.50	519813.13	73.6
Cypress Creek	3NG0200	1441004.25	565647.87	104.2
Cypress Creek	3NG0160	1440983.50	566649.87	107.1
Cypress Creek	3NG1130	1441004.75	550472.06	90.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK2440	1441009.50	510872.00	77.0
Cypress Creek	3NG0140	1441017.88	566819.25	107.1
Cypress Creek	3NB0940	1441020.38	573308.13	113.7
Cypress Creek	3NJ2640	1441060.63	529742.00	65.2
Cypress Creek	3NB1390	1440042.75	570179.38	106.0
Cypress Creek	3NB1360	1441080.12	571277.69	106.1
Cypress Creek	3NG3200	1441105.13	548241.81	81.7
Cypress Creek	3NB0920	1441126.63	573322.63	114.9
Cypress Creek	3NB0580	1441132.50	576809.37	195.0
Cypress Creek	3NB0680	1441142.12	575352.38	163.7
Cypress Creek	3NB1380	1441145.50	571224.50	106.1
Cypress Creek	3NG3160	1441172.12	548733.56	88.4
Cypress Creek	3NB0600	1441189.13	576141.75	188.2
Cypress Creek	3NB0640	1441209.75	575658.00	176.8
Cypress Creek	3NG3180	1441209.88	548252.56	81.9
Cypress Creek	3NB0720	1441220.63	577440.87	198.9
Cypress Creek	3NB0660	1441225.38	575079.50	164.5
Cypress Creek	3NG0860	1441256.63	556937.94	105.2
Cypress Creek	3NG1080	1441262.63	552000.81	89.3
Cypress Creek	3NK1220	1441285.13	521920.69	74.2
Cypress Creek	3NK2300	1441308.37	517818.88	73.9
Cypress Creek	3NB0620	1441321.13	575907.88	184.4
Cypress Creek	3NK1960	1441410.75	513400.22	76.1
Cypress Creek	3NB0560	1441426.75	576766.00	195.1
Cypress Creek	3NB1180	1441509.88	574517.62	145.4
Cypress Creek	3NB1400	1441519.00	569759.00	106.0
Cypress Creek	3NB1340	1441612.63	572455.94	114.0
Cypress Creek	3NK1180	1441618.00	521227.56	74.3
Cypress Creek	3NJ2580	1441638.25	532441.81	68.7
Cypress Creek	3NJ2620	1441556.00	531422.94	69.6
Cypress Creek	3NB1320	1441666.37	572524.75	114.0
Cypress Creek	3NK2080	1441670.87	516189.72	75.9
Cypress Creek	3NG1150	1441685.38	550970.81	90.0
Cypress Creek	3NF1000	1441693.13	535160.50	70.8
Cypress Creek	3NJ2660	1441724.00	527214.56	65.2
Cypress Creek	3NG3280	1441736.88	541399.56	71.4
Cypress Creek	3NB0540	1441748.00	576282.00	193.5
Cypress Creek	3NK2100	1441745.25	517212.25	75.7
Cypress Creek	3NK2120	1441785.25	517313.75	75.2
Cypress Creek	3NJ2590	1441831.00	533334.87	69.7
Cypress Creek	3NG2400	1441622.00	555654.00	108.3
Cypress Creek	3NG2420	1441833.12	555101.31	102.0
Cypress Creek	3NB1240	1441899.13	573288.00	120.1
Cypress Creek	3NB1300	1441930.50	572870.37	120.1
Cypress Creek	3NG2440	1441933.75	554286.25	98.4
Cypress Creek	3NK1140	1441978.38	522989.62	70.8
Cypress Creek	3NK2240	1442011.13	519015.88	73.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK1120	1442029.75	522933.53	70.9
Cypress Creek	3NB1410	1442035.13	570157.25	106.0
Cypress Creek	3NK1200	1442072.25	521554.50	74.3
Cypress Creek	3NK2220	1442104.88	518946.44	74.6
Cypress Creek	3NK1160	1442113.88	521500.69	74.3
Cypress Creek	3NG2740	1442102.38	550218.37	98.0
Cypress Creek	3NB1200	1442136.50	574526.87	142.5
Cypress Creek	3NB1160	1442016.25	574716.44	155.6
Cypress Creek	3NB1120	1441752.63	575003.19	159.9
Cypress Creek	3NB1140	1442169.63	574910.00	144.3
Cypress Creek	3NB1130	1441960.75	575271.44	159.1
Cypress Creek	3NB1280	1442199.88	573017.12	120.1
Cypress Creek	3NG0800	1442215.00	557425.00	105.6
Cypress Creek	3NG0780	1441776.75	557975.19	107.4
Cypress Creek	3NB1100	1442108.75	575766.31	183.2
Cypress Creek	3NK1800	1442240.38	510614.88	76.1
Cypress Creek	3NK2140	1442299.12	517890.53	75.2
Cypress Creek	3NB1220	1442302.87	574547.94	141.2
Cypress Creek	3NK1060	1442378.25	522060.63	74.0
Cypress Creek	3NB1060	1442361.13	576073.81	191.9
Cypress Creek	3NK2160	1442390.50	517930.87	75.0
Cypress Creek	3NB1040	1442501.88	574806.62	156.9
Cypress Creek	3NB1260	1442552.38	572695.06	120.6
Cypress Creek	3NK1820	1442471.25	511821.94	76.0
Cypress Creek	3NK2200	1442583.00	518671.84	74.8
Cypress Creek	3NG2580	1442611.12	551838.69	89.4
Cypress Creek	3NB1080	1442668.75	575860.69	191.9
Cypress Creek	3NK2180	1442770.00	518061.34	74.9
Cypress Creek	3NB1020	1442733.13	575195.13	180.4
Cypress Creek	3NK1700	1442815.25	518638.16	74.8
Cypress Creek	3NK1080	1442856.13	522397.78	71.7
Cypress Creek	3NG0040	1442858.50	565571.63	104.7
Cypress Creek	3NK1940	1442869.75	517758.78	75.0
Cypress Creek	3NG2520	1442880.75	553316.81	92.4
Cypress Creek	3NG0020	1442926.13	565559.69	112.4
Cypress Creek	3NG3150	1442937.50	544020.63	71.7
Cypress Creek	3NG3140	1442456.37	547122.44	79.6
Cypress Creek	3NK1920	1442950.50	517702.31	75.6
Cypress Creek	3NG2700	1442952.50	550205.44	87.4
Cypress Creek	3NG2720	1442842.75	549503.50	85.8
Cypress Creek	3NB2480	1442965.50	561170.75	102.8
Cypress Creek	3NJ2520	1442516.63	534446.81	72.7
Cypress Creek	3NG3360	1442998.13	536894.75	71.3
Cypress Creek	3NG3120	1443023.13	546669.00	79.4
Cypress Creek	3NG2680	1443024.00	550043.75	86.0
Cypress Creek	3NG2670	1443057.37	550418.56	86.4
Cypress Creek	3NK1100	1443058.13	522577.81	71.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NB1420	1443147.37	569017.13	105.8
Cypress Creek	3NJ2540	1443174.50	534838.69	72.4
Cypress Creek	3NG2810	1442738.50	548841.88	85.0
Cypress Creek	3NG2820	1443181.25	548948.81	85.0
Cypress Creek	3NK1680	1443190.75	518547.62	74.8
Cypress Creek	3NK1780	1443206.50	510538.91	76.1
Cypress Creek	3NG2620	1443210.88	551042.06	87.8
Cypress Creek	3NJ2600	1443235.75	530158.94	65.5
Cypress Creek	3NK1660	1443300.12	518543.00	74.8
Cypress Creek	3NB2440	1443362.88	563815.69	110.1
Cypress Creek	3NB2420	1443118.12	564550.06	109.2
Cypress Creek	3NB2520	1443383.25	557667.81	104.5
Cypress Creek	3NB2540	1443216.00	558683.56	104.7
Cypress Creek	3NG2660	1443399.00	550202.62	88.4
Cypress Creek	3NG2880	1443459.87	547750.94	81.7
Cypress Creek	3NG2870	1442644.12	547989.19	83.5
Cypress Creek	3NG3110	1443468.75	545567.63	75.4
Cypress Creek	3NK1900	1443470.12	518077.09	75.6
Cypress Creek	3NG2790	1443472.75	548619.94	85.0
Cypress Creek	3NG2640	1443485.88	549820.38	88.9
Cypress Creek	3NG3100	1443567.13	545668.69	75.5
Cypress Creek	3NG2480	1443453.75	554404.56	96.4
Cypress Creek	3NK1880	1443457.37	515845.97	75.7
Cypress Creek	3NK1640	1443635.62	518759.09	74.8
Cypress Creek	3NJ2560	1443639.37	534295.31	71.6
Cypress Creek	3NK1620	1443738.13	519292.50	74.8
Cypress Creek	3NG2460	1443923.87	555011.06	99.5
Cypress Creek	3NG2800	1443933.37	549454.56	87.2
Cypress Creek	3NK1040	1443976.25	523247.41	72.1
Cypress Creek	3NK0880	1443991.00	526436.19	68.8
Cypress Creek	3NG2840	1444008.25	548720.25	84.2
Cypress Creek	3NG2860	1443983.88	548119.81	83.8
Cypress Creek	3NB2460	1444029.50	563164.62	108.4
Cypress Creek	3NK1600	1444036.75	519475.03	74.7
Cypress Creek	3NK1580	1444048.50	519562.16	74.7
Cypress Creek	3NG0145C	1444049.63	510524.19	76.4
Cypress Creek	3NK0860	1444086.75	526428.37	69.0
Cypress Creek	3NG0160C	1444098.50	507957.22	76.3
Cypress Creek	3NG2560	1444126.63	551979.44	89.6
Cypress Creek	3NJ2500	1444165.00	534300.69	71.8
Cypress Creek	3NK1560	1444160.75	519899.56	74.6
Cypress Creek	3NK1420	1444180.75	518778.19	74.8
Cypress Creek	3NG2780	1444194.13	550350.75	87.5
Cypress Creek	3NB2560	1444241.50	560279.00	102.8
Cypress Creek	3NG2770	1444293.25	550057.50	87.5
Cypress Creek	3NG2760	1444367.38	550934.63	87.8
Cypress Creek	3NK0640	1444384.25	527697.56	65.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK0620	1444488.13	527662.63	68.8
Cypress Creek	3NB1720	1444541.37	567881.56	104.6
Cypress Creek	3NJ2460	1444587.25	531514.25	68.9
Cypress Creek	3NG3080	1444589.87	545977.56	75.8
Cypress Creek	3NK1520	1444652.00	520441.22	74.6
Cypress Creek	3NG2500	1444643.63	554139.81	97.0
Cypress Creek	3NK1840	1444676.13	513429.31	75.7
Cypress Creek	3NK1540	1444680.00	519849.91	74.6
Cypress Creek	3NG2540	1444682.00	552497.44	91.0
Cypress Creek	3NB1650	1444683.25	570455.94	108.3
Cypress Creek	3NK1500	1444704.63	520487.59	74.6
Cypress Creek	3NG2360	1444773.25	549362.19	83.9
Cypress Creek	3NG2380	1444567.50	548745.19	83.6
Cypress Creek	3NJ2420	1444847.38	529138.00	65.2
Cypress Creek	3NG2390	1444880.88	548780.31	82.5
Cypress Creek	3NK1860	1444917.87	515068.69	75.7
Cypress Creek	3NJ2400	1444924.88	529118.13	69.6
Cypress Creek	3NK1480	1444926.62	520712.37	74.6
Cypress Creek	3NB1640	1444956.88	571240.19	110.8
Cypress Creek	3NK1020	1445027.38	523814.28	73.4
Cypress Creek	3NK1000	1445088.62	523877.72	73.4
Cypress Creek	3NG0150C	1445126.00	510169.75	76.3
Cypress Creek	3NB2500	1445145.25	556948.19	104.5
Cypress Creek	3NK1460	1445157.75	520381.09	74.6
Cypress Creek	3NG2920	1445207.00	548432.31	80.1
Cypress Creek	3NB1700	1445251.25	569133.06	104.6
Cypress Creek	3NB1660	1445270.62	569278.69	104.7
Cypress Creek	3NJ2480	1445283.00	534342.13	72.1
Cypress Creek	3NG2080	1444896.88	550718.25	88.5
Cypress Creek	3NK1400	1447694.25	519601.06	75.3
Cypress Creek	3NG1700	1447725.12	551117.31	91.2
Cypress Creek	3NJ2180	1447751.88	533943.50	73.3
Cypress Creek	3NJ2200	1447792.50	533385.88	72.6
Cypress Creek	3NG1740	1447828.75	550804.87	90.5
Cypress Creek	3NG1720	1447923.13	550801.44	91.2
Cypress Creek	3ND0010C	1447963.13	513622.41	77.5
Cypress Creek	3NB1500	1448011.00	570342.13	105.7
Cypress Creek	3NG2010	1448059.25	552924.19	94.3
Cypress Creek	3NG1680	1448168.13	550713.37	91.3
Cypress Creek	3NB2320	1446994.00	562559.13	101.6
Cypress Creek	3NB2340	1448251.75	563063.50	97.8
Cypress Creek	3NJ2140	1448265.38	536702.88	76.5
Cypress Creek	3NK1760	1448401.75	515519.03	75.6
Cypress Creek	3NK0580	1448423.13	527036.19	75.4
Cypress Creek	3NJ2120	1448524.50	538169.00	76.7
Cypress Creek	3NK0660	1448527.37	520695.66	75.4
Cypress Creek	3NK0680	1448343.38	521084.53	75.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK0740	1448536.25	523463.91	75.1
Cypress Creek	3NK0720	1446588.25	522716.22	75.1
Cypress Creek	3NB1870	1448501.88	567941.50	107.8
Cypress Creek	3NB1880	1448063.87	567206.88	102.0
Cypress Creek	3NB2720	1448645.13	559345.44	100.1
Cypress Creek	3NK1720	1448664.75	512306.91	76.0
Cypress Creek	3NG1660	1448757.75	551140.81	93.1
Cypress Creek	3NC0140	1448771.25	553653.56	96.8
Cypress Creek	3NB2000	1448793.38	566063.19	99.8
Cypress Creek	3NB1890	1448805.38	566577.63	99.8
Cypress Creek	3NB1480	1448845.62	571043.12	105.7
Cypress Creek	3NK0780	1448848.12	525143.44	75.3
Cypress Creek	3NJ2060	1448854.50	533496.38	73.1
Cypress Creek	3NB2020	1448885.12	566010.75	99.8
Cypress Creek	3NK0760	1448907.63	524509.44	75.1
Cypress Creek	3NG1620	1448924.50	550423.31	96.3
Cypress Creek	3NG1640	1448888.00	549786.88	95.4
Cypress Creek	3NC1140	1448975.88	535496.50	76.2
Cypress Creek	3NG3000	1449013.25	542886.31	79.8
Cypress Creek	3NJ2340	1449024.00	529744.25	75.2
Cypress Creek	3NC1070	1449027.50	534394.56	74.6
Cypress Creek	3NG1650	1449043.87	550470.19	94.8
Cypress Creek	3NG1580	1449048.25	551184.25	94.3
Cypress Creek	3NC0120	1449051.12	554212.38	99.9
Cypress Creek	3NG0120C	1448013.88	508866.91	76.6
Cypress Creek	3NJ2055	1449183.62	534064.25	74.8
Cypress Creek	3ND0020C	1449206.00	514433.94	76.3
Cypress Creek	3NG2980	1449397.75	542761.19	82.9
Cypress Creek	3NC1160	1449515.00	534856.44	76.0
Cypress Creek	3NJ2040	1449519.25	532809.75	74.5
Cypress Creek	3NB2740	1449576.00	558526.56	96.8
Cypress Creek	3NJ2020	1449579.13	532785.00	74.5
Cypress Creek	3NJ2110	1449597.50	538309.63	77.3
Cypress Creek	3NJ2100	1449383.87	539504.06	78.2
Cypress Creek	3NJ2320	1449611.63	529885.69	75.4
Cypress Creek	3NK0560	1449714.13	526032.94	75.5
Cypress Creek	3NG1560	1449735.13	550511.06	93.8
Cypress Creek	3NA1550	1449551.00	555580.56	100.5
Cypress Creek	3NA1560	1449769.75	555794.12	99.9
Cypress Creek	3NG1600	1449794.88	551250.13	96.3
Cypress Creek	3NG0090C	1449571.13	509227.03	77.5
Cypress Creek	3NK0700	1449842.37	521448.06	75.1
Cypress Creek	3NC1080	1449843.37	534300.12	76.0
Cypress Creek	3NC1060	1449872.37	534514.81	76.0
Cypress Creek	3NB2040	1449905.00	565506.12	98.2
Cypress Creek	3NB1860	1449860.00	566642.81	98.2
Cypress Creek	3NK1360	1450003.25	518489.94	75.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NB2050	1449464.38	564899.06	98.1
Cypress Creek	3NB2300	1450008.50	564411.50	98.1
Cypress Creek	3NG1540	1450044.38	549936.88	94.3
Cypress Creek	3NC1120	1450048.75	536427.12	76.6
Cypress Creek	3NA1570	1450071.88	555601.38	100.0
Cypress Creek	3NJ2080	1449911.63	540601.31	79.0
Cypress Creek	3NA1580	1450087.50	555721.19	99.4
Cypress Creek	3NB2360	1450239.13	563636.00	97.8
Cypress Creek	3NB2380	1449811.38	562322.56	96.8
Cypress Creek	3NB2375	1450241.00	562563.06	96.8
Cypress Creek	3ND0030C	1450249.50	514122.59	75.8
Cypress Creek	3NC1100	1450257.63	537088.87	76.7
Cypress Creek	3NK0540	1450220.13	525196.50	76.2
Cypress Creek	3NJ2300	1450263.75	529931.88	75.5
Cypress Creek	3NG1520	1450274.50	549973.19	95.7
Cypress Creek	3NG1500	1450291.50	550826.44	97.0
Cypress Creek	3NG1480	1450183.87	551371.56	98.2
Cypress Creek	3NB1460	1450311.13	572599.38	128.1
Cypress Creek	3NC1040	1450327.50	534848.69	76.0
Cypress Creek	3NB2400	1450366.63	560268.81	94.7
Cypress Creek	3NK0200	1450424.50	526437.37	75.9
Cypress Creek	3NC0180	1450542.13	555346.19	97.5
Cypress Creek	3NC0200	1450355.75	554682.19	93.7
Cypress Creek	3NJ2000	1450562.88	532713.13	75.9
Cypress Creek	3ND0460C	1450564.88	516924.66	75.9
Cypress Creek	3NK0180	1450593.75	526454.19	76.7
Cypress Creek	3NB2115	1450605.00	563330.19	97.8
Cypress Creek	3NC0220	1450633.38	553297.69	93.7
Cypress Creek	3NC1000	1450654.25	535651.19	76.0
Cypress Creek	3NJ1980	1450711.00	532713.13	76.1
Cypress Creek	3NC0980	1450741.63	535725.00	76.0
Cypress Creek	3NJ2280	1450746.63	530178.88	76.5
Cypress Creek	3NB1840	1450770.00	567896.25	100.1
Cypress Creek	3NB1820	1450773.38	567953.44	100.6
Cypress Creek	3NB1800	1450850.37	567951.75	101.1
Cypress Creek	3NC0240	1450879.13	552725.94	93.7
Cypress Creek	3NC0540	1450702.75	545020.69	91.2
Cypress Creek	3NC0560	1450907.13	545024.00	86.1
Cypress Creek	3NA1540	1449738.50	556564.94	98.2
Cypress Creek	3NA1590	1450926.00	556466.00	95.5
Cypress Creek	3NA1530	1450525.00	557434.75	97.4
Cypress Creek	3NK0160	1450935.50	527192.06	76.8
Cypress Creek	3NC0460	1450763.38	547715.00	97.8
Cypress Creek	3NC0480	1450955.00	547684.38	93.2
Cypress Creek	3NC0360	1450799.88	549162.06	98.4
Cypress Creek	3NC0380	1450956.13	549157.50	96.5
Cypress Creek	3ND0150C	1450981.37	511575.97	75.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NK0520	1451003.75	525415.38	76.9
Cypress Creek	3NC0160	1451008.12	554305.56	96.8
Cypress Creek	3NB1440	1451008.25	571611.63	137.8
Cypress Creek	3NC1020	1451040.25	535078.63	76.0
Cypress Creek	3NC0500	1450773.50	547111.37	98.7
Cypress Creek	3NC0520	1451090.38	547219.38	89.7
Cypress Creek	3NB2760	1451124.50	558223.31	94.3
Cypress Creek	3NK1280	1451153.62	524252.91	76.8
Cypress Creek	3NA1500	1451242.13	558219.13	94.2
Cypress Creek	3NB2110	1451255.50	562771.63	97.8
Cypress Creek	3NB2260	1451261.38	563897.56	97.8
Cypress Creek	3NC0740	1451304.50	541079.81	86.8
Cypress Creek	3NC0760	1451151.50	540173.13	79.1
Cypress Creek	3NC0490	1451465.25	547572.94	85.3
Cypress Creek	3NC0300	1451509.12	551992.63	93.7
Cypress Creek	3NK1300	1451413.13	523115.94	75.9
Cypress Creek	3ND0140C	1451549.75	510704.19	75.8
Cypress Creek	3NB2280	1451593.88	565044.63	101.4
Cypress Creek	3NB2100	1451615.38	561974.38	100.3
Cypress Creek	3NC0960	1451615.50	537138.81	77.4
Cypress Creek	3NC0400	1451700.13	550581.38	91.7
Cypress Creek	3NC0320	1450981.00	551488.31	94.2
Cypress Creek	3NC0340	1451760.50	551646.19	91.8
Cypress Creek	3NA1610	1451821.87	556354.25	94.4
Cypress Creek	3NK1340	1451983.62	520366.09	75.7
Cypress Creek	3ND0450C	1451309.37	518357.84	75.9
Cypress Creek	3NC0280	1451984.75	552084.06	93.7
Cypress Creek	3NB1780	1452037.13	569489.94	113.3
Cypress Creek	3NK0140	1452037.62	527242.94	76.8
Cypress Creek	3NJ1960	1452147.75	533774.50	76.4
Cypress Creek	3NC0840	1452153.12	538180.38	79.0
Cypress Creek	3NC0420	1452168.62	550200.75	87.9
Cypress Creek	3NC0820	1452195.75	538266.00	79.0
Cypress Creek	3NK0500	1452263.88	524882.25	77.8
Cypress Creek	3NA1600	1452401.63	554806.62	96.1
Cypress Creek	3NK1260	1452450.25	523873.63	76.0
Cypress Creek	3NC0920	1452463.62	537840.56	79.0
Cypress Creek	3NA1520	1452501.37	557733.94	93.7
Cypress Creek	3NB2240	1452543.13	563718.25	100.1
Cypress Creek	3NC0900	1452561.13	537856.13	79.0
Cypress Creek	3NJ2260	1452600.00	530518.69	76.5
Cypress Creek	3NK0480	1452606.75	525390.06	77.8
Cypress Creek	3NK1320	1452610.38	522020.06	75.7
Cypress Creek	3NB1775	1452624.50	569316.19	115.1
Cypress Creek	3ND0490C	1452678.13	517089.25	75.9
Cypress Creek	3NC0440	1452700.63	549590.37	87.4
Cypress Creek	3NB1770	1452955.87	569153.19	118.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NJ1940	1453241.38	533527.00	76.6
Cypress Creek	3NB1760	1453318.63	569093.19	120.5
Cypress Creek	3NJ1920	1453323.38	533488.19	76.5
Cypress Creek	3NB2080	1453334.25	561260.38	103.1
Cypress Creek	3NC0572	1452542.13	545391.56	86.7
Cypress Creek	3NC0570	1453344.00	545371.50	83.1
Cypress Creek	3NK0440	1453377.50	524231.84	77.2
Cypress Creek	3NJ0560	1453379.50	534074.75	77.1
Cypress Creek	3NA1620	1453398.63	556335.81	93.8
Cypress Creek	3NB2060	1453414.88	561212.00	105.2
Cypress Creek	3NB2220	1453444.25	565539.56	104.7
Cypress Creek	3NJ1900	1453465.75	532672.25	76.5
Cypress Creek	3NJ0540	1453498.75	534065.75	77.1
Cypress Creek	3NB2200	1453516.88	566035.94	108.4
Cypress Creek	3NB2120	1453523.88	564234.75	107.0
Cypress Creek	3NJ0440	1452848.88	536172.94	77.6
Cypress Creek	3NJ0460	1453505.25	535435.56	77.6
Cypress Creek	3NC0800	1453556.00	539717.69	79.1
Cypress Creek	3NB2140	1453564.00	565565.63	107.7
Cypress Creek	3NJ0500	1453569.13	534707.19	77.6
Cypress Creek	3NC0880	1453581.75	538500.69	79.0
Cypress Creek	3NA1630	1453613.37	555878.63	93.0
Cypress Creek	3NA1640	1453671.13	556898.06	93.4
Cypress Creek	3NB1740	1453680.88	568933.37	130.5
Cypress Creek	3NB2180	1453731.25	566379.00	108.5
Cypress Creek	3NC0940	1453758.88	536872.44	79.1
Cypress Creek	3NC0548	1453372.38	550239.62	87.0
Cypress Creek	3NC0550	1453778.37	549671.81	85.2
Cypress Creek	3NC0780	1453783.50	539435.75	79.1
Cypress Creek	3NA1660	1453828.38	556882.31	93.0
Cypress Creek	3NK0420	1453843.50	524177.44	77.4
Cypress Creek	3NK0400	1453865.13	523404.88	77.4
Cypress Creek	3NC0860	1453864.00	537924.94	79.0
Cypress Creek	3NA1625	1453956.12	554744.25	94.4
Cypress Creek	3NJ1860	1453191.38	528771.31	76.5
Cypress Creek	3NJ1880	1454000.38	530503.50	76.5
Cypress Creek	3NC0568	1454002.25	544890.31	84.1
Cypress Creek	3NI1740	1467262.38	545273.56	100.4
Cypress Creek	3NA0020	1467342.75	558481.44	118.6
Cypress Creek	3NJ1080	1467365.50	536168.19	79.2
Cypress Creek	3NI1720	1466382.13	543295.69	112.3
Cypress Creek	3NI1390	1467655.63	547730.31	96.2
Cypress Creek	3NJ1320	1467875.12	528834.31	77.3
Cypress Creek	3NJ1160	1467948.13	535064.75	77.4
Cypress Creek	3NA0060	1468170.63	561538.94	173.8
Cypress Creek	3NI1360	1468379.12	550029.88	92.9
Cypress Creek	3NJ1060	1468421.63	536494.50	84.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NA0040	1468428.13	561665.06	194.2
Cypress Creek	3NJ1300	1468436.00	532681.25	77.4
Cypress Creek	3NJ1180	1468539.37	535313.87	77.4
Cypress Creek	3NI0420	1467864.88	560536.50	170.1
Cypress Creek	3NI0440	1468540.12	559334.56	119.9
Cypress Creek	3NI1355	1468567.50	549087.69	91.1
Cypress Creek	3NJ1012	1468231.63	538849.69	108.7
Cypress Creek	3NJ1015	1468696.00	538814.94	107.5
Cypress Creek	3NJ1010	1468470.25	539309.75	108.3
Cypress Creek	3NX0350C	1468764.50	527704.63	77.2
Cypress Creek	3NA2010C	1468885.87	518379.28	75.9
Cypress Creek	3NI1350	1468916.13	550060.94	95.4
Cypress Creek	3NJ1020	1469094.38	537607.81	95.8
Cypress Creek	3NJ1040	1469398.38	537443.50	92.7
Cypress Creek	3NI0460	1469449.88	558362.81	113.1
Cypress Creek	3NI1320	1469444.37	553518.31	112.6
Cypress Creek	3NI1325	1469452.88	553335.56	102.8
Cypress Creek	3NI0560	1469475.13	556385.63	112.8
Cypress Creek	3NI1340	1469528.62	550206.12	97.0
Cypress Creek	3NI1330	1469329.63	552325.13	99.2
Cypress Creek	3NI0200	1469463.50	563101.06	202.2
Cypress Creek	3NI0220	1469567.25	563100.88	182.6
Cypress Creek	3NI1300	1469637.38	550206.12	98.7
Cypress Creek	3NI0480	1469911.38	558575.81	109.3
Cypress Creek	3NI1280	1470035.25	550383.31	98.9
Cypress Creek	3NX0360C	1470199.12	528235.87	77.2
Cypress Creek	3NI0520	1470350.37	558600.31	109.0
Cypress Creek	3NJ1280	1470380.50	531578.81	77.4
Cypress Creek	3NJ1220	1470422.25	534506.81	79.2
Cypress Creek	3NI0240	1470513.75	562562.69	160.9
Cypress Creek	3NI0260	1470508.62	562504.69	158.6
Cypress Creek	3NJ1200	1470526.25	535552.94	84.2
Cypress Creek	3NI0280	1470544.75	561942.69	158.2
Cypress Creek	3NI0300	1470538.25	561842.44	147.2
Cypress Creek	3NI0500	1470407.75	559598.31	127.7
Cypress Creek	3NX0330C	1470642.38	529245.31	77.2
Cypress Creek	3NX0320C	1470745.38	529689.94	77.5
Cypress Creek	3NI0190	1470791.63	563403.81	180.8
Cypress Creek	3NI0185	1470814.25	563622.50	193.8
Cypress Creek	3NI0180	1470850.12	563813.75	202.2
Cypress Creek	3NI0160	1470847.00	563950.63	203.4
Cypress Creek	3NI1260	1470880.38	549326.69	103.8
Cypress Creek	3NI1220	1469909.88	547546.13	124.6
Cypress Creek	3NI1240	1470922.25	549200.75	103.8
Cypress Creek	3NJ1260	1470984.00	530135.88	79.3
Cypress Creek	3NI0320	1470090.75	560618.38	165.5
Cypress Creek	3NI0340	1471028.87	560529.31	136.2

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NI0140	1471066.13	564619.63	213.8
Cypress Creek	3NJ1270	1471071.62	534081.25	78.8
Cypress Creek	3NJ1240	1471092.38	529694.81	78.8
Cypress Creek	3NI1020	1471110.38	551726.69	101.0
Cypress Creek	3NI0360	1471194.50	560462.44	122.5
Cypress Creek	3NI0570	1471274.00	556596.06	108.2
Cypress Creek	3NI0980	1471340.62	553331.00	106.8
Cypress Creek	3NI1000	1471301.38	553230.50	105.8
Cypress Creek	3NI0540	1471395.38	558536.19	108.3
Cypress Creek	3NI0960	1471406.75	553578.94	107.9
Cypress Creek	3NA1040C	1471417.50	537236.69	106.0
Cypress Creek	3NI0920	1471435.38	554124.06	108.1
Cypress Creek	3NI0940	1471435.75	554042.50	108.0
Cypress Creek	3NA0710C	1471436.50	542647.50	100.1
Cypress Creek	3NI0400	1471438.75	558622.81	108.3
Cypress Creek	3NA1110C	1471677.50	530827.38	77.2
Cypress Creek	3NI0370	1471743.13	560252.12	116.2
Cypress Creek	3NA1090C	1471846.00	532741.38	78.3
Cypress Creek	3NA1080C	1471868.00	533513.25	78.3
Cypress Creek	3NI0380	1471962.38	559513.50	108.4
Cypress Creek	3NA1070C	1471966.88	535060.81	79.7
Cypress Creek	3NI0120	1472244.38	560557.19	110.1
Cypress Creek	3NA0740C	1472362.12	539684.31	89.6
Cypress Creek	3NI1200	1472418.00	548606.56	108.4
Cypress Creek	3NA0770C	1472493.25	539257.50	86.8
Cypress Creek	3NA1140C	1472515.38	529101.94	77.1
Cypress Creek	3NI0900	1472559.25	554282.25	108.1
East Pasco	6NB0080	1439632.60	585223.89	144.1
East Pasco	6NB0220	1441078.07	590873.19	80.9
East Pasco	6NB0230	1440872.68	592333.38	80.9
East Pasco	6NB0260	1437095.52	591262.42	82.7
East Pasco	6NB0460	1432448.83	599452.06	84.3
East Pasco	6NB0470	1432196.73	599630.32	84.3
East Pasco	6NB0100	1435932.44	586633.10	112.8
East Pasco	6NB0330	1433409.00	589213.71	90.2
East Pasco	6NB0320	1432627.43	589039.88	110.8
East Pasco	6NB0350	1433836.58	591055.13	87.6
East Pasco	6NB0370	1434182.05	592575.21	87.7
East Pasco	6NB0360	1431822.97	593290.36	126.6
East Pasco	6NB0440	1430335.70	596827.26	104.3
East Pasco	6NC0260	1430714.66	592863.43	127.8
East Pasco	6NC0270	1429986.12	594584.23	130.6
East Pasco	6NC0265	1429204.18	592910.74	87.6
East Pasco	6NC0090	1427300.90	584912.85	101.1
East Pasco	6NC0110	1426597.14	585349.14	98.2
East Pasco	6NC0100	1427079.54	585584.72	100.6
East Pasco	6NC0080	1424687.64	585685.56	92.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NC0060	1424084.11	585920.27	92.5
East Pasco	6NC0140	1428187.21	586788.68	95.8
East Pasco	6NC0150	1428046.52	587844.97	85.9
East Pasco	6NC0160	1424855.29	587160.86	89.7
East Pasco	6NC0200	1425037.87	589756.14	88.5
East Pasco	6NC0340	1422318.53	592267.42	82.3
East Pasco	6NC0360	1424067.12	592416.53	87.2
East Pasco	6NC0380	1422850.75	592997.70	79.3
East Pasco	6NC0400	1424168.22	594972.60	86.6
East Pasco	6ND0100	1425372.85	600806.18	83.0
East Pasco	6ND0110	1424913.26	601066.70	84.6
East Pasco	6ND0120	1424225.25	601449.58	82.7
East Pasco	6ND0190	1424139.03	600043.93	78.8
East Pasco	6ND0460	1422077.85	602745.21	80.3
East Pasco	6ND0500	1420115.94	603087.68	82.5
East Pasco	6ND0450	1421872.88	604613.55	81.3
East Pasco	6ND0290	1424485.60	605860.16	79.3
East Pasco	6ND0300	1424010.65	606042.21	79.3
East Pasco	6ND0270	1424474.12	606513.59	84.0
East Pasco	6ND0280	1423248.00	606640.27	81.3
East Pasco	6ND0380	1422293.42	608194.88	82.5
East Pasco	6ND0420	1422110.03	605620.23	80.9
East Pasco	6ND0430	1421231.38	605271.55	83.3
East Pasco	6ND0330	1423671.62	608115.25	82.0
East Pasco	6NE0080	1423363.45	581490.77	114.0
East Pasco	6NC0040	1423726.46	584355.55	103.4
East Pasco	6NC0020	1422861.24	582882.28	106.9
East Pasco	6NC0010	1423095.56	582148.29	110.3
East Pasco	6NE0130	1421849.78	585824.37	95.4
East Pasco	6NE0110	1421882.33	584545.55	99.4
East Pasco	6NE0140	1421435.26	585786.15	95.4
East Pasco	6NE0180	1418675.60	586501.89	85.0
East Pasco	6NE0200	1417933.70	585867.37	85.7
East Pasco	6NE0300	1419573.69	590894.73	81.2
East Pasco	6NE0390	1419440.92	593368.23	81.1
East Pasco	6NE0370	1419597.09	592628.11	81.1
East Pasco	6NE0410	1420731.24	596215.55	84.1
East Pasco	6NE0480	1418714.65	593920.91	81.1
East Pasco	6NF0170	1415833.69	608717.38	79.7
East Pasco	6NF0120	1413422.59	603964.78	80.1
East Pasco	6NF0110	1414936.50	604481.79	81.5
East Pasco	6NF0140	1413142.38	605943.79	74.7
East Pasco	6NF0150	1412556.30	606009.37	74.7
East Pasco	6NF0050	1418245.82	603278.17	82.6
East Pasco	6NF0130	1412504.56	604740.20	74.8
East Pasco	6NF0160	1414455.88	606320.33	80.2
East Pasco	6NF0210	1412141.62	606390.50	73.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NF0190	1412984.09	607791.89	74.9
East Pasco	6NF0200	1412783.35	606434.17	74.6
East Pasco	6NF0310	1410486.00	606642.54	71.2
East Pasco	6NE0680	1409508.85	599263.13	71.2
East Pasco	6NE0700	1408067.94	598535.74	69.0
East Pasco	6NE0590	1415026.05	597459.61	79.9
East Pasco	6NE0600	1413680.85	597824.95	78.2
East Pasco	6NE0630	1412482.01	597670.53	77.6
East Pasco	6NE0720	1406488.83	598376.02	62.5
East Pasco	6NE0710	1406466.95	598113.26	62.6
East Pasco	6NE0750	1405638.60	598339.83	61.1
East Pasco	6NE0770	1404552.00	598890.90	61.1
East Pasco	6NE0760	1405070.30	598235.95	61.1
East Pasco	6NE0731	1406436.81	599927.39	63.6
East Pasco	6NE0790	1403666.18	599244.28	61.1
East Pasco	6NE0740	1405995.03	599052.86	61.1
East Pasco	6NF0240	1411147.98	604783.82	76.3
East Pasco	6NF0250	1411638.29	605357.39	77.8
East Pasco	6NF0230	1411137.86	603642.33	75.5
East Pasco	6NF0260	1409889.30	604505.81	75.4
East Pasco	6NF0300	1408532.68	605125.44	72.2
East Pasco	6NF0330	1408282.41	605952.55	72.2
East Pasco	6NF0350	1413081.08	610182.03	76.9
East Pasco	6NF0370	1410637.96	611127.76	74.7
East Pasco	6NF0390	1407240.21	612928.52	76.9
East Pasco	6NF0460	1407903.24	607484.58	71.1
East Pasco	6NF0440	1407517.41	609597.50	71.3
East Pasco	6ND0035	1428715.01	597738.38	137.9
East Pasco	6ND0265	1423592.67	603404.14	82.2
East Pasco	6NF0400	1407730.73	612327.43	54.8
East Pasco	6NF0060	1415262.47	601304.37	77.3
East Pasco	6NE0205	1418939.30	587348.84	83.3
East Pasco	6NF0380	1409397.59	612149.84	69.9
East Pasco	6NA0150	1453112.48	581046.60	86.6
East Pasco	6NA0130	1453343.67	581838.94	86.6
East Pasco	6NA0220	1449210.71	584885.40	97.3
East Pasco	6NC0120	1429445.82	588176.59	100.7
East Pasco	6NC0125	1428827.82	587970.41	96.1
East Pasco	6NF0420	1406167.14	609733.44	68.8
East Pasco	6NF0410	1407804.65	610963.61	55.5
East Pasco	6NF0430	1406601.12	609595.34	71.1
East Pasco	6NE0170	1420949.60	586949.14	93.0
East Pasco	6NE0175	1420042.29	586322.46	88.6
East Pasco	6NB0340	1434089.92	589661.73	87.9
East Pasco	6NB0110	1435437.26	588418.04	88.4
East Pasco	6NE0220	1419261.31	588532.36	83.2
East Pasco	6NF0450	1406452.26	608728.42	71.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NB0410	1433760.74	596569.46	82.4
East Pasco	6NB0430	1432328.61	596898.87	85.1
East Pasco	6NB0420	1434286.08	598083.52	82.2
East Pasco	6NB0450	1431533.44	597503.93	85.1
East Pasco	6NC0030	1423424.69	583226.72	108.9
East Pasco	6NC0320	1427833.26	595786.50	126.9
East Pasco	6ND0030	1426573.60	598158.71	98.0
East Pasco	6ND0510	1418981.41	602167.57	83.7
East Pasco	6NE0020	1427948.20	582184.36	131.2
East Pasco	6NE0060	1424374.85	580936.89	119.1
East Pasco	6NE0040	1425733.21	581700.09	123.3
East Pasco	6NE0050	1424866.47	580589.05	120.1
East Pasco	6NE0070	1423527.11	581566.25	114.9
East Pasco	6NE0120	1421003.10	584468.38	99.1
East Pasco	6NE0150	1421144.67	585249.67	97.3
East Pasco	6NE0160	1419974.69	586097.78	86.8
East Pasco	6NE0520	1417103.94	594789.71	81.0
East Pasco	6NE0490	1417594.57	594562.76	81.0
East Pasco	6NE0580	1414509.37	596867.11	79.0
East Pasco	6NE0570	1415207.29	596603.33	81.0
East Pasco	6NE0620	1413857.42	596870.07	78.6
East Pasco	6NE0610	1414034.32	595928.43	79.8
East Pasco	6NE0615	1412972.94	596570.76	79.6
East Pasco	6NE0635	1412596.66	596052.16	77.8
East Pasco	6NE0650	1411602.60	597976.61	75.1
East Pasco	6NE0670	1409312.05	596859.20	70.9
East Pasco	6NE0655	1409284.14	597333.89	73.3
East Pasco	6NE0360	1419458.30	592336.76	81.2
East Pasco	6NB0020	1448379.76	594962.41	81.7
East Pasco	6NB0010	1450030.47	595980.69	93.6
East Pasco	6NB0070	1443319.37	599277.50	104.2
East Pasco	6NB0140	1442346.69	590824.82	83.6
East Pasco	6NB0145	1441694.99	590237.75	83.9
East Pasco	6NB0090	1440515.69	588751.99	84.3
East Pasco	6NB0150	1440898.05	589965.18	83.9
East Pasco	6NB0160	1438581.05	589869.01	85.3
East Pasco	6NB0120	1440098.13	590326.22	80.9
East Pasco	6NB0130	1437060.26	589798.15	87.5
East Pasco	6NB0015	1447671.38	595879.02	105.7
East Pasco	6NB0050	1444308.84	601101.28	111.2
East Pasco	6NB0170	1442483.72	599292.32	86.7
Cypress Creek	3NA1120C	1472943.63	531303.56	77.2
Cypress Creek	3NI0100	1473033.00	561389.94	114.3
Cypress Creek	3NI0740	1473345.38	553591.25	108.1
Cypress Creek	3NA1130C	1473364.50	530671.94	77.2
Cypress Creek	3NI0720	1473492.12	553343.25	110.3
Cypress Creek	3NI1250	1473549.25	550191.63	116.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NI0880	1473552.00	555134.06	108.1
Cypress Creek	3NI0080	1473572.25	562327.69	114.3
Cypress Creek	3NI0060	1473966.87	562758.44	114.7
Cypress Creek	3NI1180	1474085.13	548540.88	116.4
Cypress Creek	3NI1160	1474174.25	548574.75	117.2
Cypress Creek	3NI0860	1474278.00	556088.69	110.4
Cypress Creek	3NI0040	1474353.38	563079.94	115.5
Cypress Creek	3NI0800	1474364.25	557113.12	120.9
Cypress Creek	3NA0490C	1474771.50	545989.94	99.4
Cypress Creek	3NI0710	1474786.12	552666.31	114.8
Cypress Creek	3NI0780	1474832.38	558185.81	132.6
Cypress Creek	3NI0760	1474953.25	558196.19	138.8
Cypress Creek	3NI0840	1475033.75	556239.94	126.6
Cypress Creek	3NA0540C	1475068.00	541834.00	89.3
Cypress Creek	3NI0820	1475127.12	556243.38	133.6
Cypress Creek	3NI0700	1475212.63	552182.44	119.4
Cypress Creek	3NI1140	1475267.25	548946.44	118.7
Cypress Creek	3NI1120	1475359.75	548947.81	120.2
Cypress Creek	3NI0020	1475447.12	564275.94	115.6
Cypress Creek	3NI0680	1475461.50	551499.25	119.5
Cypress Creek	3NI1100	1476121.50	549480.19	126.5
Cypress Creek	3NI1080	1476082.50	550351.38	129.7
Cypress Creek	3NI0650	1476301.25	552340.12	125.1
Cypress Creek	3NA0040C	1476339.88	559968.69	146.7
Cypress Creek	3NI0660	1476877.13	551321.13	137.9
Cypress Creek	3NA0460C	1477041.13	544728.06	116.6
Cypress Creek	3NI0640	1477170.13	553189.94	135.8
Cypress Creek	3NI1060	1477342.88	549349.44	131.5
Cypress Creek	3NI1040	1477400.87	549407.81	136.8
Cypress Creek	3NI0620	1478358.50	554263.19	162.8
Cypress Creek	3NA0440C	1478712.25	542856.25	99.2
Cypress Creek	3NI0600	1479403.88	554750.38	188.8
Cypress Creek	3NA0050C	1479461.50	559085.75	111.7
Cypress Creek	3NI0580	1479788.38	554631.94	189.2
Cypress Creek	3NI0575	1480340.87	555501.13	201.9
Cypress Creek	3NA0350C	1480516.87	549934.38	130.4
Cypress Creek	3NA0360C	1480942.63	549479.69	112.0
Cypress Creek	3NA0060C	1480994.50	560089.37	110.0
Cypress Creek	3NA0390C	1481307.50	546072.81	109.6
Cypress Creek	3NA0030C	1481502.25	567636.87	226.0
Cypress Creek	3NA0300C	1481560.62	550716.69	130.4
Cypress Creek	3NA0380C	1481579.75	547244.19	112.0
Cypress Creek	3NA0100C	1482854.00	558942.44	109.9
Cypress Creek	3NA0120C	1486213.75	554768.13	106.6
East Pasco	6NB0040	1445034.08	600723.12	104.7
East Pasco	6NB0400	1433686.87	594774.71	84.3
East Pasco	6NC0130	1428878.34	586856.88	96.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NC0070	1425425.29	584769.08	92.6
East Pasco	6ND0070	1426935.90	602454.27	77.9
East Pasco	6NE0470	1419575.26	595526.65	82.2
Cypress Creek	3NC0554	1454897.75	548278.50	84.5
Cypress Creek	3NC0552	1454954.62	548936.75	86.6
Cypress Creek	3NI2000	1455420.62	546603.56	83.3
Cypress Creek	3NJ1780	1455464.75	532714.81	76.8
Cypress Creek	3NA1680	1455562.00	556592.19	91.2
Cypress Creek	3NJ1760	1455563.38	532674.19	77.1
Cypress Creek	3NA1480	1455647.88	556929.81	91.2
Cypress Creek	3NK0380	1455733.00	524726.81	76.7
Cypress Creek	3NC0620	1455738.75	542011.19	83.0
Cypress Creek	3NC0600	1455697.38	542638.06	83.1
Cypress Creek	3NA1700	1455380.88	555248.63	90.9
Cypress Creek	3NA1710	1455802.25	555827.25	90.9
Cypress Creek	3NK0340	1455400.63	522348.91	76.7
Cypress Creek	3NA1720	1455873.13	555755.81	90.9
Cypress Creek	3NA1430	1454936.37	559136.76	96.0
Cypress Creek	3NA1440	1455886.13	558574.69	93.6
Cypress Creek	3NA1460	1455894.50	558487.44	93.6
Cypress Creek	3NC0640	1455919.50	541503.19	83.0
Cypress Creek	3NA1436	1455948.25	559040.17	94.2
Cypress Creek	3NA1380	1455948.50	561311.06	96.8
Cypress Creek	3NA1434	1455967.53	559117.30	94.3
Cypress Creek	3NI1990	1455897.00	548580.62	83.4
Cypress Creek	3NC0660	1456049.37	541156.75	82.9
Cypress Creek	3NI2010	1456056.63	545339.69	83.2
Cypress Creek	3NJ0020	1456086.00	541014.56	79.7
Cypress Creek	3NA1250	1455976.37	563940.25	129.3
Cypress Creek	3NA1290	1456104.12	564034.31	128.5
Cypress Creek	3NI1980	1456126.13	549372.31	85.3
Cypress Creek	3NK0260	1456281.13	525727.31	76.7
Cypress Creek	3NK0100	1456375.00	526954.44	76.7
Cypress Creek	3NA1450	1456498.75	557886.31	93.6
Cypress Creek	3NA1840	1456501.50	551472.63	89.1
Cypress Creek	3NA1270	1456512.75	565125.94	148.8
Cypress Creek	3NK0320	1456665.88	521851.19	76.7
Cypress Creek	3NJ0240	1456724.25	538099.50	79.9
Cypress Creek	3NI2180	1456764.13	541128.06	81.9
Cypress Creek	3NJ0080	1456792.63	540792.63	80.3
Cypress Creek	3NJ1820	1456799.38	531859.56	77.3
Cypress Creek	3NA1120	1456794.63	566662.25	156.6
Cypress Creek	3NA1140	1456673.25	565871.94	143.3
Cypress Creek	3NA1160	1456879.50	565609.75	133.0
Cypress Creek	3NK0360	1456894.37	522779.06	76.7
Cypress Creek	3NJ0260	1456995.75	535604.87	77.6
Cypress Creek	3NJ0280	1456956.88	535785.62	77.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NA1420	1457057.87	560764.19	95.2
Cypress Creek	3NA1400	1455257.25	560159.81	95.3
Cypress Creek	3NA1100	1457155.88	566556.25	157.4
Cypress Creek	3NJ0300	1457157.50	537164.81	78.7
Cypress Creek	3NI2120	1457181.88	543277.19	82.8
Cypress Creek	3NA1080	1457191.38	566627.44	157.8
Cypress Creek	3NA1310	1457234.50	562169.81	100.4
Cypress Creek	3NA1300	1457269.13	562258.44	100.5
Cypress Creek	3NK0300	1457296.13	521706.97	76.6
Cypress Creek	3NA1850	1457308.75	550833.75	84.8
Cypress Creek	3NJ0220	1457321.75	539236.81	79.5
Cypress Creek	3NJ1800	1457473.38	530167.38	76.8
Cypress Creek	3NI2020	1457563.62	544542.13	83.1
Cypress Creek	3NI2160	1457722.87	542136.06	81.9
Cypress Creek	3NA1740	1457739.75	554693.69	90.8
Cypress Creek	3NK0270	1457773.13	520330.72	76.8
Cypress Creek	3ND0510C	1457355.13	518184.41	75.9
Cypress Creek	3NK0060	1457796.13	528490.44	77.1
Cypress Creek	3NK0240	1457892.50	525139.94	77.2
Cypress Creek	3NI2100	1457994.13	542932.13	82.8
Cypress Creek	3NJ1740	1458202.12	532467.19	77.1
Cypress Creek	3NA1425	1458230.15	561104.40	97.3
Cypress Creek	3NI1880	1458243.00	545850.31	83.4
Cypress Creek	3NA1280	1458249.50	563854.56	109.6
Cypress Creek	3NJ0040	1458252.63	540523.19	81.0
Cypress Creek	3NA1220	1458269.75	563936.38	111.9
Cypress Creek	3NK0280	1458282.37	520690.56	76.8
Cypress Creek	3NJ1620	1458319.63	529031.31	77.2
Cypress Creek	3NJ1700	1458330.38	532464.88	77.2
Cypress Creek	3NA1760	1458204.75	552734.44	88.8
Cypress Creek	3NA1780	1458373.25	552443.19	86.0
Cypress Creek	3NJ0060	1458382.50	539552.81	81.6
Cypress Creek	3NK0080	1458413.25	526676.25	76.7
Cypress Creek	3NA1180	1458422.63	565183.63	122.3
Cypress Creek	3NJ0200	1458442.38	537084.06	78.7
Cypress Creek	3NA1330	1458472.00	561607.88	97.2
Cypress Creek	3NI1960	1458492.50	544165.50	84.1
Cypress Creek	3NI2080	1458502.25	542826.25	82.8
Cypress Creek	3NA1020	1458473.88	555927.56	90.9
Cypress Creek	3NA1000	1458622.63	556278.81	91.0
Cypress Creek	3NI1950	1458624.38	543583.88	84.2
Cypress Creek	3NI2140	1458709.50	541342.25	82.9
Cypress Creek	3NI1860	1458730.25	550005.13	84.0
Cypress Creek	3NI2060	1458813.13	542635.19	82.8
Cypress Creek	3NA0980	1458853.50	556627.38	91.0
Cypress Creek	3NA1260	1458869.37	563487.94	110.6
Cypress Creek	3NA1060	1458873.12	565715.06	138.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NA1320	1458903.38	561749.44	97.2
Cypress Creek	3NA1860	1458927.50	551208.37	85.1
Cypress Creek	3NI1940	1458933.13	543933.25	84.2
Cypress Creek	3NA1200	1458963.25	563951.25	118.2
Cypress Creek	3NA1240	1458984.00	563472.25	113.7
Cypress Creek	3NK0220	1459116.38	524914.25	77.2
Cypress Creek	3NA1040	1459136.50	566051.38	144.1
Cypress Creek	3NA0910	1459221.00	559199.44	94.0
Cypress Creek	3NA0915	1459179.62	559183.81	93.9
Cypress Creek	3NA0940	1459247.38	558001.31	92.5
Cypress Creek	3NA0960	1459222.62	557902.38	92.4
Cypress Creek	3NA0920	1459277.75	558231.88	92.5
Cypress Creek	3NI2040	1459318.38	543083.88	83.7
Cypress Creek	3NI1930	1459658.63	543594.31	84.2
Cypress Creek	3NJ1680	1459894.00	532659.31	77.4
Cypress Creek	3NJ1720	1459953.25	533353.37	77.5
Cypress Creek	3NK0020	1460005.00	525164.56	76.7
Cypress Creek	3NA0900	1460041.37	558822.88	94.0
Cypress Creek	3NJ1560	1460057.38	521716.72	76.9
Cypress Creek	3NJ1540	1460069.63	523661.87	76.9
Cypress Creek	3NA0895	1460091.38	558617.62	94.9
Cypress Creek	3NJ1640	1460149.63	529313.56	77.2
Cypress Creek	3NJ0180	1460247.25	536725.25	78.4
Cypress Creek	3NI1925	1460248.88	544044.19	89.0
Cypress Creek	3NJ0100	1459963.25	539947.13	93.0
Cypress Creek	3NJ0120	1460296.50	539780.44	92.0
Cypress Creek	3NJ1520	1460348.12	520553.53	76.9
Cypress Creek	3ND0650C	1460071.50	517760.62	75.5
Cypress Creek	3NA0840	1460399.38	560188.31	94.0
Cypress Creek	3NK0040	1460510.88	525602.87	76.7
Cypress Creek	3NA0420	1460541.00	552118.88	85.6
Cypress Creek	3NJ0160	1460581.25	537686.69	78.9
Cypress Creek	3NJ1660	1460770.88	531065.44	77.2
Cypress Creek	3NI1915	1460821.37	544032.19	88.7
Cypress Creek	3NJ0140	1460925.00	538044.38	79.2
Cypress Creek	3NA0780	1460988.50	561578.06	96.8
Cypress Creek	3NI1920	1461019.12	542069.38	99.9
Cypress Creek	3NA0890	1461040.63	558648.94	96.6
Cypress Creek	3NA0760	1461041.50	561732.62	97.3
Cypress Creek	3NA0720	1461109.25	562347.37	102.1
Cypress Creek	3NA0740	1461108.88	562240.13	100.3
Cypress Creek	3NA0710	1461105.75	562988.56	102.8
Cypress Creek	3NJ0880	1461381.38	536883.06	78.3
Cypress Creek	3NJ0900	1461420.50	535040.25	77.6
Cypress Creek	3NI1910	1461456.88	544013.37	92.2
Cypress Creek	3NJ1420	1461499.50	532836.06	77.5
Cypress Creek	3NA0700	1461516.00	563028.06	104.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Cypress Creek	3NA0880	1461543.75	558634.88	102.5
Cypress Creek	3NA0820	1461547.88	560484.44	104.6
Cypress Creek	3NA0680	1461559.88	563993.12	119.0
Cypress Creek	3NI1900	1461616.88	544058.63	92.2
Cypress Creek	3NA0660	1461642.37	563047.00	105.0
Cypress Creek	3NA0860	1461651.62	558632.38	106.2
Cypress Creek	3NA0800	1461657.25	560471.06	106.7
Cypress Creek	3NJ1600	1461672.87	529154.31	77.2
Cypress Creek	3NA0400	1462038.88	553213.44	95.0
Cypress Creek	3NA0380	1462047.25	553436.94	95.7
Cypress Creek	3NJ0870	1462063.13	537597.81	78.4
Cypress Creek	3NA0360	1462224.38	553727.94	97.0
Cypress Creek	3NJ1580	1462327.62	522197.25	77.1
Cypress Creek	3NJ1480	1462414.50	520427.47	77.1
Cypress Creek	3NA0340	1462460.62	554605.19	99.8
Cypress Creek	3NA0320	1462498.50	554727.44	102.7
Cypress Creek	3NI1700	1462621.25	547949.12	86.1
Cypress Creek	3NA0640	1462684.13	563864.69	105.3
Cypress Creek	3NA0580	1462676.00	563971.25	107.2
Cypress Creek	3NJ0890	1462791.87	536690.63	77.6
Cypress Creek	3NA0560	1462009.37	565751.63	168.2
Cypress Creek	3NJ1400	1463011.88	532424.38	77.5
Cypress Creek	3NJ0920	1462811.50	536041.56	77.6
Cypress Creek	3NI1680	1463034.25	548747.62	86.2
Cypress Creek	3NA0620	1463332.88	563632.38	115.5
Cypress Creek	3NJ0960	1463371.25	534721.25	77.6
Cypress Creek	3NA0550	1463516.00	565085.19	114.7
Cypress Creek	3NA0540	1463567.00	565136.56	119.0
Cypress Creek	3NJ1440	1463585.50	518676.38	77.1
Cypress Creek	3ND0690C	1461654.50	515646.41	76.0
East Pasco	6ND0490	1419435.78	600815.39	82.9
East Pasco	6NA0140	1454773.96	580570.56	88.0
East Pasco	6NA0200	1441234.53	585934.55	108.2
East Pasco	6NE0690	1408577.09	597333.90	69.8
East Pasco	6NB0310	1434125.91	588059.73	95.3
East Pasco	6NB0240	1439997.48	591481.21	80.9
East Pasco	6NA0190	1448720.63	589757.31	97.3
East Pasco	6NA0120	1454732.83	579811.76	92.9
East Pasco	6NA0070	1456272.25	584885.40	89.1
East Pasco	6NB0180	1443299.05	597817.37	89.8
East Pasco	6NB0030	1445597.45	600335.05	123.8
East Pasco	6NB0300	1436410.43	597930.00	78.4
East Pasco	6NB0390	1435987.46	599357.14	78.5
East Pasco	6ND0010	1432657.93	602418.66	79.8
East Pasco	6ND0200	1422995.62	599091.20	80.3
East Pasco	6ND0230	1422178.45	599611.02	81.3
East Pasco	6ND0220	1419650.40	599623.04	80.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NE0440	1418234.51	597574.79	86.9
East Pasco	6ND0130	1421581.44	598117.82	84.2
East Pasco	6ND0150	1423144.52	597016.00	83.0
East Pasco	6ND0140	1422391.67	596430.28	88.0
East Pasco	6NE0420	1420439.05	595451.19	82.2
East Pasco	6NC0250	1429662.56	591605.51	85.5
East Pasco	6NC0280	1428825.24	594555.45	137.8
East Pasco	6NC0190	1425702.18	590205.38	88.5
East Pasco	6NC0231	1425467.95	591700.33	81.1
East Pasco	6NC0300	1427503.81	592744.97	85.8
East Pasco	6NC0410	1424115.05	595871.57	86.2
East Pasco	6NC0430	1424934.94	596015.98	87.5
East Pasco	6ND0040	1425993.04	598470.92	87.4
East Pasco	6ND0080	1427250.97	601335.03	83.1
East Pasco	6ND0090	1427196.38	600488.60	76.1
East Pasco	6ND0320	1422474.07	605156.59	82.6
East Pasco	6ND0310	1422674.56	603633.42	79.0
East Pasco	6NE0010	1429068.08	583063.53	135.2
East Pasco	6NE0270	1418179.53	592601.23	83.8
East Pasco	6NE0230	1420457.63	588751.55	87.7
East Pasco	6NE0250	1420751.18	590478.63	78.5
East Pasco	6NE0280	1418494.60	592073.90	82.1
East Pasco	6NE0290	1418851.31	590904.49	81.2
East Pasco	6NE0310	1420194.85	591385.06	81.2
East Pasco	6NE0340	1420316.57	592069.74	81.2
East Pasco	6NE0350	1419817.74	592085.68	81.2
East Pasco	6NE0530	1416750.58	595581.68	81.0
East Pasco	6NE0510	1415659.27	598100.80	79.1
East Pasco	6NE0550	1416224.51	596712.16	81.0
East Pasco	6NE0560	1415527.62	596375.59	81.0
East Pasco	6NE0660	1410650.18	596870.83	74.5
East Pasco	6NE0780	1403788.68	598999.27	61.1
East Pasco	6NA0010	1459413.61	581953.71	78.9
East Pasco	6NA0030	1458709.17	582138.15	79.4
East Pasco	6NA0020	1457687.58	581173.11	80.5
East Pasco	6NA0050	1458502.11	584891.83	80.5
East Pasco	6NA0040	1459983.94	583888.80	82.8
East Pasco	6NA0090	1455602.09	585880.86	85.1
East Pasco	6NA0100	1453588.24	584513.68	84.9
East Pasco	6NA0110	1453024.60	585089.13	81.6
East Pasco	6NA0080	1455361.82	585010.32	87.9
East Pasco	6NA0210	1450756.27	579812.04	97.0
East Pasco	6NA0160	1449042.39	579607.28	99.4
East Pasco	6NA0170	1450004.29	587588.97	120.1
East Pasco	6NB0190	1443764.27	596298.23	80.0
East Pasco	6ND0115	1424934.34	600646.57	84.4
East Pasco	6ND0114	1424417.20	600457.58	82.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NE0640	1411979.74	596867.14	77.8
East Pasco	6NA0025	1457469.12	580988.82	93.5
East Pasco	6NB0299	1438436.65	595542.97	113.4
East Pasco	6NB0035	1445663.61	600601.04	120.2
East Pasco	6NE0612	1413679.62	596155.90	79.6
East Pasco	6NC0332	1425517.48	595429.58	87.2
East Pasco	6NE0115	1421952.90	583890.87	99.5
East Pasco	6NE0117	1422570.27	583784.42	101.7
East Pasco	6NE0137	1421970.35	585254.63	95.4
East Pasco	6NE0119	1422931.42	584801.14	108.2
East Pasco	6ND0172	1424487.08	598059.06	83.3
East Pasco	6NE0275	1418153.95	592395.90	84.4
East Pasco	6NE0565	1415726.70	597007.60	81.0
East Pasco	6ND0465	1422170.17	601853.78	80.6
East Pasco	6NE0417	1421615.79	595881.40	86.6
East Pasco	6NF0155	1412638.96	605713.65	74.7
East Pasco	6ND0167	1423160.68	596838.60	89.1
East Pasco	6ND0165	1424185.88	596316.23	87.4
East Pasco	6NB0292	1437371.57	596986.36	81.0
East Pasco	6NB0297	1437635.32	597206.83	79.3
East Pasco	6NF0087	1416495.53	604752.71	82.6
East Pasco	6NF0089	1416325.77	604712.24	78.6
East Pasco	6ND0275	1424509.24	606386.02	84.0
East Pasco	6NF0305	1409317.00	605642.32	73.1
East Pasco	6NC0157	1428372.00	588088.83	93.6
East Pasco	6NC0175	1428585.03	588803.61	91.5
East Pasco	6NC0252	1431870.82	590463.37	140.5
East Pasco	6NF0062	1416476.40	600995.16	85.0
East Pasco	6NF0082	1416714.00	601991.89	91.3
East Pasco	6NF0084	1416464.91	601799.99	91.3
East Pasco	6NC0431	1426354.70	596404.03	102.0
East Pasco	6ND0062	1426563.82	597508.44	109.6
East Pasco	6ND0067	1426610.29	597162.14	122.6
East Pasco	6NC0055	1422196.42	586941.47	96.8
East Pasco	6NC0155	1428354.63	587803.25	91.8
East Pasco	6NE0450	1419741.42	597441.57	85.6
East Pasco	6ND0225	1420059.32	598746.41	86.8
East Pasco	6NE0382	1419945.81	595432.25	82.2
East Pasco	6NE0387	1420168.02	595488.37	82.2
East Pasco	6NE0389	1420246.68	595168.99	82.2
East Pasco	6NF0065	1414889.46	600815.25	77.8
East Pasco	6ND0092	1426273.30	598999.55	85.9
East Pasco	6ND0095	1426886.54	599005.87	84.0
East Pasco	6ND0097	1425997.89	599479.78	86.4
East Pasco	6NF0066	1416267.13	598436.87	81.2
East Pasco	6NF0067	1414311.50	598674.81	79.8
East Pasco	6NF0068	1415725.18	598307.26	80.2

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NF0069	1416525.69	599786.22	79.9
East Pasco	6NF0061	1416228.87	598974.52	78.7
East Pasco	6NF0063	1414865.93	599517.89	74.2
East Pasco	6NF0064	1414666.40	599272.57	78.1
East Pasco	6NF0075	1414178.78	600764.55	76.4
East Pasco	6ND0175	1424470.56	597490.24	85.3
East Pasco	6ND0177	1424644.15	597859.08	85.9
East Pasco	6NA0064	1457733.55	584381.33	91.5
East Pasco	6NC0425	1424701.81	595523.13	86.4
East Pasco	6NC0434	1424695.55	595898.70	87.5
East Pasco	6NC0436	1424361.34	595875.67	90.3
East Pasco	6NC0438	1426067.28	595706.10	91.3
East Pasco	6NC0279	1429719.05	594299.90	116.7
East Pasco	6NA0065	1457821.03	584347.50	90.6
East Pasco	6NA0195	1450987.20	590419.21	130.2
East Pasco	6NC0439	1425854.04	595769.70	87.5
East Pasco	6NF0102	1415635.17	602202.98	76.3
East Pasco	6NE0327	1420447.21	591654.75	81.2
East Pasco	6NE0315	1420331.77	591145.00	81.9
East Pasco	6NB0215	1447048.90	594778.59	99.3
East Pasco	6NC0402	1423932.83	595205.78	89.0
East Pasco	6NC0405	1423656.24	595119.72	92.7
East Pasco	6NC0407	1424181.01	595531.05	89.0
East Pasco	6NC0409	1423794.94	594897.02	87.7
East Pasco	6NA0115	1452096.20	585510.57	116.0
East Pasco	6NA0225	1451330.22	585264.81	119.6
East Pasco	6NC0365	1424206.93	592462.52	87.2
East Pasco	6NC0345	1423386.14	591525.75	88.4
East Pasco	6NC0346	1421893.15	590849.05	89.1
East Pasco	6NC0347	1421931.16	590780.98	89.1
East Pasco	6NC0212	1421915.62	590519.07	87.8
East Pasco	6NC0233	1424169.35	592119.66	86.5
East Pasco	6NB0017	1446749.00	596080.19	139.0
East Pasco	6NC0230	1425010.59	592405.46	82.4
East Pasco	6NC0242	1425633.08	593998.47	84.6
East Pasco	6NC0243	1425970.94	592856.16	86.2
East Pasco	6NC0247	1426511.19	593610.22	86.6
East Pasco	6NC0305	1426919.58	592078.44	83.4
East Pasco	6ND0099	1426901.48	599539.62	82.5
East Pasco	6NC0433	1425575.31	595662.00	86.1
East Pasco	6NC0338	1426319.40	595078.56	84.9
East Pasco	6NC0339	1426860.76	595851.97	106.2
East Pasco	6NC0330	1426107.32	594992.20	84.9
East Pasco	6NB0175	1441266.50	599868.08	107.7
East Pasco	6NB0195	1443198.78	597448.81	88.5
East Pasco	6NC0272	1431415.48	595068.17	145.4
East Pasco	6NC0277	1431412.11	594525.40	148.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NB0415	1432098.44	594333.97	129.8
East Pasco	6NE0422	1421751.45	595097.95	92.8
East Pasco	6NC0441	1426047.61	596303.72	93.6
East Pasco	6NF0175	1415305.28	608203.02	79.0
East Pasco	6ND0119	1424456.29	601039.59	82.7
East Pasco	6NC0440	1425751.52	596647.97	100.8
East Pasco	6NF0470	1413612.80	602118.09	78.8
East Pasco	6NF0109	1415986.97	602505.68	77.5
East Pasco	6NF0107	1415770.16	602620.22	76.5
East Pasco	6NE0113	1421770.44	584537.61	99.3
East Pasco	6NA0060	1456894.27	584295.71	102.5
East Pasco	6NA0125	1454947.67	579803.09	92.9
East Pasco	6NA0145	1455042.40	579952.66	92.2
East Pasco	6NA0165	1448958.15	579992.92	99.4
East Pasco	6NA0227	1451191.37	586047.20	114.3
East Pasco	6NC0415	1424652.82	595302.02	86.4
East Pasco	6NC0411	1424584.03	595133.80	86.4
East Pasco	6NC0437	1426441.98	595663.31	89.9
East Pasco	6NC0337	1425697.58	594924.98	85.1
East Pasco	6ND0105	1425755.55	601175.46	85.8
East Pasco	6ND0117	1425206.24	599545.07	86.6
East Pasco	6ND0116	1424535.61	600633.90	81.7
East Pasco	6ND0179	1424582.50	597516.33	85.6
East Pasco	6ND0174	1425038.19	598148.08	82.7
East Pasco	6ND0144	1422205.30	595971.65	87.7
East Pasco	6ND0162	1423074.53	596578.72	90.7
East Pasco	6ND0145	1422221.38	596800.08	84.4
East Pasco	6NE0409	1421753.62	595360.91	94.5
East Pasco	6NE0407	1421740.32	595662.93	92.0
East Pasco	6NE0404	1421932.17	595759.80	91.5
East Pasco	6NE0402	1421858.09	596077.01	86.7
East Pasco	6NE0425	1420968.37	595731.95	82.2
East Pasco	6NE0460	1419472.34	596872.73	83.9
East Pasco	6NE0252	1420215.15	590290.23	79.2
East Pasco	6NE0317	1420496.95	591328.35	81.9
East Pasco	6NC0426	1424996.55	595668.34	87.5
East Pasco	6NE9000	1403110.18	598801.37	56.0
East Pasco	6NF9003	1406128.26	607686.37	65.5
East Pasco	6NF9004	1405267.19	609298.00	66.1
East Pasco	6NF9002	1411717.00	611436.47	74.8
East Pasco	6NF9000	1418768.63	608650.23	81.0
East Pasco	6ND9002	1424284.58	610750.90	79.7
East Pasco	6NE9001	1416495.75	588469.61	81.7
East Pasco	6NE9002	1416615.89	593270.71	79.8
East Pasco	6NE9003	1411898.52	598841.62	73.3
East Pasco	6NF9001	1409215.11	603693.27	68.5
East Pasco	6ND9001	1433237.40	604070.73	73.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NB0345	1430123.63	595521.23	120.8
East Pasco	6NF0072	1416019.34	598460.26	80.3
East Pasco	6NF0074	1415124.88	598987.29	79.5
East Pasco	6NC0331	1427011.96	595544.19	100.8
East Pasco	6NC0333	1425614.48	595537.50	85.7
East Pasco	6NC0336	1426452.00	595537.09	89.7
East Pasco	6NC0395	1423160.33	594490.86	86.8
East Pasco	6NC0385	1422927.58	593653.95	89.3
East Pasco	6NE0381	1421783.64	593772.80	101.1
East Pasco	6NC0408	1424144.04	595666.37	88.9
East Pasco	6NB0085	1439444.69	587205.88	98.6
East Pasco	6NB0305	1433876.84	587498.68	111.5
East Pasco	6NB0115	1434476.84	588486.18	91.5
East Pasco	6NB0105	1435094.12	587229.72	111.1
East Pasco	6NB0435	1432155.31	596584.34	83.5
East Pasco	6NB0422	1433074.40	597154.81	83.0
East Pasco	6NB0407	1432648.26	596818.32	84.4
East Pasco	6NB0425	1432893.40	597445.54	86.6
East Pasco	6NB0421	1433521.77	597411.94	83.0
East Pasco	6NB0419	1433587.49	597663.76	83.0
East Pasco	6NB0417	1434312.58	597262.05	82.3
East Pasco	6NB0445	1433671.06	598908.92	81.3
East Pasco	6NB0395	1434776.29	598860.07	78.5
East Pasco	6NB0397	1434382.54	598879.67	79.1
East Pasco	6NB0386	1435890.47	597252.56	81.5
East Pasco	6NF0055	1414459.10	600107.60	78.6
East Pasco	6NF0229	1414407.26	607913.89	76.9
East Pasco	6NF0232	1412717.20	608168.55	76.9
East Pasco	6NF0222	1413899.90	608848.38	77.9
East Pasco	6NF0225	1413682.56	608922.90	77.1
East Pasco	6NF0227	1412498.94	609200.76	76.0
East Pasco	6NF0365	1412441.96	610371.88	76.2
East Pasco	6NF0360	1412498.32	609607.67	76.8
East Pasco	6NF0375	1411377.25	610444.14	76.0
East Pasco	6NF0355	1411278.26	609575.50	75.9
East Pasco	6NF0372	1410492.84	610690.81	75.1
East Pasco	6NF0377	1409898.98	611160.18	76.0
East Pasco	6NF0415	1409863.44	610492.78	74.5
East Pasco	6NF0405	1408459.29	611125.68	71.5
East Pasco	6NF0395	1408159.85	612952.79	72.1
East Pasco	6NF0195	1414489.06	607017.73	79.2
East Pasco	6NF0185	1414891.53	607272.23	84.7
East Pasco	6NF0275	1411588.56	607993.52	74.6
East Pasco	6NF0374	1410809.00	610502.38	75.2
East Pasco	6NF0480	1408986.82	606914.08	72.4
East Pasco	6NF0475	1408562.46	606684.07	72.4
East Pasco	6NF0485	1407392.22	606425.83	70.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NF0315	1409638.71	606730.74	72.9
East Pasco	6NF0295	1411454.46	607468.40	74.9
East Pasco	6NF0292	1411861.85	607036.18	76.5
East Pasco	6NF0297	1412030.42	607454.57	76.5
East Pasco	6NF0299	1411926.84	607881.08	74.9
East Pasco	6NF0302	1412779.87	607673.92	77.2
East Pasco	6NF0192	1413875.54	607837.29	77.1
East Pasco	6NF0194	1413655.41	607835.02	77.0
East Pasco	6NF0197	1413101.68	607830.48	76.9
East Pasco	6NF0191	1413082.16	607585.21	77.0
East Pasco	6NF0282	1411739.98	608649.07	75.1
East Pasco	6NF0280	1411381.61	609053.30	75.1
East Pasco	6NF0289	1410312.21	608234.81	74.2
East Pasco	6NF0285	1409880.78	608510.74	75.1
East Pasco	6NF0325	1409388.30	607690.71	74.5
East Pasco	6NF0327	1409703.21	607527.15	74.5
East Pasco	6NF0490	1409135.60	607868.82	72.3
East Pasco	6NF0495	1408717.64	608404.68	71.8
East Pasco	6NF0455	1408486.35	609021.12	72.6
East Pasco	6NF0445	1409720.57	609293.48	72.7
East Pasco	6NF0465	1408254.99	609948.68	71.3
East Pasco	6NF0435	1409620.56	609872.82	74.0
East Pasco	6NF0284	1410318.89	608649.90	75.1
East Pasco	6NF0347	1410623.49	609235.74	74.5
East Pasco	6NF0500	1409355.43	607819.91	74.5
East Pasco	6NF0317	1409190.28	606275.65	74.9
East Pasco	6NF0335	1409111.81	606361.60	74.2
East Pasco	6NF0095	1415554.80	605052.70	80.9
East Pasco	6NF0097	1415541.69	605599.13	85.8
East Pasco	6ND0042	1426401.22	598794.29	87.9
East Pasco	6NF0145	1413944.98	605310.74	80.4
East Pasco	6ND0125	1424286.00	601040.25	82.7
East Pasco	6NF0101	1414783.19	603623.37	81.7
East Pasco	6NE0104	1422750.52	581645.39	109.3
East Pasco	6NE0102	1422656.19	582206.55	108.5
East Pasco	6NE0106	1422552.18	581899.36	107.5
East Pasco	6NE0107	1422201.45	582777.39	105.1
East Pasco	6NE0109	1422220.96	583447.43	104.1
East Pasco	6NF0131	1415018.32	602311.68	74.8
East Pasco	6NE0159	1420585.40	584979.40	90.2
East Pasco	6NE0141	1420926.86	585588.26	94.4
East Pasco	6NE0178	1419972.94	584810.10	88.9
East Pasco	6NE0179	1419407.32	585511.49	88.3
East Pasco	6NC0248	1426862.77	593398.44	86.6
East Pasco	6NC0192	1421853.01	589010.02	96.9
East Pasco	6NC0202	1422318.77	590256.31	88.5
East Pasco	6NC0145	1428179.71	587019.01	95.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NC0135	1427768.25	586936.72	95.8
East Pasco	6NE0045	1425634.16	582358.74	124.0
East Pasco	6NB0265	1437405.44	590329.30	85.4
East Pasco	6NB0255	1437796.53	590811.70	87.6
East Pasco	6NB0125	1437124.61	587460.45	93.3
East Pasco	6NB0135	1437411.87	589077.89	87.8
East Pasco	6NB0167	1438160.34	590023.49	85.9
East Pasco	6NB0157	1438117.16	589280.11	87.3
East Pasco	6NB0155	1438935.58	589924.01	85.1
East Pasco	6NB0165	1439490.49	590374.01	83.4
East Pasco	6NB0245	1439304.48	590587.04	80.0
East Pasco	6NB0095	1435871.76	584093.29	159.1
East Pasco	6NB0102	1434812.75	585016.16	187.7
East Pasco	6NB0107	1435397.55	586689.49	112.8
East Pasco	6NA0215	1447557.96	582947.14	97.4
East Pasco	6NB0392	1435816.19	598314.21	80.1
East Pasco	6NB0385	1434758.83	597790.02	81.5
East Pasco	6NB0375	1435132.77	597830.45	81.5
East Pasco	6NB0423	1433868.37	597792.82	82.6
East Pasco	6NB0442	1434352.95	598359.76	82.2
East Pasco	6NB0449	1434073.31	598580.02	81.6
East Pasco	6NB0447	1433707.48	598495.75	81.7
East Pasco	6NE0022	1427931.00	581504.41	129.8
East Pasco	6NE0025	1427330.61	581399.27	128.4
East Pasco	6NE0075	1424494.12	581495.89	121.4
East Pasco	6NE0065	1424494.27	580616.26	119.5
East Pasco	6NE0055	1424212.93	580352.06	119.7
East Pasco	6NE0078	1424020.42	580859.67	118.0
East Pasco	6NE0085	1423740.61	579957.93	122.5
East Pasco	6NE0097	1423385.56	581106.07	117.8
East Pasco	6NE0087	1423123.50	581324.77	113.6
East Pasco	6NE0092	1422725.64	581439.91	112.7
East Pasco	6NC0035	1423385.91	582783.26	113.1
East Pasco	6NE0101	1422151.58	582909.92	104.8
East Pasco	6NC0045	1423159.30	585359.05	108.1
East Pasco	6NF0446	1409271.10	608894.13	73.5
East Pasco	6NF0322	1410902.67	607412.45	74.3
East Pasco	6NF0323	1410766.91	607490.93	74.2
East Pasco	6NF0226	1413115.85	608869.42	76.6
East Pasco	6NF0228	1412779.13	609002.06	76.6
East Pasco	6NF0176	1415586.09	608125.90	80.1
East Pasco	6NE0730	1406235.29	598822.85	61.7
East Pasco	6NE0732	1407039.83	598678.03	65.2
East Pasco	6NE0761	1404957.49	597423.96	66.1
East Pasco	6NE0781	1404058.85	597322.60	61.1
East Pasco	6NE0715	1407754.45	597703.58	68.0
East Pasco	6NE0695	1407681.93	597916.89	67.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NE0705	1407497.06	597786.06	67.3
East Pasco	6NE0725	1406968.21	597763.76	64.2
East Pasco	6NE0795	1403222.51	599903.97	61.1
East Pasco	6NC0375	1423170.02	593040.31	76.6
East Pasco	6NC0391	1423492.98	594084.08	76.6
East Pasco	6NC0397	1424028.15	593663.58	84.2
East Pasco	6ND0205	1423701.31	598755.06	82.1
East Pasco	6ND0185	1424352.77	598541.13	85.0
East Pasco	6ND0195	1423312.56	598418.97	81.6
East Pasco	6ND0520	1419751.40	603779.07	82.6
East Pasco	6ND0530	1422168.52	603894.66	81.2
East Pasco	6ND0540	1421893.02	603419.23	80.2
East Pasco	6ND0560	1421506.69	603901.17	83.0
East Pasco	6ND0550	1422360.82	601950.65	80.4
East Pasco	6NB0472	1431761.68	600372.40	84.8
East Pasco	6NB0485	1431956.05	598344.21	84.1
East Pasco	6NB0467	1432278.20	599482.81	84.3
East Pasco	6NB0462	1432274.94	599711.76	84.3
East Pasco	6NE0125	1422326.47	581544.33	112.2
East Pasco	6NE0099	1422463.07	581564.71	111.8
East Pasco	6NE0122	1421702.21	583003.49	104.6
East Pasco	6NE0155	1421135.66	587149.97	98.2
East Pasco	6NE0165	1420924.73	587185.47	95.8
East Pasco	6NE0163	1420252.01	585984.82	88.2
East Pasco	6NF0135	1413063.39	603089.12	74.8
East Pasco	6NF0125	1413780.19	604129.22	79.5
East Pasco	6NF0205	1415805.57	603159.90	75.9
East Pasco	6NF0215	1415484.43	603386.95	79.0
East Pasco	6NF0077	1416398.76	603292.86	80.5
East Pasco	6NF0079	1417014.65	603575.32	81.7
East Pasco	6NE0035	1424991.19	581173.29	121.3
East Pasco	6NE0096	1422441.05	582566.98	107.4
East Pasco	6NE0027	1426588.14	581442.27	126.6
East Pasco	6NE0079	1423696.39	581147.34	117.1
East Pasco	6NE0094	1422214.94	583056.64	104.6
East Pasco	6NF0132	1414424.49	602249.61	74.8
East Pasco	6NF0137	1413885.30	602209.64	74.8
East Pasco	6NF0127	1412756.43	603672.38	74.8
East Pasco	6NF0129	1412991.42	604720.64	80.2
East Pasco	6NF0187	1414331.91	607147.47	74.9
East Pasco	6NF0193	1412822.69	607940.87	74.9
East Pasco	6NF0288	1412572.03	606351.91	73.0
East Pasco	6NF0291	1411813.24	606371.88	73.0
East Pasco	6NF0296	1411159.28	607095.73	74.8
East Pasco	6NF0321	1410925.16	606955.59	71.1
East Pasco	6NF0294	1411774.24	607562.25	76.3
East Pasco	6NF0319	1410256.78	607582.05	71.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NF0318	1409550.82	607204.38	71.6
East Pasco	6NF0312	1410188.70	606262.49	74.9
East Pasco	6NF0313	1409931.24	606457.24	73.9
East Pasco	6NF0316	1409738.14	606335.11	73.9
East Pasco	6NF0462	1408729.77	610339.34	72.4
East Pasco	6ND0107	1424767.56	601429.51	85.9
East Pasco	6NA0207	1440537.83	585582.64	149.8
East Pasco	6NA0205	1441144.96	584338.18	177.4
East Pasco	6ND0405	1419927.81	607957.88	80.2
East Pasco	6ND0415	1419542.20	607411.85	80.0
East Pasco	6NB0060	1444075.92	600128.86	114.7
East Pasco	6NC0350	1423061.73	592117.14	86.9
East Pasco	6ND0470	1421231.60	602145.84	80.0
East Pasco	6ND0350	1422779.43	610510.20	83.4
East Pasco	6ND0370	1421833.57	609262.39	83.4
East Pasco	6ND0340	1423886.57	609142.16	83.5
East Pasco	6ND0345	1422783.14	609893.92	84.3
East Pasco	6ND0360	1421930.01	610189.03	83.4
East Pasco	6NA0180	1444384.21	581263.08	100.3
East Pasco	6NB0210	1444511.64	594233.47	80.9
East Pasco	6NB0250	1438938.04	591907.29	82.1
East Pasco	6NC0165	1426576.37	590535.81	88.5
East Pasco	6NC0170	1427651.02	589249.95	89.6
East Pasco	6NE0030	1425558.54	581421.07	123.3
East Pasco	6NC0220	1423489.04	589825.47	88.5
East Pasco	6NC0210	1422926.39	590417.35	88.5
East Pasco	6NC0195	1422403.25	589729.88	88.5
East Pasco	6NE0255	1421555.08	590156.03	86.7
East Pasco	6NE0260	1419271.07	590016.16	81.3
East Pasco	6ND0440	1419786.84	604147.09	79.7
East Pasco	6ND0445	1419131.00	606081.16	81.3
East Pasco	6NF0020	1418026.60	607386.93	82.2
East Pasco	6NF0030	1418042.86	605976.85	81.4
East Pasco	6NF0100	1415515.44	602476.14	74.8
East Pasco	6NF0090	1416014.36	604675.60	80.2
East Pasco	6NF0070	1415409.56	601781.84	75.6
East Pasco	6NF0340	1415260.96	609415.86	79.2
East Pasco	6ND0400	1421971.54	606858.63	81.2
East Pasco	6ND0385	1420840.09	607362.82	80.9
East Pasco	6ND0390	1421547.03	608608.67	80.2
East Pasco	6ND0410	1419915.25	607356.90	76.1
East Pasco	6NC0334	1426187.31	594870.14	84.9
East Pasco	6NC0310	1427157.47	594026.18	87.4
East Pasco	6NC0240	1425803.43	593385.61	82.3
East Pasco	6NC0245	1424699.54	593731.63	84.1
East Pasco	6NC0420	1424815.77	594833.04	86.2
East Pasco	6NC0390	1423602.26	594283.62	80.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6ND0170	1425280.63	597991.97	85.6
East Pasco	6ND0180	1424416.50	598469.41	85.0
East Pasco	6ND0160	1423680.53	597927.22	82.0
East Pasco	6ND0250	1422125.01	600694.48	81.4
East Pasco	6ND0210	1422934.71	600049.08	81.3
East Pasco	6ND0240	1421271.84	600450.57	82.3
East Pasco	6ND0480	1420246.92	601719.79	76.9
East Pasco	6NE0240	1418909.88	589254.73	82.3
East Pasco	6NE0195	1417650.97	588566.65	83.5
East Pasco	6NE0210	1417329.58	586890.35	84.5
East Pasco	6NE0320	1419939.24	591333.33	81.2
East Pasco	6NE0325	1420748.79	592036.05	83.8
East Pasco	6NE0330	1420179.52	591674.27	81.2
East Pasco	6NE0380	1420542.33	593479.85	81.1
East Pasco	6NE0385	1420182.33	594229.62	81.1
East Pasco	6NE0465	1419079.72	596373.32	82.4
East Pasco	6NE0475	1418365.28	595710.67	81.1
East Pasco	6NE0500	1417581.45	595656.02	82.0
East Pasco	6NF0040	1416977.81	605549.74	80.2
East Pasco	6NF0010	1418590.96	604701.94	75.8
East Pasco	6NF0080	1416697.60	602957.75	80.2
East Pasco	6NF0085	1416207.99	604520.08	77.6
East Pasco	6NE0400	1421738.37	595791.84	88.6
East Pasco	6NF0220	1412316.69	608250.61	76.9
East Pasco	6NF0287	1411297.66	608609.03	75.1
Trout Creek	13NX0150	1406801.07	551256.27	71.0
Trout Creek	13NW1800	1406768.59	549439.28	71.0
Trout Creek	13NR3400	1407029.98	544266.56	63.0
Trout Creek	13NR3955	1406996.97	543811.89	63.0
Trout Creek	13NR3960	1406687.07	543272.31	61.7
Trout Creek	13NU5140	1406766.66	538640.96	61.3
Trout Creek	13NS3650	1406630.49	535412.68	54.9
Trout Creek	13NX6080	1408815.18	556739.62	82.1
Trout Creek	13NX6040	1409540.00	557487.73	82.7
Trout Creek	13NS2800	1406227.26	533113.65	54.4
Trout Creek	13NU5025	1413832.75	538197.82	68.7
Trout Creek	13NR3700	1416603.47	547901.05	78.0
Trout Creek	13NR3730	1415685.04	548364.08	77.5
Trout Creek	13NR2430	1415431.50	549573.68	78.1
Trout Creek	13NR3925	1406966.56	542222.95	61.1
Trout Creek	13NR3420	1406438.03	545689.11	64.5
Trout Creek	13NR6600	1400312.43	541444.35	55.0
Trout Creek	13NS5000	1400276.75	539158.88	52.5
Trout Creek	13NX6210	1400620.95	554974.12	69.0
Trout Creek	13NX4280	1400192.19	552356.94	66.6
Trout Creek	13NV1080	1400152.70	545315.69	56.1
Trout Creek	13NS5020	1400069.19	539607.01	52.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NV1100	1400043.96	543895.10	57.9
Trout Creek	13NS5010	1400042.66	538706.78	52.5
Trout Creek	13NX4250	1400029.04	553489.39	67.2
Trout Creek	13NX6230	1399806.89	554667.75	67.9
Trout Creek	13NX2550	1399835.12	550367.43	60.9
Trout Creek	13NS2025	1411728.42	533682.75	61.0
Trout Creek	13NS2026	1411471.16	534375.94	61.1
Trout Creek	13NS2045	1412253.77	535147.38	64.0
Trout Creek	13NS2046	1411799.30	535269.89	64.0
Trout Creek	13NX4178	1402076.77	551203.08	68.9
Trout Creek	13NX4186	1402079.90	551634.17	69.1
Trout Creek	13NR7190	1399816.83	540251.26	52.5
Trout Creek	13NX8050	1396182.81	553652.93	62.8
Trout Creek	13NV1440	1396150.05	544985.13	57.6
Trout Creek	13NR8440	1396125.18	539434.39	51.4
Trout Creek	13NX8060	1395300.64	553882.83	61.8
Trout Creek	13NX8080	1396012.24	549578.98	60.0
Trout Creek	13NV0010	1395762.72	549030.71	62.2
Trout Creek	13NR8430	1395946.09	540469.79	51.6
Trout Creek	13NR8420	1395706.93	541223.40	51.6
Trout Creek	13NS2010	1412216.76	532919.33	61.8
Trout Creek	13NS2130	1410231.77	533224.28	58.3
Trout Creek	13NQ0010	1395639.96	550402.31	60.0
Trout Creek	13NV1420	1395636.90	546163.95	58.6
Trout Creek	13NX6400	1395543.49	551102.42	60.0
Trout Creek	13NV1460	1395476.13	544078.47	57.1
Trout Creek	13NR8640	1395441.59	539026.43	51.3
Trout Creek	13NR8650	1395431.53	540358.37	51.4
Trout Creek	13NV1410	1395415.54	546493.81	58.7
Trout Creek	13NR8620	1395685.90	538539.64	49.3
Trout Creek	13NV1430	1395350.44	545721.24	58.1
Trout Creek	13NV1450	1395319.88	544308.50	57.5
Trout Creek	13NV1475	1395297.49	543412.03	57.1
Trout Creek	13NX8090	1395246.00	548476.88	60.2
Trout Creek	13NS0205	1415808.82	527072.59	55.7
Trout Creek	13NS0600	1413971.40	527568.82	55.6
Trout Creek	13NS0800	1414275.81	528284.35	55.5
Trout Creek	13NS0690	1415690.89	528053.26	55.7
Trout Creek	13NS1800	1410572.75	531162.15	54.6
Trout Creek	13NS2000	1409523.70	531723.32	54.5
Trout Creek	13NS2690	1406694.58	530956.88	54.4
Trout Creek	13NR7222	1398809.24	539050.55	52.4
Trout Creek	13NR7615	1398533.85	541477.20	52.4
Trout Creek	13NU9320	1403775.19	541326.80	58.4
Trout Creek	13NR2485	1414344.61	548640.00	74.3
Trout Creek	13NR3015	1409560.47	545449.50	65.2
Trout Creek	13NR3415	1405860.98	546254.61	67.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NR3425	1405728.19	545674.66	64.1
Trout Creek	13NR3235	1407895.19	545151.25	63.4
Trout Creek	13NR3225	1407623.62	546554.48	67.1
Trout Creek	13NW2415	1404611.06	547453.23	63.8
Trout Creek	13NR2550	1410424.33	547600.30	70.6
Trout Creek	13NR2555	1409748.93	547804.75	69.7
Trout Creek	13NW1505	1409221.36	550875.65	73.8
Trout Creek	13NW1515	1408033.25	550876.77	72.4
Trout Creek	13NW1485	1407713.91	551366.62	72.5
Trout Creek	13NW1475	1409769.74	553809.49	75.6
Trout Creek	13NX4035	1404878.59	553397.32	71.6
Trout Creek	13NX4025	1405998.60	553333.04	70.8
Trout Creek	13NS3615	1408344.22	535449.84	59.1
Trout Creek	13NS3625	1408132.08	535276.59	59.1
Trout Creek	13NS3635	1408109.10	535573.58	59.1
Trout Creek	13NU4855	1418115.33	541189.89	76.5
Trout Creek	13NS4215	1402730.71	536401.61	53.0
Trout Creek	13NS2056	1411077.59	533325.41	60.3
Trout Creek	13NS2057	1411082.85	533540.76	60.0
Trout Creek	13NU5032	1411978.92	537644.55	65.4
Trout Creek	13NS1005	1412831.90	531093.95	57.5
Trout Creek	13NS1002	1413364.61	531458.19	59.9
Trout Creek	13NS1025	1411912.55	530807.27	55.8
Trout Creek	13NS1300	1411482.52	530623.29	55.4
Trout Creek	13NS1350	1412047.14	530330.64	55.4
Trout Creek	13NS1360	1411587.46	530562.69	55.4
Trout Creek	13NT3105	1415185.65	533341.59	63.7
Trout Creek	13NS1900	1413070.15	533337.97	63.9
Trout Creek	13NS1950	1412562.27	534016.87	63.3
Trout Creek	13NR3500	1419191.18	548517.38	82.1
Trout Creek	13NR3685	1418553.22	548110.52	81.4
Trout Creek	13NS4265	1401365.78	537239.57	52.5
Trout Creek	13NW1476	1409628.74	553285.10	75.6
Trout Creek	13NW1478	1410048.08	552914.94	75.6
Trout Creek	13NW1435	1408385.70	555894.98	80.7
Trout Creek	13NX6115	1406088.52	556002.80	76.6
Trout Creek	13NW1525	1408368.27	548569.07	73.6
Trout Creek	13NW0007	1416738.24	557370.51	84.1
Trout Creek	13NW0005	1416612.54	557688.70	83.7
Trout Creek	13NW0009	1416779.57	557691.95	83.7
Trout Creek	13NU5034	1411352.09	537089.76	66.3
Trout Creek	13NU5036	1411242.99	537187.25	67.0
Trout Creek	13NU4848	1420317.08	541141.35	78.3
Trout Creek	13NR7215	1398477.42	539338.70	52.9
Trout Creek	13NR8025	1398215.06	538928.62	52.3
Trout Creek	13NR7225	1398206.24	539744.37	52.4
Trout Creek	13NR7300	1398051.91	539486.41	52.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NR8015	1397747.66	538935.23	52.9
Trout Creek	13NR8432	1397002.46	539440.12	51.4
Trout Creek	13NR8435	1396654.12	539532.71	51.4
Trout Creek	13NR8602	1396848.13	538331.14	53.2
Trout Creek	13NR8605	1396468.92	538353.19	51.9
Trout Creek	13NX8013	1396186.17	555293.40	68.1
Trout Creek	13NU0500	1419785.64	545328.52	81.3
Trout Creek	13NR2045	1421318.12	557632.18	95.9
Trout Creek	13NU4815	1420126.61	542462.42	80.8
Trout Creek	13NU4816	1420096.57	542151.58	80.4
Trout Creek	13NU4817	1419851.04	542343.01	81.0
Trout Creek	13NU4818	1419573.55	541850.69	80.1
Trout Creek	13NS2085	1410110.85	535732.16	61.4
Trout Creek	13NS2075	1410795.78	536195.01	65.1
Trout Creek	13NS2076	1410789.08	536385.82	64.5
Trout Creek	13NT2025	1415401.17	537670.82	67.4
Trout Creek	13NR3805	1416699.26	544299.62	73.0
Trout Creek	13NU0550	1419060.50	543249.94	79.5
Trout Creek	13NT2900	1416180.13	534782.00	63.8
Trout Creek	13NU4842	1419842.76	540555.81	75.2
Trout Creek	13NR2420	1415583.59	550074.24	78.2
Trout Creek	13NR2265	1417130.41	551970.68	81.7
Trout Creek	13NR2255	1418300.23	551829.94	85.9
Trout Creek	13NR6300	1400430.13	541961.94	56.4
Trout Creek	13NR6550	1400327.03	541990.58	55.9
Anclote	7ND1570	1395509.60	505649.70	71.0
Anclote	7ND1065	1395523.74	505078.35	71.0
Anclote	7ND1073	1395587.34	504912.11	70.9
Anclote	7ND1055	1395671.66	505136.86	71.0
Anclote	7ND0790	1395685.84	499936.89	64.3
Anclote	7ND0730	1395771.81	503917.12	70.5
Anclote	7ND0800	1395777.16	499579.53	64.7
Anclote	7NL0020	1395787.50	497122.50	62.9
Anclote	7NE0580	1395837.86	489414.97	58.1
Anclote	7NE0695	1395842.35	488864.46	57.2
Anclote	7NE0630	1395843.44	488741.50	57.1
Anclote	7NL0150	1395847.50	494457.50	63.4
Anclote	7ND1560	1395848.84	505679.65	71.0
Anclote	7NL0130	1395852.50	496972.50	62.8
Anclote	7NE0590	1395858.33	489169.39	57.4
Anclote	7NE0730	1395871.87	487928.29	56.9
Anclote	7NE0575	1395949.82	489613.97	58.1
Anclote	7ND0475	1395949.90	501669.05	64.3
Anclote	7NE2180	1395955.91	479708.91	58.3
Anclote	7NE0570	1395969.32	489827.67	58.3
Anclote	7ND0835	1395977.27	499382.64	65.0
Anclote	7ND0845	1395986.95	499046.97	65.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE1612	1396022.33	484215.42	55.1
Anclote	7ND0247	1396029.00	502138.56	66.1
Anclote	7NE2550	1396063.37	478086.79	57.2
Anclote	7ND0242	1396072.18	502577.04	69.6
Anclote	7NE0490	1396090.04	486901.32	56.5
Anclote	7NE2190	1396103.99	479661.84	58.3
East Pasco	6NF0270	1410669.76	605625.16	76.3
East Pasco	6NF0290	1411142.68	606814.63	72.9
East Pasco	6NF0320	1409360.96	607397.33	71.1
East Pasco	6NF0180	1414448.88	607831.74	77.2
East Pasco	6ND0060	1428182.45	598958.68	80.9
East Pasco	6ND0020	1430406.05	601300.66	77.1
East Pasco	6NB0200	1443794.68	595629.16	80.0
East Pasco	6NE0100	1421848.20	583442.68	103.0
East Pasco	6NE0090	1423248.48	581565.42	112.1
East Pasco	6NB0380	1435538.35	597591.98	81.5
East Pasco	6NC0050	1422985.45	586645.75	92.0
East Pasco	6ND0285	1424395.84	605009.35	83.6
East Pasco	6NE0190	1419228.04	586986.78	84.6
East Pasco	6NE0185	1420081.40	587374.56	95.3
East Pasco	6NE0540	1416563.69	595991.91	81.0
East Pasco	6NE0535	1416556.31	595708.02	81.6
East Pasco	6NF0025	1418007.73	606136.89	81.9
East Pasco	6NF0105	1415669.90	604031.32	81.0
East Pasco	6NF0345	1410614.48	609634.83	74.5
East Pasco	6NC0325	1425592.13	594340.63	81.7
East Pasco	6NB0285	1440607.16	599284.93	100.8
East Pasco	6NB0270	1439607.99	598598.39	76.6
East Pasco	6NB0291	1437691.64	597921.71	75.7
East Pasco	6ND0065	1429744.04	598411.94	109.1
East Pasco	6NB0475	1430842.56	598450.19	112.1
East Pasco	6NB0480	1430858.96	599554.18	128.3
East Pasco	6ND0075	1429749.50	599532.32	97.7
East Pasco	6NC0275	1429732.51	593370.91	99.6
East Pasco	6NB0280	1438474.67	599620.60	75.7
East Pasco	6NB0275	1439596.88	596998.40	97.5
East Pasco	6NB0276	1439520.56	597568.93	76.7
East Pasco	6NB0281	1439289.66	598571.02	76.6
East Pasco	6NB0277	1438963.55	597520.62	78.4
East Pasco	6NB0282	1438730.22	599398.38	75.7
East Pasco	6NB0286	1438169.11	598698.39	75.7
East Pasco	6NC0435	1427106.87	596338.31	127.8
East Pasco	6NC0335	1428254.42	595735.42	138.6
East Pasco	6NB0455	1429048.65	596371.13	167.8
East Pasco	6NB0405	1431907.88	594474.54	129.8
East Pasco	6NB0290	1437465.20	597313.91	80.4
East Pasco	6NB0295	1438536.20	595672.45	108.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NC0255	1429475.15	593704.47	95.8
East Pasco	6NC0290	1428151.81	592917.68	90.3
East Pasco	6NC0285	1428903.32	594006.91	106.0
East Pasco	6ND0260	1423708.76	603901.61	82.2
East Pasco	6ND0245	1424288.45	604967.07	83.9
East Pasco	6ND0255	1423720.43	603253.57	82.7
East Pasco	6NC0355	1422418.21	592119.70	83.5
East Pasco	6NC0370	1423504.85	592734.36	84.9
East Pasco	6NE0265	1421774.76	590620.37	86.7
East Pasco	6NC0185	1427006.04	590598.00	88.5
East Pasco	6NC0180	1426388.14	590768.29	88.5
East Pasco	6NC0235	1425721.89	591481.03	82.3
East Pasco	6NC0232	1425164.88	590892.72	85.9
East Pasco	6NC0234	1424245.61	591579.05	84.6
East Pasco	6NC0237	1424595.34	591493.91	82.2
East Pasco	6NC0225	1423439.13	590383.97	88.5
East Pasco	6NC0215	1422494.23	589980.33	88.5
East Pasco	6NC0205	1422314.10	590161.35	88.5
East Pasco	6NC0227	1422841.85	589009.58	88.5
East Pasco	6NC0229	1423534.54	589264.02	88.5
East Pasco	6NC0217	1423016.58	589401.82	88.5
East Pasco	6NC0222	1423555.02	589059.50	88.5
East Pasco	6NC0228	1424846.35	592538.57	80.3
East Pasco	6NC0315	1426424.54	593974.19	85.1
East Pasco	6NB0465	1431443.42	600355.97	84.7
East Pasco	6ND0045	1431092.77	600883.68	79.2
East Pasco	6ND0055	1430364.08	600523.13	82.8
East Pasco	6ND0025	1431147.32	601697.98	77.8
East Pasco	6NF0235	1410925.04	603779.04	73.6
East Pasco	6NF0265	1410880.10	604644.82	76.3
East Pasco	6NE0142	1421640.52	586310.41	95.4
East Pasco	6NE0145	1421615.81	585956.21	95.4
East Pasco	6NE0147	1421211.73	586655.82	95.4
East Pasco	6NE0172	1420887.61	586691.45	93.0
East Pasco	6NE0135	1421735.41	585839.10	95.4
East Pasco	6NE0105	1421748.08	583363.87	103.1
East Pasco	6NE0112	1421747.20	584165.85	99.5
East Pasco	6NE0095	1422631.39	581329.10	113.5
East Pasco	6NE0232	1421751.33	588798.62	97.4
East Pasco	6NC0197	1421765.19	589968.89	87.8
East Pasco	6ND0462	1422048.38	601510.00	84.4
East Pasco	6NA0192	1449493.33	589903.45	104.0
East Pasco	6NB0182	1443394.23	598023.23	96.7
East Pasco	6NB0185	1442652.64	598338.81	95.8
East Pasco	6NB0172	1443160.91	598834.01	96.1
East Pasco	6ND0152	1422791.86	597189.61	83.0
East Pasco	6ND0155	1422386.29	597125.36	82.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6ND0142	1422214.32	596355.94	88.1
East Pasco	6ND0147	1421823.35	596567.74	82.9
East Pasco	6NE0405	1421616.73	596160.10	87.0
East Pasco	6NE0412	1421506.53	595680.27	87.2
East Pasco	6ND0112	1424952.02	600132.24	85.4
East Pasco	6ND0375	1420853.95	608289.94	81.4
East Pasco	6ND0335	1424094.46	608826.61	83.4
East Pasco	6ND0325	1423449.27	608729.57	83.4
East Pasco	6ND0355	1423815.30	608933.96	83.5
East Pasco	6ND0570	1422888.61	608783.33	84.0
East Pasco	6ND0580	1422983.54	608828.54	84.0
East Pasco	6ND0590	1422886.35	608912.16	83.6
East Pasco	6ND0610	1422486.32	608995.78	83.6
East Pasco	6ND0600	1422438.86	609350.61	83.6
East Pasco	6NB0104	1433677.15	585489.83	174.1
East Pasco	6NB0106	1434215.12	585830.32	154.1
East Pasco	6NB0108	1434705.43	586558.96	123.4
East Pasco	6NB0131	1436265.64	587160.03	101.1
East Pasco	6NB0132	1436532.78	587746.77	93.5
East Pasco	6NB0134	1436550.04	588426.64	89.0
East Pasco	6NB0133	1437219.56	588405.94	88.6
East Pasco	6NB0136	1437150.54	588661.32	88.5
East Pasco	6NB0287	1437342.20	595663.12	121.4
East Pasco	6NB0436	1430182.44	596034.40	113.6
East Pasco	6NB0438	1430076.03	596232.59	114.9
East Pasco	6NB0437	1430230.93	596628.00	106.4
East Pasco	6NC0429	1425097.54	596832.62	93.0
East Pasco	6NC0428	1424756.85	596352.03	88.5
East Pasco	6NC0432	1425256.70	595709.96	87.5
East Pasco	6ND0113	1424353.23	600029.67	83.4
East Pasco	6NE0005	1430226.06	581242.34	146.5
East Pasco	6NE0015	1429591.97	581459.26	145.6
East Pasco	6NE0012	1428354.42	580131.00	134.6
East Pasco	6NE0017	1428698.81	581623.36	135.4
East Pasco	6NE0023	1427914.90	580452.25	132.1
East Pasco	6NE0024	1427686.65	580870.08	130.8
East Pasco	6NC0075	1430768.85	584098.45	173.9
East Pasco	6NC0085	1430006.63	584608.52	143.2
East Pasco	6NC0095	1429189.56	584902.49	131.6
East Pasco	6NC0065	1428136.28	585296.12	117.1
East Pasco	6NC0092	1427819.19	585623.65	105.7
East Pasco	6NC0087	1427948.77	584145.64	126.1
East Pasco	6NC0015	1423426.25	581971.06	116.7
East Pasco	6NE0121	1421108.49	582454.31	104.9
East Pasco	6NE0206	1418500.77	586053.96	83.6
East Pasco	6NE0204	1418195.88	585299.77	89.3
East Pasco	6NE0202	1417035.18	585329.18	83.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NE0208	1417214.40	585980.43	84.1
East Pasco	6NE0247	1421283.71	590275.49	86.1
East Pasco	6NE0249	1421083.49	590269.85	85.4
East Pasco	6NE0245	1420802.90	590725.27	81.0
East Pasco	6NE0277	1417528.24	593051.61	82.5
East Pasco	6NE0411	1420800.15	596605.75	82.9
East Pasco	6NE0585	1414777.62	596595.79	81.4
East Pasco	6NF0165	1415702.40	606451.17	81.6
East Pasco	6NF0167	1415812.73	608624.60	80.0
East Pasco	6NF0183	1415530.79	607227.78	87.4
East Pasco	6NF0181	1416781.67	607283.07	90.9
East Pasco	6NF0168	1417172.14	607480.03	84.3
East Pasco	6NF0425	1409309.88	610794.32	74.4
East Pasco	6NB0137	1436751.97	587801.45	92.6
East Pasco	6NB0101	1436206.84	584494.35	155.3
East Pasco	6NC0162	1426122.12	585716.54	93.3
East Pasco	6NC0164	1425444.04	585781.42	90.8
East Pasco	6NC0076	1430596.97	583886.84	170.9
East Pasco	6NC0077	1431518.77	584470.73	184.6
East Pasco	6NC0078	1431118.74	584838.45	178.4
East Pasco	6NB0142	1443318.68	591592.64	85.8
East Pasco	6NB0045	1445000.08	600291.11	107.4
East Pasco	6NB0055	1445073.54	599698.66	114.6
East Pasco	6ND0215	1420053.65	599228.83	81.7
East Pasco	6ND0235	1420366.74	599933.30	80.0
East Pasco	6NF0342	1416496.59	609441.28	80.9
East Pasco	6NF0338	1415264.08	610326.62	79.8
East Pasco	6ND0442	1420720.06	604383.49	83.0
East Pasco	6ND0455	1420506.07	604941.58	82.5
East Pasco	6ND0435	1420639.60	605361.01	83.1
East Pasco	6ND0425	1420002.76	604905.63	81.9
East Pasco	6ND0447	1419389.89	605273.70	80.2
East Pasco	6ND0452	1419291.24	605484.65	79.6
East Pasco	6ND0427	1420370.99	605616.05	83.0
East Pasco	6ND0432	1420580.59	606262.68	84.7
East Pasco	6ND0395	1421210.53	606309.37	81.7
East Pasco	6ND0050	1428317.73	598316.68	94.8
East Pasco	6ND0057	1428772.65	599676.19	79.4
East Pasco	6NF0057	1414881.37	599098.55	79.4
East Pasco	6NE0408	1420988.50	595936.09	85.1
East Pasco	6NE0399	1421720.14	595294.98	92.2
East Pasco	6NE0401	1421415.68	595559.82	87.6
East Pasco	6NE0421	1420821.64	595657.26	82.2
East Pasco	6NE0413	1420246.13	595526.14	82.2
East Pasco	6NE0472	1418818.00	595244.40	82.4
East Pasco	6NE0384	1419337.80	594627.36	82.2
East Pasco	6NE0485	1419090.09	594001.53	81.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
East Pasco	6NE0403	1421721.38	595981.71	88.6
East Pasco	6NC0322	1428188.66	596491.28	166.8
East Pasco	6NC0318	1428343.70	596103.12	156.0
East Pasco	6NB0406	1432093.23	595439.28	134.4
East Pasco	6NE0388	1420180.77	594484.28	82.8
East Pasco	6ND0141	1422717.79	595686.53	101.8
East Pasco	6NF0178	1414590.18	607701.81	77.9
East Pasco	6NF0179	1414862.00	607841.90	77.5
East Pasco	6NB0426	1432993.86	597588.52	85.8
East Pasco	6NF0099	1415453.00	602552.86	78.1
East Pasco	6NF0133	1414672.83	602665.78	78.1
East Pasco	6NF0134	1414674.54	602491.27	77.9
East Pasco	6NF0136	1414060.33	602710.26	78.5
East Pasco	6NF0111	1416174.62	602623.81	82.4
East Pasco	6NF0112	1415962.47	602376.59	79.9
East Pasco	6NF0115	1416028.28	602686.95	80.5
East Pasco	6NF0114	1416012.27	602465.52	79.4
East Pasco	6NF0108	1415638.87	602358.56	75.4
East Pasco	6NF0206	1415797.29	603052.16	80.4
East Pasco	6NF0152	1412509.30	605158.36	74.8
East Pasco	6NA0229	1450908.92	585750.99	98.3
East Pasco	6NB0261	1436191.26	591598.16	81.7
East Pasco	6ND0176	1424618.24	597878.52	85.6
East Pasco	6ND0186	1424345.37	597879.71	85.0
East Pasco	6ND0184	1424460.61	598150.60	84.7
East Pasco	6ND0187	1424274.00	598517.99	85.6
East Pasco	6ND0188	1424279.32	598582.18	85.2
East Pasco	6ND0126	1422042.28	597195.53	83.5
East Pasco	6ND0135	1421543.56	597890.30	83.1
East Pasco	6ND0136	1421496.96	598256.44	86.9
East Pasco	6ND0282	1424396.43	604864.54	86.2
East Pasco	6ND0286	1424360.35	604887.26	85.4
East Pasco	6ND0121	1424043.55	601085.27	82.7
East Pasco	6NC0052	1423403.59	586212.16	91.4
East Pasco	6NC0344	1422150.31	591025.96	89.0
Trout Creek	13NR3965	1407293.13	542912.93	62.7
Trout Creek	13NW1455	1408890.13	553467.75	74.1
Trout Creek	13NR3812	1414933.11	542905.97	71.3
Trout Creek	13NR0400	1414583.42	546084.50	72.3
Trout Creek	13NR3785	1416826.12	545478.84	73.5
Trout Creek	13NR3795	1416891.06	544740.40	73.0
Trout Creek	13NW0450	1412261.92	552615.63	77.2
Trout Creek	13NW1465	1410632.19	552235.33	78.0
Trout Creek	13NR3100	1409350.21	544240.38	65.2
Trout Creek	13NW1225	1411845.45	550470.24	74.2
Trout Creek	13NW0825	1413326.00	552321.66	78.4
Trout Creek	13NT3500	1415294.51	532672.88	63.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NT2020	1415205.93	537706.43	68.6
Trout Creek	13NT4030	1415197.89	531806.55	63.5
Trout Creek	13NW0050	1415076.60	554532.65	83.0
Trout Creek	13NU1780	1414863.54	541600.97	72.3
Trout Creek	13NS0850	1414928.35	529524.56	58.4
Trout Creek	13NR2280	1414919.32	552475.78	84.2
Trout Creek	13NS0830	1414765.59	530514.89	61.9
Trout Creek	13NR2460	1414743.52	550210.17	78.3
Trout Creek	13NU4970	1414634.58	538864.65	67.8
Trout Creek	13NT3520	1414480.49	533951.70	64.9
Trout Creek	13NT3530	1414415.68	533103.41	63.4
Trout Creek	13NT4500	1414386.02	531641.94	61.0
Trout Creek	13NT5000	1414340.24	531548.52	60.5
Trout Creek	13NS0860	1414333.29	529707.61	56.3
Trout Creek	13NU5000	1414271.94	539525.39	67.0
Trout Creek	13NT5500	1414259.80	530639.93	57.8
Trout Creek	13NT3510	1414153.35	534621.34	64.9
Trout Creek	13NS0210	1414030.93	525835.80	55.6
Trout Creek	13NR3815	1414016.55	543488.60	68.3
Trout Creek	13NW0810	1413973.79	551836.57	79.6
Trout Creek	13NT2060	1413971.47	535296.00	64.9
Trout Creek	13NR2470	1413797.34	550432.13	76.5
Trout Creek	13NR3820	1413732.39	542821.61	67.5
Trout Creek	13NS2020	1413336.97	532883.26	63.3
Trout Creek	13NS2030	1413296.48	534970.80	64.8
Trout Creek	13NR3830	1413202.87	542938.80	67.4
Trout Creek	13NR3740	1415380.03	547066.85	72.4
Trout Creek	13NR2480	1414193.95	549487.27	73.9
Trout Creek	13NR2440	1415904.98	549340.21	78.3
Trout Creek	13NR3430	1405942.27	545318.57	63.3
Trout Creek	13NR0500	1413032.09	545199.45	69.2
Trout Creek	13NS0420	1412881.75	526796.50	55.6
Trout Creek	13NU3410	1412805.13	540611.71	65.0
Trout Creek	13NU5040	1412791.28	538292.05	65.3
Trout Creek	13NS1010	1412703.77	530521.87	56.2
Trout Creek	13NW1220	1412669.66	550127.56	73.5
Trout Creek	13NS0870	1413144.13	530134.07	56.4
Trout Creek	13NS0410	1412465.91	526202.14	57.5
Trout Creek	13NR3840	1412465.77	542350.62	64.9
Trout Creek	13NW0400	1412406.29	553120.34	78.9
Trout Creek	13NU3300	1412159.87	541342.26	65.1
Trout Creek	13NR3850	1412109.26	543103.20	67.4
Trout Creek	13NX8020	1396562.59	554951.55	66.4
Trout Creek	13NR2000	1410556.50	544194.02	66.5
Trout Creek	13NR3230	1408310.46	546856.50	66.6
Trout Creek	13NX2100	1403922.58	549084.08	63.7
Trout Creek	13NX2200	1402848.33	548459.15	61.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NR6000	1400985.73	541888.47	56.8
Trout Creek	13NR6210	1401333.64	541709.68	57.8
Trout Creek	13NR6200	1400637.37	541756.72	56.5
Trout Creek	13NU9800	1401897.71	542099.96	58.0
Trout Creek	13NR6220	1401550.35	542080.55	57.7
Trout Creek	13NW0035	1416144.71	554334.94	83.8
Trout Creek	13NR4600	1404178.69	544118.90	60.8
Trout Creek	13NU8610	1405322.41	541374.91	60.3
Trout Creek	13NU9010	1404463.74	541105.85	58.5
Trout Creek	13NU9310	1403618.91	541082.42	58.4
Trout Creek	13NU9280	1403485.95	540277.27	58.3
Trout Creek	13NS4070	1404182.02	539059.39	55.2
Trout Creek	13NS4230	1403943.33	539235.15	58.3
Trout Creek	13NS4050	1404384.33	538664.89	56.3
Trout Creek	13NS4260	1402866.45	538952.23	52.5
Trout Creek	13NS4410	1402171.33	539309.94	56.6
Trout Creek	13NS4420	1401962.12	539170.02	52.7
Trout Creek	13NS4270	1401794.08	537710.94	52.5
Trout Creek	13NS4210	1403348.06	538404.26	55.2
Trout Creek	13NS4000	1403658.17	536930.62	52.6
Trout Creek	13NS4080	1404839.69	537657.96	56.4
Trout Creek	13NS4100	1404469.81	537164.33	54.3
Trout Creek	13NU9260	1405553.37	540122.16	60.1
Trout Creek	13NU9250	1405614.84	540119.17	61.1
Trout Creek	13NS3400	1405133.21	534106.98	52.6
Trout Creek	13NS3000	1405941.35	533540.46	54.4
Trout Creek	13NS3200	1405836.57	533723.60	52.6
Trout Creek	13NR8600	1396157.29	540012.41	51.6
Trout Creek	13NX8100	1396414.15	546942.86	60.5
Trout Creek	13NX8030	1396373.79	554312.65	64.0
Trout Creek	13NR8610	1396280.52	537827.11	50.0
Trout Creek	13NV1480	1396256.35	542751.24	56.3
Trout Creek	13NU5045	1411953.54	538567.13	65.0
Trout Creek	13NU5035	1412290.65	538485.36	66.7
Trout Creek	13NU5075	1411909.13	539140.87	67.5
Trout Creek	13NU5065	1412489.57	539516.44	67.4
Trout Creek	13NU5055	1411529.06	538462.18	64.8
Trout Creek	13NU2900	1413675.64	540842.71	70.5
Trout Creek	13NU2800	1414071.78	539973.32	70.5
Trout Creek	13NU4975	1414994.17	540714.55	72.8
Trout Creek	13NU9240	1406324.44	540050.64	61.2
Trout Creek	13NS3720	1406035.07	536439.64	53.9
Trout Creek	13NS4020	1406002.91	538705.84	61.3
Trout Creek	13NU9210	1405872.15	539593.86	61.2
Trout Creek	13NX6100	1405714.52	558316.51	76.7
Trout Creek	13NR3600	1405868.88	544276.63	60.8
Trout Creek	13NW2000	1405676.72	548761.87	69.2

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NU8600	1405614.89	541446.38	60.9
Trout Creek	13NS4030	1405804.78	538256.29	59.1
Trout Creek	13NR4010	1405445.62	543371.80	60.8
Trout Creek	13NW2430	1405430.10	546581.42	66.3
Trout Creek	13NS3740	1405267.34	536639.95	52.7
Trout Creek	13NR3980	1404969.96	542289.52	60.8
Trout Creek	13NX4060	1404872.16	555724.42	76.8
Trout Creek	13NU9270	1404799.22	540082.47	58.8
Trout Creek	13NX4040	1404656.46	552282.34	70.0
Trout Creek	13NS3600	1404326.05	535552.82	52.6
Trout Creek	13NX2050	1404328.42	549527.59	66.9
Trout Creek	13NR3200	1408542.57	544220.40	63.5
Trout Creek	13NR3000	1409896.06	544184.36	65.5
Trout Creek	13NR1500	1411189.49	545013.28	68.1
Trout Creek	13NU9020	1404283.30	542099.14	60.8
Trout Creek	13NU9200	1404286.25	541416.31	58.5
Trout Creek	13NW2440	1404152.48	547724.91	63.3
Trout Creek	13NW2800	1403977.18	545935.37	62.1
Trout Creek	13NR4030	1403903.83	542953.14	60.8
Trout Creek	13NX6150	1403848.46	556972.81	74.3
Trout Creek	13NR4020	1403520.61	542961.14	60.8
Trout Creek	13NX4090	1405793.25	554542.79	73.9
Trout Creek	13NX6120	1404173.95	557698.17	81.2
Trout Creek	13NX6360	1396545.16	553135.38	61.2
Trout Creek	13NX6130	1404836.45	557591.92	80.2
Trout Creek	13NX4020	1407714.46	553202.42	72.4
Trout Creek	13NW1450	1408546.30	554198.54	75.5
Trout Creek	13NR3990	1404755.97	542773.56	60.8
Trout Creek	13NW1440	1408131.97	555197.92	80.6
Trout Creek	13NW3250	1403441.35	546694.88	63.1
Trout Creek	13NX6220	1399714.08	554144.23	69.1
Trout Creek	13NV0400	1399704.67	546833.56	59.1
Trout Creek	13NX4260	1399700.33	553007.43	66.6
Trout Creek	13NX4240	1399636.39	553294.37	67.0
Trout Creek	13NX3050	1399525.19	550767.91	64.0
Trout Creek	13NX6250	1399331.08	557349.24	68.3
Trout Creek	13NV2000	1397915.51	541708.04	52.4
Trout Creek	13NR6700	1400053.15	541464.34	53.2
Trout Creek	13NX3100	1399379.03	550639.29	64.0
Trout Creek	13NV0210	1399376.74	547884.81	59.1
Trout Creek	13NV1090	1399361.62	544835.45	54.8
Trout Creek	13NV0420	1399359.32	546254.63	57.8
Trout Creek	13NX4320	1399653.96	551859.40	66.6
Trout Creek	13NX3500	1399325.47	549729.86	59.8
Trout Creek	13NX6270	1399283.17	556398.95	68.0
Trout Creek	13NV0200	1399771.04	548602.22	59.3
Trout Creek	13NV1110	1399237.76	544405.40	54.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NV0410	1399216.41	546823.05	58.9
Trout Creek	13NV0600	1399152.18	546364.25	58.9
Trout Creek	13NV0800	1399143.79	546325.54	58.5
Trout Creek	13NV0030	1399121.18	548355.43	59.3
Trout Creek	13NV1230	1399018.33	543356.84	57.9
Trout Creek	13NX4330	1399057.66	552169.43	66.0
Trout Creek	13NV0640	1398919.65	546404.27	58.8
Trout Creek	13NR7220	1398891.53	538783.87	52.6
Trout Creek	13NV1050	1398869.82	545084.87	55.9
Trout Creek	13NX6260	1398864.78	556235.68	67.9
Trout Creek	13NV1220	1398728.68	544168.50	55.9
Trout Creek	13NV1510	1398647.99	542843.37	54.7
Trout Creek	13NX4300	1398756.87	553499.83	67.2
Trout Creek	13NV0050	1398629.15	549242.94	60.2
Trout Creek	13NV1040	1398541.66	545436.99	57.3
Trout Creek	13NX4340	1398510.68	551926.19	63.6
Trout Creek	13NX6300	1398497.41	555898.94	67.9
Trout Creek	13NR7610	1398492.79	541150.00	52.4
Trout Creek	13NR7230	1398487.89	539825.54	52.4
Trout Creek	13NV0040	1398459.96	548481.95	59.5
Trout Creek	13NX6280	1398510.30	556978.57	67.9
Trout Creek	13NX4370	1398425.10	551112.82	61.6
Trout Creek	13NR7620	1398384.27	541714.81	52.4
Trout Creek	13NX6290	1398368.17	554817.23	67.9
Trout Creek	13NX4380	1398332.33	550797.81	60.4
Trout Creek	13NR7630	1398293.54	541326.05	52.4
Trout Creek	13NX4390	1398160.33	550654.80	60.0
Trout Creek	13NR8000	1398085.47	540427.48	52.3
Trout Creek	13NV0630	1398064.23	547228.95	60.0
Trout Creek	13NV0620	1397948.41	546493.99	58.8
Trout Creek	13NV1030	1397939.96	545574.68	58.9
Trout Creek	13NX6330	1397920.19	554272.84	65.4
Trout Creek	13NV1210	1397874.57	544366.69	57.3
Trout Creek	13NX6340	1397859.94	552635.70	62.5
Trout Creek	13NX6350	1397816.02	552875.27	61.1
Trout Creek	13NX4350	1397757.98	551879.58	61.6
Trout Creek	13NV1800	1397735.40	542160.49	53.6
Trout Creek	13NV1600	1397732.90	542330.50	54.5
Trout Creek	13NV1500	1397641.78	542897.06	54.5
Trout Creek	13NR8030	1397639.28	539968.02	52.3
Trout Creek	13NR8020	1397623.13	539372.75	52.4
Trout Creek	13NX6310	1397599.93	554591.29	65.4
Trout Creek	13NV1020	1397581.41	545115.05	57.2
Trout Creek	13NR8210	1397442.23	540997.82	52.3
Trout Creek	13NV1490	1397429.11	543820.67	54.7
Trout Creek	13NX6320	1397325.72	554393.92	65.4
Trout Creek	13NV0610	1397387.10	546578.90	60.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NV0020	1397330.33	548422.56	60.0
Trout Creek	13NX4360	1397282.39	551246.32	60.0
Trout Creek	13NX6380	1397236.18	552132.72	61.0
Trout Creek	13NX8010	1396949.90	555186.81	66.4
Trout Creek	13NX4400	1397079.95	549878.45	60.2
Trout Creek	13NR8410	1397042.42	540025.27	52.2
Trout Creek	13NX8040	1396694.97	553744.07	63.1
Trout Creek	13NX6390	1396852.42	551661.59	60.0
Trout Creek	13NX8000	1396834.20	551009.26	60.0
Trout Creek	13NV1010	1396700.18	545864.54	57.8
Trout Creek	13NW0880	1411096.82	550925.49	74.8
Trout Creek	13NW3230	1401116.44	547057.63	59.1
Trout Creek	13NV1060	1400596.60	544972.36	58.2
Trout Creek	13NR5800	1401475.12	542183.74	57.7
Trout Creek	13NS4610	1400757.31	539601.18	53.2
Trout Creek	13NX6240	1400180.25	557109.34	69.4
Trout Creek	13NX4230	1400291.83	552847.18	66.6
Trout Creek	13NV1095	1400448.89	542946.48	57.9
Trout Creek	13NR6400	1400522.59	541608.40	56.4
Trout Creek	13NX4120	1404031.43	553763.68	70.6
Trout Creek	13NX6180	1401661.10	555816.57	71.9
Trout Creek	13NX6190	1401473.60	555323.51	70.6
Trout Creek	13NX6170	1401533.20	556719.73	73.1
Trout Creek	13NX6160	1402788.84	556406.37	72.5
Trout Creek	13NX6110	1406111.45	557026.29	76.7
Trout Creek	13NX6070	1409517.63	556181.01	83.6
Trout Creek	13NS4800	1400432.11	539101.82	52.5
Trout Creek	13NR4800	1403661.38	544088.47	60.5
Trout Creek	13NS3800	1403919.57	536512.42	52.6
Trout Creek	13NS3410	1403924.75	535134.39	52.6
Trout Creek	13NS2710	1405500.81	531764.04	54.4
Trout Creek	13NS2400	1408539.45	532280.86	54.5
Trout Creek	13NS1400	1410771.86	530326.17	55.4
Trout Creek	13NS1600	1410754.81	530381.10	54.7
Trout Creek	13NS1000	1412331.57	529831.94	55.4
Trout Creek	13NS1020	1412091.41	530868.29	55.8
Trout Creek	13NT6000	1414248.74	530604.12	55.4
Trout Creek	13NT4010	1414243.30	532227.91	63.7
Trout Creek	13NT4020	1413474.00	532004.29	63.2
Trout Creek	13NS0400	1414509.23	526973.47	55.6
Trout Creek	13NS0010	1418146.04	528203.37	60.8
Trout Creek	13NR8010	1397337.76	538975.01	52.8
Trout Creek	13NS0030	1417341.48	528376.22	60.3
Trout Creek	13NT2380	1417983.02	532564.22	63.6
Trout Creek	13NT2370	1418989.52	532978.83	66.2
Trout Creek	13NT2000	1417468.46	535641.62	64.6
Trout Creek	13NT1050	1419180.07	536142.88	67.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NT1060	1418676.33	535880.80	66.5
Trout Creek	13NT4000	1414917.39	532437.90	63.3
Trout Creek	13NT3540	1414434.15	532707.19	63.4
Trout Creek	13NT2070	1414327.15	535503.30	65.0
Trout Creek	13NU4920	1418315.14	539398.83	72.8
Trout Creek	13NU4950	1416000.79	538665.86	72.9
Trout Creek	13NU5030	1413154.06	537802.09	66.2
Trout Creek	13NU5060	1411119.89	538953.78	64.7
Trout Creek	13NU1000	1418146.97	544558.55	76.1
Trout Creek	13NU3000	1413083.46	541216.00	69.1
Trout Creek	13NU4600	1408630.58	540732.16	62.7
Trout Creek	13NU8400	1406013.84	541390.57	61.1
Trout Creek	13NR5400	1401603.06	542448.36	58.9
Trout Creek	13NR5300	1402332.43	543872.27	59.5
Trout Creek	13NW3200	1402354.08	545447.78	59.8
Trout Creek	13NV0230	1400793.54	546303.43	59.2
Trout Creek	13NW3210	1402176.94	547158.26	59.4
Trout Creek	13NV0220	1400624.04	547557.94	59.1
Trout Creek	13NR3970	1406387.98	542550.82	60.8
Trout Creek	13NW1400	1409013.65	549596.52	71.9
Trout Creek	13NR2540	1409164.06	548491.95	71.3
Trout Creek	13NW1240	1409793.13	549381.46	72.0
Trout Creek	13NW1000	1410562.46	550263.75	73.5
Trout Creek	13NW1200	1409685.67	549879.56	71.9
Trout Creek	13NR2560	1410063.26	547010.67	69.5
Trout Creek	13NR2570	1410584.27	545744.79	68.6
Trout Creek	13NW3000	1403352.46	545385.42	60.5
Trout Creek	13NX4290	1399696.19	552766.26	66.6
Trout Creek	13NX4310	1398546.67	552498.21	66.1
Trout Creek	13NU9400	1403098.31	541288.46	58.3
Trout Creek	13NS4250	1402988.91	539549.26	58.0
Trout Creek	13NR5200	1403006.45	544072.84	60.3
Trout Creek	13NR5210	1402833.98	543058.36	58.9
Trout Creek	13NX1500	1402549.87	551007.22	68.4
Trout Creek	13NX4150	1402551.46	554548.82	68.7
Trout Creek	13NX2150	1402474.59	548191.86	61.1
Trout Creek	13NU9305	1402741.65	542065.45	58.4
Trout Creek	13NS3420	1405310.27	534945.08	53.0
Trout Creek	13NU8800	1405448.21	541458.96	60.4
Trout Creek	13NU9000	1405139.31	541444.48	59.9
Trout Creek	13NW3400	1401855.79	544878.79	59.4
Trout Creek	13NX4160	1401908.50	553200.13	67.0
Trout Creek	13NX4190	1401886.06	551928.34	67.8
Trout Creek	13NW3260	1401883.70	546466.40	59.1
Trout Creek	13NR5600	1401569.63	542363.70	58.8
Trout Creek	13NW3220	1401557.05	547802.98	60.4
Trout Creek	13NS2050	1411947.90	535001.56	64.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NS0880	1411842.39	528619.62	55.5
Trout Creek	13NR1000	1411984.62	545562.41	68.7
Trout Creek	13NU5050	1412186.63	539159.27	67.3
Trout Creek	13NR0520	1411760.16	546202.76	69.5
Trout Creek	13NU5090	1411668.29	537959.92	65.2
Trout Creek	13NW0027	1411650.21	555927.30	84.2
Trout Creek	13NS2070	1411254.71	535458.86	63.3
Trout Creek	13NT2050	1414445.09	536706.76	65.0
Trout Creek	13NT1530	1418093.49	536735.02	70.5
Trout Creek	13NU5020	1412680.16	537322.31	66.1
Trout Creek	13NU5010	1414003.47	537816.64	66.2
Trout Creek	13NW0850	1411549.87	551433.99	76.2
Trout Creek	13NS2060	1411519.22	533434.50	58.7
Trout Creek	13NU3600	1411719.61	541204.41	64.7
Trout Creek	13NW1415	1411437.03	553530.34	78.8
Trout Creek	13NR3870	1411230.59	542019.38	64.8
Trout Creek	13NR2490	1413137.50	548929.23	72.6
Trout Creek	13NW1230	1411273.81	549199.08	72.5
Trout Creek	13NR2450	1415136.01	549247.31	77.3
Trout Creek	13NW2600	1404335.97	546322.56	62.6
Trout Creek	13NW2410	1406162.33	548063.38	67.9
Trout Creek	13NX0500	1404230.70	551177.70	69.9
Trout Creek	13NX2000	1402793.81	550238.63	65.7
Trout Creek	13NX4270	1401189.15	552290.87	66.6
Trout Creek	13NX4200	1401246.25	552703.29	66.6
Trout Creek	13NW2400	1404971.03	547141.36	63.6
Trout Creek	13NU3800	1411199.80	541109.64	64.7
Trout Creek	13NR2510	1411127.29	546993.44	69.7
Trout Creek	13NX6050	1411087.31	555227.97	84.7
Trout Creek	13NW0800	1411011.00	551681.65	75.0
Trout Creek	13NR3860	1410889.93	542453.23	67.0
Trout Creek	13NR3875	1410841.93	542336.55	64.8
Trout Creek	13NS1030	1410730.47	529846.27	56.1
Trout Creek	13NU4000	1410696.90	541130.63	64.7
Trout Creek	13NU4200	1410651.42	541120.95	64.7
Trout Creek	13NW1420	1410649.67	554172.65	79.6
Trout Creek	13NU5080	1410641.26	540052.26	64.7
Trout Creek	13NX6020	1410592.66	557803.60	83.5
Trout Creek	13NS2080	1410449.59	535311.22	59.5
Trout Creek	13NX6060	1410120.36	555866.47	84.7
Trout Creek	13NR3935	1410090.18	543236.99	65.7
Trout Creek	13NU5100	1410271.38	537487.74	64.1
Trout Creek	13NR2530	1410017.72	548764.75	71.7
Trout Creek	13NW1470	1409996.04	552126.28	75.4
Trout Creek	13NS2100	1410164.78	534077.19	55.5
Trout Creek	13NS0680	1416367.80	527883.61	59.2
Trout Creek	13NU9290	1403827.91	540080.82	58.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NU4400	1409667.96	540982.19	64.7
Trout Creek	13NR3010	1409845.82	546334.41	69.1
Trout Creek	13NR3890	1409474.41	541655.71	64.0
Trout Creek	13NR3940	1409395.72	542802.97	65.7
Trout Creek	13NW1430	1410695.21	553386.63	75.6
Trout Creek	13NW2420	1405702.01	546668.48	66.3
Trout Creek	13NX6030	1409870.65	557346.98	83.2
Trout Creek	13NX4110	1404636.01	554516.22	71.5
Trout Creek	13NW1490	1409212.46	551756.96	73.6
Trout Creek	13NW1480	1409158.36	552599.38	73.8
Trout Creek	13NS2110	1409071.55	533998.13	54.5
Trout Creek	13NW2200	1405264.19	548211.82	66.8
Trout Creek	13NU8200	1407336.41	540973.79	61.3
Trout Creek	13NU8000	1407976.98	539109.12	61.3
Trout Creek	13NU4800	1407943.04	540340.29	61.7
Trout Creek	13NR3020	1408958.57	545234.78	64.4
Trout Creek	13NS2120	1408939.33	533731.88	54.5
Trout Creek	13NR3900	1408793.72	541659.98	62.1
Trout Creek	13NS3605	1408756.78	535547.35	59.8
Trout Creek	13NS2620	1408735.76	529210.14	56.7
Trout Creek	13NS3620	1408266.10	537073.92	60.7
Trout Creek	13NR3950	1408228.32	543219.44	63.5
Trout Creek	13NW1510	1408205.71	550324.16	72.4
Trout Creek	13NR3910	1408167.56	542332.19	62.3
Trout Creek	13NR3920	1408166.42	542410.35	62.0
Trout Creek	13NS2630	1407559.06	528384.31	58.5
Trout Creek	13NX4010	1407433.58	554260.58	79.5
Trout Creek	13NR3240	1407404.13	545546.29	63.4
Trout Creek	13NS0670	1416626.11	528461.28	57.6
Trout Creek	13NS2680	1407292.22	530077.07	54.4
Trout Creek	13NS2650	1407210.64	528363.45	57.9
Trout Creek	13NS2640	1407197.80	528195.04	58.5
Trout Creek	13NR3210	1407151.78	547256.95	67.4
Trout Creek	13NS3640	1407643.86	536068.00	59.4
Trout Creek	13NR3410	1406959.17	546433.54	65.3
Trout Creek	13NX4030	1406946.02	552613.48	71.9
Trout Creek	13NS2420	1406908.03	534269.46	53.8
Trout Creek	13NW0195	1412322.98	554552.09	80.8
Trout Creek	13NW1409	1411673.60	553870.86	79.5
Trout Creek	13NT2490	1418473.49	537334.74	70.9
Trout Creek	13NU4857	1419212.03	539986.35	74.3
Trout Creek	13NX6045	1411081.53	555804.29	84.4
Trout Creek	13NW0013	1415107.52	555896.97	83.1
Trout Creek	13NW0002	1417041.03	558597.36	95.6
Trout Creek	13NW0004	1416607.79	557937.66	90.0
Trout Creek	13NW0006	1416886.77	557317.35	85.8
Trout Creek	13NU5099	1409587.54	537903.49	64.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NU5098	1410858.46	537086.74	64.4
Trout Creek	13NX8065	1395690.57	553265.15	60.9
Trout Creek	13NX6295	1398840.94	555388.88	67.9
Trout Creek	13NX8012	1396633.25	555326.41	69.3
Trout Creek	13NX8014	1396318.87	555270.46	67.7
Trout Creek	13NX8016	1395951.21	554982.73	65.3
Trout Creek	13NX8018	1395522.28	555115.94	64.4
Trout Creek	13NS0615	1418276.48	530186.24	65.0
Trout Creek	13NS3665	1407082.88	537224.45	58.7
Trout Creek	13NS3705	1405863.33	537680.80	59.4
Trout Creek	13NS3695	1406184.65	538254.32	60.8
Trout Creek	13NW2405	1407427.29	548283.10	70.7
Trout Creek	13NX6025	1410720.72	556669.51	84.6
Trout Creek	13NU9205	1406050.57	539673.33	62.8
Trout Creek	13NR2475	1414861.51	548604.77	76.0
Trout Creek	13NS2055	1412722.89	534896.17	61.7
Trout Creek	13NU9350	1402546.51	541329.99	58.4
Trout Creek	13NS2720	1406230.10	531970.90	54.4
Trout Creek	13NS4040	1405255.76	538198.99	53.0
Trout Creek	13NS4090	1404630.31	537797.39	52.6
Trout Creek	13NS4200	1403478.72	537334.65	52.6
Trout Creek	13NS4400	1402259.50	538050.35	52.5
Trout Creek	13NS4600	1401263.04	538554.63	52.5
Trout Creek	13NS5200	1399974.12	539063.32	52.5
Trout Creek	13NS5400	1399301.74	539358.15	52.4
Trout Creek	13NT2090	1414939.89	535056.33	65.0
Trout Creek	13NT2100	1415135.13	535024.76	65.0
Trout Creek	13NT2330	1420102.40	533128.88	66.2
Trout Creek	13NT1500	1418316.65	535714.05	66.5
Trout Creek	13NR2180	1418209.76	553708.64	86.4
Trout Creek	13NU4860	1418208.69	540576.68	72.8
Trout Creek	13NU4890	1418171.82	538370.93	74.4
Trout Creek	13NT3060	1416673.80	531484.13	63.8
Trout Creek	13NT3080	1416686.95	532178.10	63.4
Trout Creek	13NT3090	1416506.62	532627.04	63.5
Trout Creek	13NU4870	1416543.53	538421.17	73.8
Trout Creek	13NU1410	1416462.71	543140.54	72.3
Trout Creek	13NS0650	1416584.94	529139.38	58.2
Trout Creek	13NT3000	1416233.98	534007.50	63.4
Trout Creek	13NT2010	1416221.76	537165.87	70.1
Trout Creek	13NR3780	1416175.19	545916.55	72.4
Trout Creek	13NT3100	1416130.19	531848.21	63.4
Trout Creek	13NR3800	1416096.23	544617.73	71.9
Trout Creek	13NS0660	1415820.65	528677.50	57.7
Trout Creek	13NS0810	1415854.13	529957.59	64.2
Trout Creek	13NS0840	1415776.01	529509.68	60.7
Trout Creek	13NU1800	1415653.53	541676.44	71.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NU4960	1415591.65	539406.07	70.2
Trout Creek	13NS0820	1415536.43	530452.38	64.3
Trout Creek	13NT2030	1415526.48	537153.20	67.4
Trout Creek	13NT2110	1415456.58	534864.11	64.9
Trout Creek	13NT2040	1415441.66	536513.50	67.4
Trout Creek	13NW1500	1409628.96	550415.02	73.4
Trout Creek	13NX3000	1399910.38	550009.87	60.9
Trout Creek	13NX2500	1401789.77	549477.82	61.1
Trout Creek	13NR2290	1415397.12	552786.10	83.3
Trout Creek	13NW1520	1407433.69	550650.99	72.0
Trout Creek	13NU4945	1414857.34	539990.15	70.1
Trout Creek	13NU4955	1414735.74	539913.68	70.1
Trout Creek	13NU4965	1414721.64	539555.53	67.7
Trout Creek	13NU1750	1416378.01	541587.02	73.3
Trout Creek	13NU1760	1416011.79	541161.05	73.0
Trout Creek	13NU1630	1415453.12	541178.48	67.1
Trout Creek	13NU2905	1413817.36	541105.27	66.2
Trout Creek	13NX8002	1396305.27	552297.58	60.0
Trout Creek	13NX8004	1395627.43	552341.79	60.0
Trout Creek	13NX8006	1395236.94	552470.73	60.0
Trout Creek	13NX8008	1395479.55	552990.33	60.9
Trout Creek	13NS4500	1401490.89	539890.21	55.4
Trout Creek	13NR2070	1420300.35	555645.16	94.7
Trout Creek	13NT2230	1417396.79	534629.11	64.3
Trout Creek	13NR3770	1417395.90	545662.23	74.1
Trout Creek	13NR3690	1417390.68	548560.51	78.0
Trout Creek	13NU4900	1417350.82	537540.09	72.8
Trout Creek	13NU1010	1417322.81	544206.97	75.2
Trout Creek	13NT3070	1417317.45	532138.76	66.1
Trout Creek	13NT2240	1417155.80	534734.70	64.2
Trout Creek	13NU1400	1417223.17	543284.18	74.2
Trout Creek	13NR2220	1417111.31	552384.99	82.5
Trout Creek	13NR3710	1417086.00	547904.59	78.0
Trout Creek	13NU1610	1417055.22	541322.20	72.1
Trout Creek	13NS0630	1417013.48	529461.28	59.7
Trout Creek	13NR3720	1416948.32	547584.83	75.4
Trout Creek	13NT3010	1416922.12	530271.65	69.2
Trout Creek	13NU1600	1416561.04	542599.49	72.7
Trout Creek	13NT2410	1416841.63	533320.64	63.6
Trout Creek	13NT3050	1416804.79	530758.27	67.7
Trout Creek	13NU4880	1416747.53	538950.68	72.7
Trout Creek	13NS4550	1401259.04	539862.61	55.3
Trout Creek	13NR5900	1401092.49	542095.98	56.8
Trout Creek	13NV1005	1400935.87	545028.46	59.4
Trout Creek	13NX2490	1401611.73	550362.80	64.7
Trout Creek	13NX2480	1400929.25	550436.45	63.4
Trout Creek	13NX4188	1401623.54	551819.13	68.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NX4265	1400894.79	552451.75	66.6
Trout Creek	13NX4268	1400674.49	552632.42	66.6
Trout Creek	13NX4195	1401209.61	553656.13	69.8
Trout Creek	13NX4197	1401279.55	553040.69	68.4
Trout Creek	13NX4220	1400488.49	553656.13	68.9
Trout Creek	13NX4145	1402208.38	554121.77	69.0
Trout Creek	13NS2058	1411063.59	533771.88	60.8
Trout Creek	13NR6500	1399553.77	541729.53	53.6
Trout Creek	13NS0035	1417544.42	528733.00	60.0
Trout Creek	13NT3035	1418317.50	530745.89	71.2
Trout Creek	13NS0643	1417264.35	529041.39	60.1
Trout Creek	13NS0641	1416699.44	530184.17	67.8
Trout Creek	13NT1015	1419952.02	536164.36	69.3
Trout Creek	13NT0400	1419822.72	534216.82	68.3
Trout Creek	13NT2305	1419823.59	533760.98	66.2
Trout Creek	13NT2315	1419949.90	533629.91	66.2
Trout Creek	13NT2345	1419038.92	533258.81	66.4
Trout Creek	13NT2325	1419872.81	532930.05	66.1
Trout Creek	13NT2205	1418687.13	534440.03	67.7
Trout Creek	13NT2375	1418599.34	532873.68	66.2
Trout Creek	13NT2385	1418266.07	533179.58	65.1
Trout Creek	13NT2382	1418726.11	533798.65	64.9
Trout Creek	13NT2384	1418165.91	533994.35	64.8
Trout Creek	13NT2235	1417200.99	534233.87	64.3
Trout Creek	13NT2376	1417465.24	532473.58	64.1
Trout Creek	13NT2204	1418384.43	535003.46	68.0
Trout Creek	13NT2372	1418520.27	531983.82	63.8
Trout Creek	13NT3015	1417882.87	530536.43	70.9
Trout Creek	13NT2405	1417213.98	533093.46	64.0
Trout Creek	13NT3490	1416841.36	532491.55	63.4
Trout Creek	13NU1005	1418826.11	544896.07	79.8
Trout Creek	13NR2080	1419785.04	555212.38	101.1
Trout Creek	13NR1200	1420805.86	556015.95	95.1
Trout Creek	13NR1100	1421222.78	556211.46	96.2
Trout Creek	13NR1300	1420855.33	555594.32	95.0
Trout Creek	13NR2085	1420112.18	555644.56	95.3
Trout Creek	13NU9265	1405216.13	540603.61	60.0
Trout Creek	13NR2500	1412056.92	548183.92	70.9
Trout Creek	13NV1482	1397124.56	543780.41	54.8
Trout Creek	13NV1484	1397631.04	543664.47	54.7
Trout Creek	13NV1035	1398542.61	545807.87	57.6
Trout Creek	13NV1205	1398229.13	544366.61	57.3
Trout Creek	13NV1465	1396202.84	543674.16	57.1
Trout Creek	13NV1478	1395374.26	542931.61	56.5
Trout Creek	13NV1445	1395233.40	544589.36	59.5
Trout Creek	13NV1432	1396693.35	544448.29	57.6
Trout Creek	13NV1434	1396571.75	544865.76	57.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NV1435	1396162.39	545542.64	57.6
Trout Creek	13NV0635	1398317.67	546591.14	58.8
Trout Creek	13NV0615	1397492.82	546810.78	59.6
Trout Creek	13NV0625	1397973.49	547396.80	60.0
Trout Creek	13NV0390	1399397.68	547146.31	59.0
Trout Creek	13NV0205	1398938.87	547833.87	59.1
Trout Creek	13NV1006	1397022.41	546008.84	57.8
Trout Creek	13NV1415	1395343.73	546132.43	58.6
Trout Creek	13NX8095	1396440.10	547289.99	60.5
Trout Creek	13NX8096	1396066.15	547067.59	60.5
Trout Creek	13NQ0905	1396257.06	547684.56	60.3
Trout Creek	13NV0015	1396231.77	548840.47	60.1
Trout Creek	13NV0012	1396248.13	549099.63	61.4
Trout Creek	13NV0011	1397176.03	549129.45	60.0
Trout Creek	13NV0013	1397216.66	548628.93	60.0
Trout Creek	13NV0014	1397845.56	548830.44	60.2
Trout Creek	13NV0017	1397270.19	547642.42	62.2
Trout Creek	13NV0016	1397486.70	547803.88	62.2
Trout Creek	13NV0018	1397763.76	547880.95	62.1
Trout Creek	13NV0019	1398143.57	548269.93	60.0
Trout Creek	13NQ0020	1396157.79	550342.87	60.6
Trout Creek	13NQ0030	1395420.36	549688.14	60.9
Trout Creek	13NX6345	1398177.51	552918.25	63.0
Trout Creek	13NX6315	1397356.75	554566.28	66.0
Trout Creek	13NX8025	1396755.32	554560.72	64.6
Trout Creek	13NX8022	1396034.54	554891.56	66.3
Trout Creek	13NX8024	1396119.06	554728.90	65.9
Trout Creek	13NX8026	1395916.13	554584.59	65.3
Trout Creek	13NX6325	1398081.75	554150.77	65.4
Trout Creek	13NX4285	1399850.51	552350.87	66.6
Trout Creek	13NX3040	1399548.62	551310.52	65.0
Trout Creek	13NX3400	1399271.85	550168.73	59.8
Trout Creek	13NX4315	1400058.68	551561.69	66.6
Trout Creek	13NX4305	1399115.68	552644.32	66.5
Trout Creek	13NX4324	1398830.76	552173.75	66.0
Trout Creek	13NX4275	1400362.83	551659.37	66.6
Trout Creek	13NX4274	1400314.20	552205.29	66.6
Trout Creek	13NX6222	1399910.77	554564.29	67.9
Trout Creek	13NX6285	1397698.52	556482.20	68.0
Trout Creek	13NX6215	1400124.52	555283.71	68.9
Trout Creek	13NX6214	1400217.13	555613.59	69.0
Trout Creek	13NX8035	1397053.58	553547.89	63.2
Trout Creek	13NX6324	1397700.40	554112.89	65.4
Trout Creek	13NX8028	1396523.26	554020.93	64.9
Trout Creek	13NX8045	1396416.88	553665.67	63.3
Trout Creek	13NX8046	1396322.56	553815.88	62.9
Trout Creek	13NX6322	1397862.25	553624.63	65.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NX6342	1397634.97	553435.47	64.6
Trout Creek	13NX6349	1397008.83	553062.71	61.1
Trout Creek	13NX6348	1397258.51	553341.14	62.9
Trout Creek	13NX6365	1396457.32	552903.45	60.1
Trout Creek	13NX4282	1400302.27	553163.56	66.6
Trout Creek	13NX4255	1400017.17	553322.90	67.0
Trout Creek	13NX4245	1400019.05	553599.45	67.6
Trout Creek	13NX4258	1399423.23	553126.36	66.9
Trout Creek	13NX6211	1399352.77	554026.65	69.1
Trout Creek	13NX6213	1399905.19	554119.30	69.1
Trout Creek	13NX6217	1399997.84	554369.29	69.1
Trout Creek	13NX4295	1398901.81	553696.90	67.8
Trout Creek	13NX4304	1398575.35	552941.69	67.0
Trout Creek	13NX4302	1398873.33	553266.24	67.0
Trout Creek	13NR8205	1397012.01	541849.80	55.1
Trout Creek	13NV1550	1400169.17	542694.80	59.8
Trout Creek	13NV1560	1400269.72	542674.32	57.1
Trout Creek	13NU5018	1412315.40	537143.55	67.2
Trout Creek	13NU1015	1418294.27	542381.92	77.3
Trout Creek	13NU4805	1422611.22	541776.02	87.3
Trout Creek	13NU4904	1419521.16	538209.23	78.6
Trout Creek	13NU4905	1419806.68	538406.20	79.9
Trout Creek	13NU4825	1419607.06	541345.71	75.6
Trout Creek	13NU4846	1420812.69	540783.58	78.3
Trout Creek	13NX4105	1405413.18	554165.57	73.0
Trout Creek	13NX4095	1404985.66	555059.82	73.8
Trout Creek	13NX4015	1406332.85	554567.30	75.5
Trout Creek	13NX4085	1406135.66	554866.39	75.6
Trout Creek	13NX4075	1406631.50	555227.02	78.2
Trout Creek	13NX6235	1401084.03	556632.31	70.5
Trout Creek	13NX4156	1402524.24	552894.59	68.3
Trout Creek	13NX2495	1402169.24	550334.51	65.2
Trout Creek	13NX2045	1404663.65	550259.99	69.1
Trout Creek	13NW0835	1412712.33	551909.38	76.9
Trout Creek	13NW0845	1412277.74	551281.43	76.5
Trout Creek	13NW0390	1412865.09	552743.51	78.9
Trout Creek	13NX4018	1406558.60	553573.43	72.0
Trout Creek	13NX4185	1402217.61	552437.08	68.2
Trout Creek	13NX6145	1401971.52	556844.75	72.6
Trout Creek	13NX6155	1402415.56	556873.50	72.9
Trout Creek	13NX4115	1403864.87	554303.41	70.7
Trout Creek	13NR2005	1421859.76	561622.88	98.5
Trout Creek	13NU1405	1416867.67	543717.71	73.2
Trout Creek	13NR3765	1417756.49	546301.00	74.2
Trout Creek	13NU4845	1420899.02	539682.60	78.3
Trout Creek	13NU0190	1421148.45	548229.28	90.5
Trout Creek	13NW0805	1414979.91	551778.41	83.2

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NW1495	1409752.36	550470.73	73.4
Trout Creek	13NW0700	1410243.06	551521.91	75.2
Trout Creek	13NW0750	1410645.39	551019.58	74.8
Trout Creek	13NW1100	1411155.62	549886.66	72.9
Trout Creek	13NR3018	1409473.30	546248.58	68.2
Trout Creek	13NX0200	1406676.65	550916.71	71.0
Trout Creek	13NX0300	1406414.86	550553.58	71.2
Trout Creek	13NX0250	1406326.19	550925.16	71.1
Trout Creek	13NW3350	1401736.28	545983.78	59.3
Trout Creek	13NR1495	1412115.78	544618.37	68.3
Trout Creek	13NX4172	1403120.02	552044.60	70.5
Trout Creek	13NX4174	1403473.00	552143.92	70.4
Trout Creek	13NX4146	1403196.83	555167.38	71.5
Trout Creek	13NX6095	1407082.93	557638.80	78.2
Trout Creek	13NX6105	1406593.98	557708.64	76.8
Trout Creek	13NU0405	1422795.42	545966.47	87.0
Trout Creek	13NU0180	1420580.35	547636.13	93.3
Trout Creek	13NU0370	1421041.51	546025.27	82.7
Trout Creek	13NU0380	1420582.78	545925.64	82.6
Trout Creek	13NU0390	1420271.42	546012.82	82.7
Trout Creek	13NU0350	1419898.98	545910.12	83.1
Trout Creek	13NU0360	1419978.17	545739.66	81.8
Trout Creek	13NU0340	1420411.32	545538.34	80.8
Trout Creek	13NU0580	1421672.16	545986.02	82.2
Trout Creek	13NU0590	1421768.88	545622.57	82.2
Trout Creek	13NU0205	1422461.28	546447.92	89.3
Trout Creek	13NU0195	1421724.39	547076.61	90.7
Trout Creek	13NT2035	1415493.82	535655.49	69.1
Trout Creek	13NU4835	1419882.06	539238.46	80.8
Trout Creek	13NS4190	1403550.14	537916.11	54.1
Trout Creek	13NS3715	1407104.45	534824.47	55.6
Trout Creek	13NR3898	1408814.81	542153.19	63.0
Trout Creek	13NS3535	1409275.14	536318.74	61.6
Trout Creek	13NS4025	1405840.11	538729.44	59.1
Trout Creek	13NS3730	1404890.64	536810.64	54.7
Trout Creek	13NS3718	1406110.30	534703.21	55.3
Trout Creek	13NS4060	1404140.04	539788.12	58.5
Trout Creek	13NU8960	1404868.95	541595.46	59.2
Trout Creek	13NU8970	1405137.91	541855.17	60.5
Trout Creek	13NU8300	1405888.94	541037.27	61.1
Trout Creek	13NU5135	1407335.38	538937.45	61.3
Trout Creek	13NU5125	1407599.04	539047.50	61.4
Trout Creek	13NU5150	1406299.44	538637.37	61.3
Trout Creek	13NU7900	1407230.62	540030.30	63.8
Trout Creek	13NU9225	1406664.46	539799.62	61.2
Trout Creek	13NU9235	1406524.07	539509.80	61.2
Trout Creek	13NU9236	1406383.05	540413.05	61.2

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NU9232	1406127.98	539832.73	60.9
Trout Creek	13NU9238	1405891.05	539894.37	61.2
Trout Creek	13NU9234	1405817.85	540281.55	61.2
Trout Creek	13NW0200	1413770.24	553723.52	80.3
Trout Creek	13NW0040	1415759.51	553947.85	83.8
Trout Creek	13NW0010	1415920.97	556839.89	83.1
Trout Creek	13NW0015	1413588.07	556127.81	83.1
Trout Creek	13NW0030	1412523.35	555341.14	82.0
Trout Creek	13NX6090	1408026.08	557018.69	80.6
Trout Creek	13BNDRY4	1406477.99	558948.65	77.0
Trout Creek	13NR2410	1416000.52	549696.03	78.3
Trout Creek	13NR2405	1416096.15	550180.60	80.9
Trout Creek	13NR2390	1416920.23	549208.49	78.2
Trout Creek	13NR3670	1417772.03	549286.15	79.2
Trout Creek	13NR2370	1416822.01	550797.37	81.1
Trout Creek	13NR2330	1415185.73	550891.03	81.1
Trout Creek	13NR2320	1415173.29	551231.19	81.1
Trout Creek	13NR2350	1415623.37	551758.01	81.1
Trout Creek	13NR2310	1415708.41	552094.02	82.6
Trout Creek	13NR2340	1415424.26	551235.34	81.1
Trout Creek	13NR2360	1416079.68	551822.31	81.1
Trout Creek	13NR2150	1416821.88	554195.15	83.0
Trout Creek	13NR2140	1416455.00	555435.12	83.0
Trout Creek	13NR2130	1416659.24	555599.71	83.0
Trout Creek	13NR2120	1417456.40	556265.27	84.4
Trout Creek	13NR2100	1418764.94	556453.85	93.1
Trout Creek	13NR2020	1421983.83	559252.59	96.1
Trout Creek	13NR8800	1395169.79	539490.38	51.4
Trout Creek	13NV1000	1399163.66	545951.25	57.7
Trout Creek	13NV1200	1399013.86	544765.13	55.9
Trout Creek	13NV1400	1398628.48	543324.72	54.8
Trout Creek	13NR7800	1398118.92	540413.01	52.4
Trout Creek	13NR8200	1397703.26	540584.37	52.3
Trout Creek	13NR8400	1397166.49	540316.23	52.3
Trout Creek	13NR6800	1400149.68	541367.19	53.3
Trout Creek	13NT1070	1418150.99	535544.38	66.5
Trout Creek	13NR2110	1418108.55	557436.00	93.1
Trout Creek	13NU1020	1418077.44	542539.27	77.3
Trout Creek	13NT2210	1418031.30	534626.90	67.7
Trout Creek	13NT2360	1419442.32	533117.24	66.2
Trout Creek	13NR2200	1418026.65	552905.02	85.4
Trout Creek	13NT3040	1417935.37	531403.97	69.4
Trout Creek	13NR2160	1417863.90	555265.04	89.8
Trout Creek	13NS0620	1417857.23	529674.81	63.9
Trout Creek	13NT2400	1417839.45	533402.79	63.6
Trout Creek	13NU1040	1417812.96	543536.18	74.3
Trout Creek	13NR2270	1417722.01	551409.63	81.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NR3790	1417629.86	544919.63	73.9
Trout Creek	13NT3020	1417607.24	530362.31	70.9
Trout Creek	13NU1200	1417456.37	543815.50	74.3
Trout Creek	13NU4865	1417411.60	539419.42	73.1
Trout Creek	13NU4830	1421220.01	539482.04	80.1
Trout Creek	13NR2210	1417406.12	553423.83	83.0
Trout Creek	13NT3030	1417398.91	530888.35	70.7
Trout Creek	13NR7000	1399905.46	540998.85	52.6
Trout Creek	13NR7200	1399468.50	540582.07	52.5
Trout Creek	13NR7210	1399252.13	540919.26	52.5
Trout Creek	13NR7600	1398415.40	540251.23	52.4
Trout Creek	13NX4000	1398965.55	549965.04	60.0
Trout Creek	13NX6000	1398137.21	550209.59	60.0
Trout Creek	13NX8070	1395443.99	553285.93	60.0
Trout Creek	13NX6370	1396598.65	552276.03	60.1
Trout Creek	13NU5120	1409699.10	538429.83	64.9
Trout Creek	13NU5130	1409404.38	538262.79	64.7
Trout Creek	13NS0610	1418554.58	529437.56	64.3
Trout Creek	13NT3110	1415174.44	533224.62	63.5
Trout Creek	13NS2700	1404732.09	532222.05	54.4
Trout Creek	13NU9600	1402025.92	542118.67	58.1
Trout Creek	13NS2600	1407275.75	533063.48	54.4
Trout Creek	13NS2090	1409769.68	535239.29	56.7
Trout Creek	13NS3660	1407279.97	537516.55	61.5
Trout Creek	13NS3670	1407105.08	538322.22	61.5
Trout Creek	13NR3880	1410379.11	542146.92	64.8
Trout Creek	13NS3630	1407893.81	535228.70	58.9
Trout Creek	13NS3680	1406786.16	537842.63	61.3
Trout Creek	13NS3690	1406713.05	537341.86	59.4
Trout Creek	13NS3700	1406517.89	537015.80	57.1
Trout Creek	13NS3610	1408613.63	536918.41	62.7
Trout Creek	13NS4010	1406297.71	539093.33	61.7
Trout Creek	13NU9230	1406280.64	540563.68	61.7
Trout Creek	13NU9220	1406968.14	539549.79	62.6
Trout Creek	13NU0420	1421985.81	544590.70	80.1
Trout Creek	13NU0410	1422612.44	545708.26	87.6
Trout Creek	13NU4840	1420346.57	539245.16	79.2
Trout Creek	13NX6200	1400615.68	555776.81	70.1
Trout Creek	13NX6140	1403358.18	556180.75	75.1
Trout Creek	13NX4070	1405144.94	555415.37	77.0
Trout Creek	13NX4080	1405699.18	555227.61	76.3
Trout Creek	13NX4130	1403209.25	554252.99	70.0
Trout Creek	13NX4050	1404101.94	553315.00	69.9
Trout Creek	13NX4210	1401528.14	553959.86	68.8
Trout Creek	13NV0060	1400586.27	548946.42	60.1
Trout Creek	13NX4180	1402199.70	551421.72	68.3
Trout Creek	13NX4170	1403223.62	551755.55	70.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NX1000	1403510.96	551036.29	69.8
Trout Creek	13NX1550	1403097.56	550038.97	66.4
Trout Creek	13NX2250	1402852.25	549340.40	65.6
Trout Creek	13NW3240	1403290.20	547391.37	65.3
Trout Creek	13NR4040	1405522.15	545589.21	63.9
Trout Creek	13NR4050	1404620.58	545362.95	60.8
Trout Creek	13NR3220	1408866.32	546980.14	67.2
Trout Creek	13NW1530	1408604.68	549053.77	72.4
Trout Creek	13NW1540	1408223.18	549338.64	72.4
Trout Creek	13NX0050	1407956.71	552533.49	72.4
Trout Creek	13NX0100	1407216.11	551858.32	71.7
Trout Creek	13NW1460	1410446.18	552791.73	76.8
Trout Creek	13NR2520	1410796.23	548801.18	72.2
Trout Creek	13NS3710	1405792.41	537232.32	57.3
Trout Creek	13NW1410	1411685.42	554076.00	79.6
Trout Creek	13NW0210	1412160.40	553750.60	79.7
Trout Creek	13NW0410	1411774.29	553333.51	78.8
Trout Creek	13NW0600	1411568.05	552808.10	77.5
Trout Creek	13NW0840	1412161.09	552079.40	76.7
Trout Creek	13NW0820	1413125.00	551456.70	78.6
Trout Creek	13NX6208	1400505.43	554635.32	69.0
Trout Creek	13NW0830	1413066.85	551912.51	77.6
Trout Creek	13NR2300	1415198.11	551897.54	83.1
Trout Creek	13NW1210	1412555.74	550609.57	75.2
Trout Creek	13NW0060	1413711.30	552795.70	80.4
Trout Creek	13NR3680	1416630.71	548531.38	78.2
Trout Creek	13NR3810	1415372.34	543086.80	71.4
Trout Creek	13NR0510	1412714.42	546808.13	69.5
Trout Creek	13NU4980	1415223.92	540633.28	72.7
Trout Creek	13NU4990	1415446.00	539944.50	68.5
Trout Creek	13NT0100	1420111.74	535262.31	69.1
Trout Creek	13NX4140	1402214.55	555060.16	69.3
Trout Creek	13NS2040	1412400.10	535397.76	64.9
Trout Creek	13BNDRY1	1395502.01	555595.06	63.0
Trout Creek	13BNDRY3C	1418017.97	558143.43	93.0
Trout Creek	13BNDRY3B	1419711.60	559260.99	96.0
Trout Creek	13BNDRY3A	1420510.41	560612.83	97.0
Trout Creek	13NS2015	1411997.90	533448.20	61.1
Trout Creek	13NT2065	1413203.51	535279.21	65.3
Trout Creek	13NS2065	1412897.78	535228.07	65.6
Trout Creek	13NS0040	1417364.65	528020.82	57.3
Trout Creek	13NS0050	1416863.06	527668.13	59.4
Trout Creek	13NS0645	1417322.52	528833.32	58.5
Trout Creek	13NX4142	1403891.08	555608.75	73.2
Trout Creek	13NX4143	1403967.53	555008.08	72.9
Trout Creek	13NX4144	1403265.83	555453.12	71.5
Trout Creek	13NX8015	1397147.05	554648.17	68.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NX6232	1399705.20	557358.08	71.3
Trout Creek	13NX6275	1398364.73	557155.52	68.7
Trout Creek	13NR7400	1398762.00	539909.33	52.4
Trout Creek	13NS0200	1417327.70	527220.12	56.6
Trout Creek	13NU0210	1421841.33	546669.25	89.3
Trout Creek	13NU0200	1421880.36	547959.28	90.5
Trout Creek	13NU0020	1421169.94	547391.51	92.4
Trout Creek	13NU0400	1421127.71	545791.90	79.5
Trout Creek	13NR2030	1420895.37	559384.85	96.2
Trout Creek	13NR2060	1420648.42	555499.04	94.9
Trout Creek	13NT2310	1420630.69	532865.23	66.2
Trout Creek	13NU0010	1420558.41	548911.31	93.5
Trout Creek	13NR2050	1420539.31	557716.57	95.9
Trout Creek	13NR3610	1420342.88	550069.90	94.2
Trout Creek	13NU0430	1420300.10	542803.94	79.8
Trout Creek	13NU0600	1420071.18	544079.28	79.5
Trout Creek	13NR3620	1419912.66	549643.76	93.6
Trout Creek	13NT2320	1419888.36	532615.40	65.7
Trout Creek	13NR2230	1419847.53	551745.34	107.5
Trout Creek	13NT0200	1419717.59	535107.27	68.4
Trout Creek	13NT1020	1419717.59	536166.09	69.2
Trout Creek	13NT1010	1419648.96	536019.03	69.1
Trout Creek	13NT1030	1419584.47	536165.41	68.7
Trout Creek	13NT0150	1419565.63	535813.15	69.0
Trout Creek	13NR2090	1419472.84	555835.50	93.1
Trout Creek	13NT1040	1419460.77	536245.06	67.9
Trout Creek	13NU4910	1419230.24	537831.18	73.6
Trout Creek	13NT1510	1419373.39	536614.00	68.6
Trout Creek	13NU4850	1419607.48	540593.41	75.0
Trout Creek	13NT2350	1419327.03	533249.33	66.2
Trout Creek	13NT0500	1419315.62	534778.85	68.3
Trout Creek	13NR2040	1420394.11	558680.00	95.9
Trout Creek	13NR2010	1421485.72	560839.96	98.0
Trout Creek	13NR2260	1417937.11	551643.27	81.4
Trout Creek	13NR2400	1416100.25	549004.43	78.3
Trout Creek	13NR3750	1419308.35	546526.87	82.7
Trout Creek	13NR3640	1419187.42	549991.68	92.7
Trout Creek	13NT2340	1419183.26	534048.46	66.6
Trout Creek	13NR3650	1419069.81	549722.18	87.4
Trout Creek	13NR2170	1419010.19	554471.54	100.2
Trout Creek	13NR3660	1418979.33	548790.92	78.4
Trout Creek	13NU0800	1418934.74	544379.66	76.6
Trout Creek	13NU1030	1417864.89	543279.61	75.6
Trout Creek	13NU4810	1422230.72	541852.76	85.8
Trout Creek	13NR2380	1416860.57	550509.85	80.0
Trout Creek	13NU4820	1420177.59	541866.66	78.3
Trout Creek	13NR2240	1418922.30	552119.64	90.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NT1000	1418807.04	534858.84	68.0
Trout Creek	13NR3645	1418792.95	550271.00	92.9
Trout Creek	13NR2190	1418667.52	553016.91	92.2
Trout Creek	13NR3760	1418553.91	546347.75	77.3
Trout Creek	13NT1520	1418498.41	535940.96	67.8
Trout Creek	13NR2250	1418492.95	551834.16	90.0
Trout Creek	13NT2390	1418441.10	533573.74	64.9
Trout Creek	13NS0640	1418410.78	528705.70	60.1
Trout Creek	13NU3405	1413161.95	540752.42	69.0
Trout Creek	13NU3404	1413194.59	540183.03	69.1
Trout Creek	13NU4100	1409042.00	540406.86	66.8
Trout Creek	13NR3885	1409193.42	542168.77	63.6
Trout Creek	13NR3895	1409268.51	541284.58	64.0
Trout Creek	13NU5005	1414209.76	537701.78	69.3
Trout Creek	13NU5015	1413700.73	537514.16	66.2
Trout Creek	13NU4915	1418867.37	537727.49	75.0
Trout Creek	13NU4856	1419262.61	539632.07	74.5
Trout Creek	13NU4858	1419078.58	540526.08	73.9
Trout Creek	13NU4700	1408485.28	540656.17	65.7
Trout Creek	13NU6000	1408659.94	540193.09	66.1
Trout Creek	13NU7500	1408294.50	539318.79	62.3
Trout Creek	13NU6100	1408367.40	539799.10	64.0
Trout Creek	13NU6200	1407872.25	540153.15	64.0
Trout Creek	13NU6500	1408482.98	540027.65	64.0
Trout Creek	13NU7100	1408971.33	539273.38	64.7
Trout Creek	13NU7200	1408550.95	539051.73	64.4
Trout Creek	13NU7300	1408772.06	538248.08	63.7
Trout Creek	13NU5110	1410440.88	538794.74	65.8
Trout Creek	13NU5070	1410037.89	539210.79	65.3
Trout Creek	13NU5095	1410779.89	538268.62	65.2
Trout Creek	13NU5085	1410489.55	538249.64	65.7
Trout Creek	13NS3510	1410080.13	536640.79	63.3
Trout Creek	13NS3520	1409773.00	536402.27	63.1
Trout Creek	13NS3540	1409279.63	536660.40	61.2
Trout Creek	13NS3500	1410132.41	536827.03	63.8
Trout Creek	13NS3530	1409436.46	536784.55	61.6
Trout Creek	13NW0190	1414462.11	554114.53	81.9
Trout Creek	13NW0180	1415068.85	553469.84	84.3
Trout Creek	13NW0170	1414086.94	554808.73	82.4
Trout Creek	13NW0011	1414059.51	555565.55	83.8
Trout Creek	13NW0020	1412431.54	555910.70	84.2
Trout Creek	13NW0220	1412658.21	553637.80	80.2
Trout Creek	13NW0380	1413000.53	553099.87	79.3
Trout Creek	13NW0420	1411378.85	553144.04	77.8
Trout Creek	13NW1417	1411213.74	554215.61	80.5
Trout Creek	13NW0160	1411597.53	554682.35	83.2
Trout Creek	13NW0036	1415677.98	553166.81	84.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Trout Creek	13NW0038	1416180.68	553747.34	84.9
Trout Creek	13NW0045	1415698.22	554907.20	83.5
Trout Creek	13NR2135	1415957.92	555553.39	83.0
Trout Creek	13NW0008	1416007.61	556204.11	85.2
Trout Creek	13NW0014	1415088.09	556930.29	83.1
Trout Creek	13NW1413	1411144.99	553627.40	79.5
Trout Creek	13NS0625	1417191.28	529667.89	61.5
Trout Creek	13NS0644	1417867.22	528866.93	60.0
Trout Creek	13NS0646	1417062.90	528858.70	59.4
Trout Creek	13NS0648	1416426.11	528890.62	58.3
Trout Creek	13NS0642	1416344.72	529938.07	63.2
Trout Creek	13NU4995	1413370.01	538555.73	65.3
Trout Creek	13NU4985	1413136.99	538661.78	67.1
Trout Creek	13NR6900	1400175.58	541190.10	52.9
Trout Creek	13NT2500	1416585.25	535769.40	68.7
Trout Creek	13NT1505	1420090.47	537268.69	75.8
Trout Creek	13NU4906	1420445.10	538374.09	76.4
Trout Creek	13NU4908	1420432.29	538924.34	79.2
Trout Creek	13NR6890	1400011.89	540802.79	52.7
Trout Creek	13NW0048	1414698.02	554700.32	83.0
Trout Creek	13NW0049	1415130.59	554212.85	83.1
Trout Creek	13NW0198	1413977.11	553138.40	80.3
Trout Creek	13NW0012	1413081.86	556205.39	83.1
Trout Creek	13NW0021	1412348.25	555196.28	81.9
Trout Creek	13NW0022	1412741.86	555115.18	81.9
Trout Creek	13NW0025	1412503.31	555019.76	81.9
Trout Creek	13NW0185	1412460.37	554766.90	81.7
Trout Creek	13NX4155	1403060.75	553499.73	68.7
Trout Creek	13NX4147	1403093.54	552879.97	69.1
Trout Creek	13NX0900	1403820.45	550704.41	70.6
Trout Creek	13NU8900	1405479.26	541606.20	61.5
Trout Creek	13NU8950	1404716.37	541772.91	60.8
Trout Creek	13NS2095	1411873.43	536738.11	64.9
Trout Creek	13NR5000	1402771.41	544438.47	60.4
Trout Creek	13NR4900	1403062.62	544720.57	60.4
Trout Creek	13NW3500	1400772.60	545745.17	59.3
Trout Creek	13NS2035	1412936.34	534583.42	63.3
Anclote	7NE0510	1396153.65	485988.87	56.4
Anclote	7NE0505	1396155.76	485935.17	56.3
Anclote	7NE0536	1396164.40	484727.81	55.7
Anclote	7NL0120	1396172.50	497777.50	62.9
Anclote	7ND0737	1396182.89	503855.64	70.2
Anclote	7NE1940	1396187.78	481209.39	56.7
Anclote	7NL0230	1396197.50	491222.50	59.1
Anclote	7NE0534	1396234.77	485511.99	56.1
Anclote	7ND0455	1396246.33	501504.71	65.7
Anclote	7NL0930	1396292.50	495892.50	62.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE2695	1396312.14	475736.86	57.4
Anclote	7NL0200	1396317.50	494657.50	62.8
Anclote	7ND0840	1396322.63	499095.38	65.3
Anclote	7NE2528	1396324.79	477312.84	58.5
Anclote	7ND1110	1396324.86	503368.61	68.7
Anclote	7NE1980	1396324.88	481167.38	56.2
Anclote	7NE2210	1396346.61	479870.03	58.1
Anclote	7NE0530	1396357.89	484957.24	55.7
Anclote	7ND0830	1396359.09	499602.84	65.9
Anclote	7NE2010	1396360.07	481784.65	55.8
Anclote	7NE1990	1396370.30	481454.16	56.0
Anclote	7NE2200	1396379.97	478928.88	58.8
Anclote	7NE0370	1396393.66	486179.21	56.5
Anclote	7NE0430	1396403.29	489011.96	57.8
Anclote	7NE0515	1396413.97	485418.46	56.1
Anclote	7NE0440	1396422.51	488531.03	57.3
Anclote	7NE1620	1396425.91	484258.92	55.0
Anclote	7NE1950	1396432.44	481054.43	56.2
Anclote	7NE1630	1396433.98	483534.30	55.0
Anclote	7NE0500	1396437.12	485937.17	56.2
Anclote	7ND0820	1396438.48	499855.12	66.4
Anclote	7NE0335	1396440.72	485982.31	56.3
Anclote	7NE0470	1396441.47	487186.95	56.6
Anclote	7NE0532	1396445.21	484732.24	55.6
Anclote	7NE1970	1396453.99	481308.57	56.2
Anclote	7NE2000	1396490.26	481468.06	55.9
Anclote	7NE2020	1396494.32	481677.43	55.8
Anclote	7NE0525	1396505.54	485148.67	55.7
Anclote	7ND1550	1396509.03	505636.03	70.9
Anclote	7NE2720	1396512.30	476965.47	57.9
Anclote	7NE0434	1396536.15	489200.75	57.8
Anclote	7NE0360	1396543.37	486186.01	56.5
Anclote	7NE0450	1396545.44	488103.00	57.3
Anclote	7NE0480	1396556.98	486412.85	56.5
Anclote	7NE1697	1396578.87	483709.55	55.0
Anclote	7NE0520	1396582.95	485179.68	55.7
Anclote	7NE0428	1396624.76	488934.29	57.8
Anclote	7NE0350	1396651.47	486750.29	56.5
Anclote	7NE2220	1396663.87	480513.53	58.1
Anclote	7ND1795	1396670.42	502031.34	67.3
Anclote	7ND1160	1396693.59	505327.73	71.0
Anclote	7ND1075	1396696.32	504974.33	70.9
Anclote	7NE0460	1396713.04	487660.55	57.2
Anclote	7NE2710	1396720.78	475962.00	57.3
Anclote	7ND1090	1396722.72	502631.47	70.5
Anclote	7NE2030	1396730.05	481951.04	55.2
Anclote	7NE2703	1396764.30	475681.62	57.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7ND1100	1396770.19	503013.27	68.7
Anclote	7NE2270	1396820.10	480095.60	57.7
Anclote	7ND0810	1396824.23	499920.97	66.7
Anclote	7ND1120	1396829.30	503420.44	68.7
Anclote	7NE2250	1396851.59	478982.06	57.7
Anclote	7ND1095	1396857.95	504229.99	70.2
Anclote	7NE1920	1396877.70	482239.28	54.9
Anclote	7NE2702	1396892.77	474970.19	57.2
Anclote	7NE1850	1396895.19	483254.94	58.3
Anclote	7NE0330	1396911.10	486080.03	56.4
Anclote	7ND1105	1396931.49	504141.63	70.2
Anclote	7NE0340	1396943.85	486523.40	56.5
Anclote	7NE2705	1396947.81	475372.88	57.1
Anclote	7ND1115	1396949.38	504036.06	68.7
Anclote	7NE0320	1396974.88	485794.20	56.2
Anclote	7NE2535	1396990.93	477551.07	57.2
Anclote	7NE1890	1397019.20	483021.60	55.0
Anclote	7NE2230	1397031.12	478620.67	58.0
Anclote	7ND1098	1397032.25	504427.51	70.2
Anclote	7NE0420	1397036.86	489018.06	57.8
Anclote	7NE2290	1397040.20	480742.57	56.6
Anclote	7NE2526	1397041.73	478212.93	57.2
Anclote	7NE0540	1397045.40	484896.15	55.6
Anclote	7NE2280	1397051.43	480509.12	57.7
Anclote	7NE2300	1397087.41	480733.99	55.9
Anclote	7NL0160	1397097.50	494502.50	62.8
Anclote	7NE0550	1397113.11	484755.83	55.7
Anclote	7ND1530	1397128.49	505926.44	70.1
Anclote	7NE2700	1397129.78	475524.41	57.6
Anclote	7NE1910	1397132.17	482595.58	54.9
Anclote	7ND1085	1397136.71	504763.18	70.2
Anclote	7NE0300	1397136.81	486521.83	56.5
Anclote	7NE2730	1397148.56	474887.49	55.9
Anclote	7NL0240	1397157.50	491392.50	59.3
Anclote	7NE2310	1397166.27	481516.65	55.1
Anclote	7NL0220	1397167.50	494332.50	59.4
Anclote	7ND0780	1397181.85	504283.39	70.2
Anclote	7NE1880	1397187.48	483071.63	55.9
Anclote	7NL0250	1397202.50	490057.50	58.3
Anclote	7NE2260	1397208.31	479392.69	57.7
Anclote	7NE1870	1397210.47	483174.41	55.9
Anclote	7NE1860	1397233.11	483263.79	55.3
Anclote	7NL0245	1397245.50	490497.02	58.3
Anclote	7ND1810	1397250.77	500919.04	64.3
Anclote	7NE0310	1397270.80	486172.97	56.5
Anclote	7NE1900	1397304.72	482852.33	55.3
Anclote	7NE1687	1397308.93	484016.74	55.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE2556	1397322.03	478218.85	57.6
Anclote	7NE2241	1397346.55	478855.38	57.8
Anclote	7ND1805	1397386.91	502237.01	64.3
Anclote	7ND0770	1397394.88	504590.97	70.2
Anclote	7NE2240	1397404.17	478626.63	58.0
Anclote	7NE0290	1397419.92	486602.76	57.0
Anclote	7NE0380	1397440.63	489763.08	58.3
Anclote	7ND0750	1397509.02	504819.75	69.6
Anclote	7NE2040	1397534.32	482538.82	54.9
Anclote	7ND1130	1397535.11	503295.35	67.3
Anclote	7NE2740	1397570.56	474880.54	54.6
Anclote	7NE1691	1397571.16	483248.34	55.0
Anclote	7NE2770	1397574.23	475201.32	54.6
Anclote	7ND0252	1397592.98	502779.88	66.2
Anclote	7NE1670	1397636.22	485012.90	56.6
Anclote	7NE2560	1397664.27	477541.76	55.6
Anclote	7NE3195	1397715.48	476938.90	55.8
Anclote	7NE2750	1397738.69	474928.18	54.6
Anclote	7ND1520	1397748.84	505266.78	69.6
Anclote	7NE1700	1397753.47	484067.31	55.1
Anclote	7NE2050	1397804.15	482853.40	54.9
Anclote	7NL0080	1397842.50	496777.50	64.1
Anclote	7NE1710	1397875.47	483291.17	55.0
Anclote	7NL0920	1397887.50	496352.50	64.1
Anclote	7NE2760	1397892.32	475413.82	58.8
Anclote	7ND0760	1397895.91	504933.51	70.6
Anclote	7ND1140	1397899.10	504001.64	67.3
Anclote	7NL0260	1397902.50	490197.50	58.4
Anclote	7NL0070	1397927.50	496607.50	64.1
Anclote	7NE3200	1397933.47	476832.77	55.8
Anclote	7NL0890	1397967.50	492842.50	60.6
Anclote	7NE2780	1398005.18	475016.79	54.8
Anclote	7NE3190	1398016.09	477125.89	55.8
Anclote	7NE0410	1398047.19	488492.40	59.1
Anclote	7NE2815	1398068.23	473242.94	51.6
Anclote	7NE1830	1398072.83	482950.16	55.0
Anclote	7NE0424	1398077.59	488680.54	59.1
Anclote	7NE2805	1398078.81	473068.41	53.3
Anclote	7NE0390	1398082.26	489229.71	58.5
Anclote	7NE2060	1398083.51	482865.36	54.9
Anclote	7NL0270	1398087.50	490152.50	58.4
Anclote	7NE1680	1398090.50	485106.43	55.9
Anclote	7NL0210	1398095.57	494021.34	61.8
Anclote	7NE2330	1398109.36	480590.53	55.1
Anclote	7ND1060	1398112.73	502482.99	68.0
Anclote	7NE2570	1398134.74	477467.34	54.8
Anclote	7NE3210	1398166.56	476338.96	55.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE2800	1398168.27	474826.89	53.4
Anclote	7NE2567	1398172.54	478448.36	56.4
Anclote	7NE2790	1398184.26	475000.44	55.8
Anclote	7NE2600	1398188.56	478307.61	56.4
Anclote	7NE0280	1398190.56	486921.84	58.3
Anclote	7ND0772	1398210.31	503406.16	67.6
Anclote	7NE0426	1398216.33	488775.54	59.1
Anclote	7ND1660	1398221.78	500182.72	65.3
Anclote	7NE0275	1398221.90	486563.12	58.3
Anclote	7NE0400	1398222.73	488207.60	59.1
Anclote	7ND1650	1398241.42	500355.33	64.8
Anclote	7ND0732	1398258.79	505135.54	69.6
Anclote	7NE2801	1398275.87	474852.51	53.3
Anclote	7ND1780	1398296.03	502015.32	65.6
Anclote	7NE2610	1398347.66	478534.46	55.4
Anclote	7ND0767	1398359.71	503295.14	67.6
Anclote	7NE2802	1398362.69	474930.14	53.1
Anclote	7ND0775	1398402.89	503686.92	67.4
Anclote	7NE1660	1398409.53	484559.34	55.6
Anclote	7NE2340	1398417.94	479162.91	55.1
Anclote	7ND1750	1398425.38	500335.13	64.8
Anclote	7NE1640	1398426.90	485624.14	58.0
Anclote	7ND1800	1398435.70	501182.16	64.3
Anclote	7NE0270	1398440.24	486920.61	58.3
Anclote	7ND0757	1398445.43	503250.94	67.8
Anclote	7NL0090	1398452.50	496927.50	62.8
Anclote	7NE2810	1398470.15	475599.89	54.4
Anclote	7NE0220	1398494.38	485897.40	58.0
Anclote	7NL0060	1398502.50	497847.50	64.0
Anclote	7NE0120	1398508.29	489875.48	58.4
Anclote	7NE0141	1398513.69	488120.21	58.7
Anclote	7ND1150	1398515.48	504750.53	66.8
Anclote	7NE1690	1398521.97	484041.43	55.1
Anclote	7NE2625	1398526.00	478313.35	54.8
Anclote	7NE2320	1398528.03	481441.82	55.1
Anclote	7NE2575	1398528.06	477691.32	53.8
Anclote	7NE3160	1398533.10	476406.42	56.8
Anclote	7ND0752	1398535.98	503299.27	67.8
Anclote	7NE2840	1398542.30	474545.47	52.6
Anclote	7NE2860	1398546.58	472750.21	52.5
Anclote	7ND1080	1398549.13	502296.97	65.7
Anclote	7NE3170	1398551.19	476198.43	55.3
Anclote	7NE2825	1398558.91	473329.03	51.7
Anclote	7NE0210	1398562.31	486218.03	58.0
Anclote	7NE2100	1398618.18	482255.74	54.8
Anclote	7NE2845	1398652.30	474133.06	52.3
Anclote	7NL0190	1398657.50	495877.50	62.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE0200	1398661.88	486206.58	58.0
Anclote	7NL0030	1398662.50	499727.50	63.4
Anclote	7NE2580	1398693.16	477544.84	53.8
Anclote	7NE3140	1398701.19	477197.98	54.4
Anclote	7NE1650	1398738.76	484906.32	56.0
Anclote	7ND1505	1398749.20	502724.88	66.7
Anclote	7NC0210	1398789.37	482932.83	55.0
Anclote	7ND1490	1398795.52	504220.10	66.8
Anclote	7NE2850	1398801.97	474135.77	52.3
Anclote	7NE0180	1398804.74	486674.28	58.2
Anclote	7NE0260	1398808.84	487321.26	58.3
Anclote	7ND0740	1398817.45	505227.62	69.1
Anclote	7NE0255	1398822.46	486942.86	58.3
Anclote	7NL0050	1398832.50	497772.50	64.0
Anclote	7NE0130	1398844.23	489516.05	58.4
Anclote	7NE3150	1398846.19	477029.07	53.9
Anclote	7NE0230	1398864.06	485586.13	57.5
Anclote	7ND1485	1398879.20	505161.84	68.4
Anclote	7NE2640	1398880.40	478244.12	54.2
Anclote	7NE2620	1398888.27	478076.36	54.3
Anclote	7NE2650	1398895.10	478525.39	53.5
Anclote	7NE2870	1398926.14	472947.99	51.5
Anclote	7NE0190	1398930.04	486170.83	57.7
Anclote	7NC0200	1398956.45	483136.39	55.0
Anclote	7NE0100	1398981.54	489887.94	58.4
Anclote	7NE2820	1398988.14	475600.15	52.2
Anclote	7NE2890	1398990.11	473523.97	52.4
Anclote	7NE2070	1398997.12	482313.92	54.8
Anclote	7NL0185	1399005.64	495658.01	62.7
Anclote	7NL0910	1399007.24	491051.97	58.4
Anclote	7ND1740	1399023.17	500863.27	64.3
Anclote	7NE0250	1399045.55	485316.94	56.9
Anclote	7NE2630	1399047.25	478140.68	54.0
Anclote	7NL0870	1399047.50	492512.50	58.4
Anclote	7NE2930	1399099.22	475012.11	52.0
Anclote	7NE0240	1399100.04	485368.90	57.4
Anclote	7NE2660	1399125.30	478678.73	53.5
Anclote	7NE2830	1399128.37	475458.64	52.1
Anclote	7NL0750	1399132.50	493942.50	62.1
Anclote	7NE2110	1399134.31	481327.82	54.7
Anclote	7NE2120	1399140.58	481232.84	53.4
Anclote	7NC1220	1399153.49	482545.56	55.3
Anclote	7NE1720	1399202.28	484758.35	55.7
Anclote	7ND1770	1399224.91	501349.47	65.0
Anclote	7NE2590	1399228.27	477404.95	53.8
Anclote	7NL0810	1399237.50	492957.50	60.5
Anclote	7NE2350	1399242.65	479276.22	55.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NL0790	1399252.50	493052.50	60.2
Anclote	7NE2090	1399258.75	481827.29	54.7
Anclote	7NE0170	1399266.03	485738.69	57.5
Anclote	7NE0138	1399288.15	487310.00	58.4
Anclote	7NL0780	1399332.50	493982.50	61.4
Anclote	7NE2910	1399360.58	474011.09	52.3
Anclote	7NE1820	1399369.53	483765.83	55.2
Anclote	7NE0160	1399381.83	486135.56	57.5
Anclote	7NL0110	1399382.50	499882.50	62.9
Anclote	7NC1250	1399390.99	482230.88	54.8
Anclote	7ND1500	1399395.52	503119.03	66.7
Anclote	7ND1340	1399399.52	504634.84	66.8
Anclote	7NE3180	1399401.23	476644.98	53.1
Anclote	7NE2880	1399439.52	472799.35	51.5
Anclote	7NC1230	1399459.94	482404.49	54.8
Anclote	7NE0140	1399470.21	488277.35	58.4
Anclote	7NE2360	1399484.78	480345.72	53.2
Anclote	7ND1760	1399490.34	500843.30	64.9
Anclote	7NE1815	1399502.21	484266.17	55.2
Anclote	7NC1210	1399509.91	482522.19	54.9
Anclote	7NE0150	1399510.39	486029.74	57.6
Anclote	7NL0770	1399537.50	494137.50	61.4
Anclote	7NC1200	1399554.58	482625.75	54.6
Anclote	7NL0100	1399557.50	499767.50	62.9
Anclote	7NC0220	1399571.19	482691.59	55.0
Anclote	7ND1200	1399589.94	505105.31	67.4
Anclote	7NL0180	1399602.50	495762.50	62.7
Anclote	7ND1320	1399609.09	504929.43	67.4
Anclote	7NC1240	1399625.96	482129.83	54.7
Anclote	7NE0144	1399626.70	486733.75	58.2
Anclote	7ND1330	1399629.92	504612.13	66.8
Anclote	7NE2900	1399675.53	473436.65	51.5
Anclote	7NE0142	1399679.76	487171.97	58.3
Anclote	7NE3130	1399681.91	477074.28	53.1
Anclote	7NE0090	1399706.80	489712.05	58.4
Anclote	7NE2680	1399710.00	478349.00	52.1
Anclote	7NE2940	1399717.89	474912.99	52.1
Anclote	7NL0800	1399722.50	493252.50	60.2
Anclote	7NE2170	1399725.87	480917.37	53.2
Anclote	7NE2670	1399727.80	477774.40	52.4
Anclote	7ND1720	1399747.82	501002.84	64.9
Anclote	7NE2160	1399748.90	481067.70	53.6
Anclote	7ND0445	1399778.77	505626.70	69.9
Anclote	7ND1310	1399785.40	504875.45	67.5
Anclote	7ND1270	1399787.37	504202.80	67.3
Anclote	7NE1790	1399820.08	484910.69	55.5
Anclote	7NE2080	1399820.64	481714.91	54.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE2672	1399821.91	478117.30	52.4
Anclote	7NC0230	1399840.81	482966.91	55.0
Anclote	7ND1300	1399853.17	504893.50	68.3
Anclote	7ND1210	1399854.75	505538.01	70.3
Anclote	7ND1510	1399858.33	504769.26	67.6
Anclote	7NE1810	1399910.06	484275.75	55.2
Anclote	7NE2920	1399933.52	474045.61	51.5
Anclote	7ND1290	1399941.87	504532.46	67.6
Anclote	7NE3120	1399942.05	477180.83	53.2
Anclote	7NL0880	1399952.50	492467.50	58.4
Anclote	7NE3090	1399953.25	475981.47	51.4
Anclote	7NE3110	1399956.17	476165.60	51.4
Anclote	7NL0520	1399957.50	497772.50	62.7
Anclote	7ND1280	1399971.47	504458.09	67.6
Anclote	7NL0760	1399992.50	493547.50	60.2
Anclote	7ND1220	1399994.86	505429.25	69.4
Anclote	7NE1780	1399997.31	485099.72	55.6
Anclote	7NE3080	1399998.38	475791.17	51.4
Anclote	7NC0232	1400004.52	482784.34	54.6
Anclote	7NL0820	1400007.50	492952.50	58.8
Anclote	7NE1800	1400019.44	484789.92	55.5
Anclote	7NE2155	1400063.61	480955.14	53.4
Anclote	7NE1730	1400063.69	485431.65	55.6
Anclote	7NL0170	1400092.50	495807.50	62.7
Anclote	7NC0237	1400099.22	482903.88	54.7
Anclote	7ND1197	1400105.92	505069.02	68.1
Anclote	7NE0080	1400113.18	489425.84	58.4
Anclote	7ND1190	1400118.57	505116.49	69.6
Anclote	7NE3070	1400122.26	475457.66	51.5
Anclote	7NE3100	1400132.15	476744.74	52.9
Anclote	7NE2380	1400138.54	479550.00	52.6
Anclote	7ND1230	1400140.30	505504.48	69.8
Anclote	7NC7510	1400143.70	486170.47	57.8
Anclote	7ND1710	1400152.14	500403.01	65.7
Anclote	7ND1285	1400174.06	505016.61	68.1
Anclote	7NE3060	1400178.96	475698.30	51.5
Anclote	7NE0110	1400179.68	488474.37	58.4
Anclote	7NE3220	1400193.03	477244.42	51.4
Anclote	7NC0240	1400206.43	482769.45	54.7
Anclote	7NL0660	1400207.50	496052.50	62.7
Anclote	7NE2370	1400215.75	480249.78	53.0
Anclote	7ND1268	1400226.88	504775.58	68.1
Anclote	7ND1272	1400228.08	504824.61	68.4
Anclote	7ND1470	1400235.14	501801.13	67.0
Anclote	7NE0060	1400242.69	489859.74	58.4
Anclote	7ND1180	1400243.43	505084.90	69.6
Anclote	7ND1275	1400245.07	505024.19	68.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE2150	1400246.17	481172.17	54.3
Anclote	7NL0840	1400247.50	492842.50	59.1
Anclote	7NE2960	1400254.05	475132.50	51.5
Anclote	7NE2950	1400257.98	474967.72	51.5
Anclote	7ND1250	1400261.73	504368.97	68.6
Anclote	7ND1260	1400270.34	504527.45	68.0
Anclote	7ND1460	1400291.40	501590.99	67.0
Anclote	7NE0070	1400294.92	489574.46	58.4
Anclote	7NE3530	1400298.10	476943.85	50.9
Anclote	7ND1480	1400321.10	502826.25	67.8
Anclote	7NE3540	1400336.81	476927.83	50.5
Anclote	7NE3520	1400337.25	475585.36	48.8
Anclote	7ND1240	1400353.41	504798.26	68.4
Anclote	7NL0740	1400357.50	494882.50	61.6
Anclote	7NE3230	1400361.68	477587.03	52.1
Anclote	7NE1770	1400370.21	484179.18	55.7
Anclote	7ND1670	1400374.49	499482.18	65.3
Anclote	7NL0630	1400402.50	496582.50	62.7
Anclote	7NC0250	1400424.46	482703.18	54.7
Anclote	7NE3525	1400435.58	477511.68	50.9
Anclote	7NE2140	1400438.98	481498.72	54.3
Anclote	7NE0050	1400439.39	489753.55	58.4
Anclote	7NE4470	1400440.89	477523.45	50.4
Anclote	7NE1750	1400441.89	484757.73	56.7
Anclote	7NE1740	1400462.01	485051.44	56.0
Anclote	7NE1760	1400462.27	484601.60	55.8
Anclote	7NE3550	1400473.71	476822.12	50.5
Anclote	7ND1170	1400473.87	505161.83	71.9
Anclote	7NE2690	1400495.37	477926.09	52.1
Anclote	7NL0670	1400507.50	495547.50	61.6
Anclote	7NC7500	1400527.41	486144.57	57.8
Anclote	7ND1680	1400538.76	499903.24	65.9
Anclote	7NE3040	1400548.01	474866.80	51.5
Anclote	7ND1700	1400554.11	500529.45	66.6
Anclote	7NC5400	1400583.49	486526.46	58.8
Anclote	7NE3010	1400587.99	474754.13	51.5
Anclote	7NC5410	1400596.86	486610.03	58.8
Anclote	7NE3020	1400612.31	474777.50	51.5
Anclote	7ND1690	1400639.35	500161.10	65.9
Anclote	7NC0330	1400653.16	482070.83	54.6
Anclote	7NL0620	1400657.50	496097.50	62.8
Anclote	7NE3570	1400674.52	476455.62	47.1
Anclote	7NE2130	1400685.73	481188.24	55.3
Anclote	7NC0325	1400694.98	482167.82	54.6
Anclote	7NE3280	1400719.28	477828.04	50.4
Anclote	7NE3030	1400731.88	474685.78	51.5
Anclote	7ND1355	1400743.05	505049.14	69.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7ND1025	1400754.41	501722.20	67.4
Anclote	7NC0280	1400767.99	482341.19	54.6
Anclote	7NE3250	1400786.53	478509.71	52.1
Anclote	7ND1450	1400802.02	504017.77	66.8
Anclote	7NE3000	1400819.50	474508.36	51.5
Anclote	7ND1400	1400854.83	504687.24	68.5
Anclote	7NE3270	1400856.82	478144.87	50.4
Anclote	7ND1350	1400858.11	505129.60	69.4
Anclote	7NC0146	1400872.99	484499.73	55.3
Anclote	7NE3560	1400880.13	477136.97	47.9
Anclote	7NL0650	1400882.50	495762.50	62.7
Anclote	7ND1035	1400884.30	501721.70	67.4
Anclote	7NL0860	1400927.71	492585.05	58.4
Anclote	7NC5550	1400955.94	485182.93	55.9
Anclote	7ND0920	1400956.12	502806.65	68.3
Anclote	7NE0040	1400974.83	489708.23	58.4
Anclote	7NL0350	1400982.50	490277.50	58.4
Anclote	7NL0710	1400982.50	494462.50	61.2
Anclote	7NE3370	1400985.13	475203.35	47.1
Anclote	7NL0900	1400986.20	491757.51	58.4
Anclote	7NC0260	1401011.39	482220.57	54.7
Anclote	7NL0830	1401022.50	493467.50	60.2
Anclote	7NC5420	1401061.25	488662.63	61.1
Anclote	7NC0148	1401118.23	484529.94	55.3
Anclote	7NC5555	1401119.77	484828.88	55.3
Anclote	7NE2990	1401123.33	474242.16	51.5
Anclote	7NE3238	1401130.49	478997.69	51.6
Anclote	7ND1410	1401137.60	504854.85	68.6
Anclote	7NC5560	1401160.76	485049.39	55.4
Anclote	7ND0545	1401182.01	503892.18	66.8
Anclote	7NC5580	1401192.18	486378.23	58.6
Anclote	7ND1370	1401209.74	505580.61	69.6
Anclote	7NC0320	1401215.33	481934.51	54.6
Anclote	7ND0832	1401220.59	503456.78	69.0
Anclote	7NE3260	1401221.44	478935.48	50.6
Anclote	7NE2980	1401221.98	474132.51	51.5
Anclote	7ND1380	1401226.72	505268.47	68.8
Anclote	7NC0310	1401232.49	481596.45	54.6
Anclote	7ND0515	1401232.72	503888.18	67.9
Anclote	7NC5570	1401255.46	485051.35	55.3
Anclote	7NE3330	1401264.76	475792.50	47.1
Anclote	7NE3050	1401273.71	474247.20	50.4
Anclote	7NL0640	1401282.50	496947.50	62.7
Anclote	7NE4400	1401283.45	479628.69	52.2
Anclote	7NC0300	1401288.64	481712.98	54.6
Anclote	7ND0512	1401293.62	503665.76	68.6
Anclote	7ND1020	1401300.74	501941.68	66.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7ND1420	1401327.61	504941.52	68.6
Anclote	7NE3380	1401331.48	474345.03	48.8
Anclote	7NL0720	1401352.50	494232.50	61.1
Anclote	7NE0030	1401356.58	489865.10	58.4
Anclote	7NC5440	1401395.48	488026.86	59.4
Anclote	7ND1360	1401413.04	505500.43	69.0
Anclote	7ND1040	1401414.99	501146.64	66.6
Anclote	7NE3420	1401416.45	474233.20	50.7
Anclote	7NE3290	1401443.93	477589.28	49.0
Anclote	7ND1440	1401455.43	504770.12	68.0
Anclote	7NL0845	1401468.47	492923.57	59.4
Anclote	7ND0850	1401490.48	503473.57	67.2
Anclote	7NE4390	1401492.26	480109.78	55.3
Anclote	7NC0150	1401497.95	484293.43	54.7
Anclote	7NE3310	1401503.40	477131.25	48.3
Anclote	7ND1050	1401509.51	500176.79	68.5
Anclote	7NC5430	1401525.55	488527.83	59.5
Anclote	7ND1390	1401527.50	505215.40	67.3
Anclote	7NC5590	1401531.95	485438.65	55.9
Anclote	7NL0850	1401532.50	492532.50	58.7
Anclote	7NE3320	1401538.94	476741.75	47.1
Anclote	7NE4380	1401556.90	480152.49	55.3
Anclote	7NC5460	1401569.68	487433.85	58.8
Anclote	7NL0480	1401577.50	498982.50	62.7
Anclote	7NC0340	1401581.84	480799.46	55.3
Anclote	7ND1430	1401582.19	504956.39	68.6
Anclote	7NE2970	1401636.96	473670.88	51.5
Anclote	7NE3390	1401658.44	474748.51	47.0
Anclote	7ND1375	1401693.69	505563.63	67.3
Anclote	7ND1385	1401699.09	505547.92	67.3
Anclote	7NE0020	1401712.09	489926.43	59.1
Anclote	7NL0510	1401727.50	497987.50	62.7
Anclote	7ND0707	1401732.14	505565.81	67.3
Anclote	7NC0160	1401742.90	484234.10	54.7
Anclote	7NE4320	1401746.68	480361.68	54.0
Anclote	7NC5610	1401749.58	485345.71	55.9
Anclote	7NC0345	1401769.11	480849.94	54.6
Anclote	7NC0270	1401770.67	482910.33	54.7
Anclote	7NC0290	1401791.26	481281.09	54.6
Anclote	7NL0440	1401822.50	499232.50	62.7
Anclote	7ND0930	1401825.16	502911.66	67.4
Anclote	7NL0680	1401827.50	496392.50	62.6
Anclote	7NL0715	1401833.23	492951.45	59.9
Anclote	7NC0180	1401846.60	483780.00	54.7
Anclote	7NE4330	1401857.14	480306.59	53.5
Anclote	7ND1030	1401886.75	502147.95	66.6
Anclote	7ND0900	1401887.67	503505.60	66.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7ND0877	1401894.37	505491.55	67.3
Anclote	7NL0500	1401932.50	498432.50	62.7
Anclote	7NL0340	1401968.48	490183.61	58.4
Anclote	7ND0860	1401968.49	504737.08	67.7
Anclote	7ND0875	1401986.43	505630.89	68.3
Anclote	7NL0490	1401992.50	498557.50	62.7
Anclote	7ND0855	1401997.83	503330.89	68.1
Anclote	7NE4340	1401998.34	480415.06	53.1
Anclote	7ND0865	1401998.72	503387.02	68.1
Anclote	7NC5600	1402004.06	485690.59	56.1
Anclote	7NC5450	1402016.22	487864.94	58.8
Anclote	7NE3400	1402020.30	475052.33	47.0
Anclote	7ND0880	1402028.78	503805.54	66.9
Anclote	7NE4305	1402043.93	478199.76	49.3
Anclote	7NC5630	1402044.29	485050.62	55.0
Anclote	7NL0430	1402047.50	499542.50	62.7
Anclote	7ND0870	1402049.55	504234.63	68.2
Anclote	7NE4280	1402069.35	478878.00	49.4
Anclote	7NC5665	1402069.56	484774.24	54.7
Anclote	7NE0010	1402074.64	489630.84	59.3
Anclote	7NL0730	1402077.50	494007.50	60.6
Anclote	7NE4350	1402103.40	480239.41	52.5
Anclote	7NC0170	1402124.02	483959.93	54.7
Anclote	7NC5670	1402152.66	484781.13	54.7
Anclote	7NC5620	1402153.21	484826.75	54.9
Anclote	7NE3300	1402179.09	476933.82	47.0
Anclote	7ND0925	1402207.18	503135.89	66.9
Anclote	7NE3410	1402211.98	473195.89	54.3
Anclote	7NE4306	1402217.59	478037.87	49.2
Anclote	7NC0375	1402237.37	481394.47	53.5
Anclote	7NL0330	1402252.50	492147.50	59.2
Anclote	7NE3360	1402253.54	475867.74	47.0
Anclote	7ND0970	1402257.34	501013.25	67.7
Anclote	7NC0377	1402296.76	481200.68	52.9
Anclote	7NL0705	1402297.74	493053.30	60.1
Anclote	7ND1010	1402319.45	499942.59	64.4
Anclote	7NE3340	1402343.52	475212.83	47.0
Anclote	7NL0360	1402353.12	491362.97	58.5
Anclote	7NC0350	1402357.50	480560.16	53.5
Anclote	7ND0885	1402369.91	505424.27	67.3
Anclote	7NC0190	1402385.27	482020.93	54.7
Anclote	7NE4360	1402392.07	480155.91	50.4
Anclote	7ND0710	1402407.42	505818.94	67.3
Anclote	7NC0370	1402411.37	480904.42	52.4
Anclote	7NE4270	1402531.11	479397.70	49.6
Anclote	7NL0370	1402534.79	491475.18	58.5
Anclote	7ND0895	1402555.86	504815.82	67.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NL0410	1402557.50	499682.50	63.6
Anclote	7NL0420	1402592.50	499287.50	62.9
Anclote	7NC5480	1402606.44	486708.11	57.1
Anclote	7NL0320	1402612.50	489732.50	58.5
Anclote	7NL0700	1402657.50	494117.50	60.7
Anclote	7NE4260	1402666.91	479825.69	50.5
Anclote	7NC5470	1402681.71	486565.48	57.1
Anclote	7NL0310	1402702.50	491907.50	58.6
Anclote	7NL0690	1402702.50	494802.50	61.4
Anclote	7NE3470	1402722.09	473484.61	50.2
Anclote	7ND0935	1402730.62	503450.00	66.9
Anclote	7NE4290	1402734.97	478696.77	48.7
Anclote	7NE3502	1402736.74	474917.18	47.2
Anclote	7NL0610	1402757.50	495732.50	62.5
Anclote	7NE4300	1402757.74	478583.71	47.7
Anclote	7ND1027	1402777.97	502488.36	66.6
Anclote	7NL0560	1402812.50	496767.50	62.7
Anclote	7NC0140	1402824.28	482919.60	54.7
Anclote	7ND0950	1402826.06	501835.95	64.8
Anclote	7ND0990	1402836.74	500908.61	64.4
Anclote	7NC7900	1402848.33	489168.06	60.7
Anclote	7NC0263	1402848.58	484233.71	54.7
Anclote	7NC0120	1402849.35	482492.22	54.4
Anclote	7NC0265	1402882.55	484220.96	54.7
Anclote	7NC5690	1402914.21	484294.48	54.7
Anclote	7NC5640	1402915.17	485057.27	55.0
Anclote	7NC0110	1402918.01	483119.61	54.7
Anclote	7NC5500	1402931.31	486337.67	56.9
Anclote	7NC5655	1402932.89	484833.53	54.7
Anclote	7NE3504	1402935.56	474995.96	47.1
Anclote	7ND0980	1402935.77	501284.11	64.4
Anclote	7ND1000	1402969.62	500436.39	64.4
Anclote	7ND0915	1402972.60	502935.71	66.9
Anclote	7NL0460	1402977.50	498872.50	62.7
Anclote	7NL0470	1402982.50	498652.50	62.7
Anclote	7NC0400	1403001.97	481700.24	52.3
Anclote	7ND0940	1403019.00	502107.74	64.8
Anclote	7ND0960	1403024.54	501622.85	64.7
Anclote	7NE4250	1403045.46	479336.56	49.0
Anclote	7ND0905	1403066.20	502701.69	67.1
Anclote	7NC0090	1403066.26	483203.32	54.4
Anclote	7NC5490	1403077.90	486593.21	56.9
Anclote	7NC6890	1403119.93	502631.86	66.9
Anclote	7NL0580	1403122.50	495802.50	62.5
Anclote	7NC6540	1403126.57	505431.19	70.6
Anclote	7NC5680	1403131.31	484775.30	54.7
Anclote	7NC0010	1403141.38	482011.74	51.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE4310	1403143.10	478112.62	47.3
Anclote	7NC5540	1403152.04	485335.59	55.3
Anclote	7NC6880	1403155.24	502830.34	66.9
Anclote	7NC0420	1403160.96	480875.27	51.1
Anclote	7NC5660	1403165.29	484847.43	54.7
Anclote	7NC5230	1403174.64	488248.03	59.2
Anclote	7NC5651	1403199.93	485530.25	55.3
Anclote	7NC7120	1403208.42	501671.56	68.0
Anclote	7NC0100	1403214.33	483276.11	53.2
Anclote	7NL0550	1403217.50	497872.50	62.7
Anclote	7NL0590	1403222.50	495352.50	62.5
Anclote	7NE3240	1403224.52	479064.37	48.9
Anclote	7NL0450	1403227.50	498817.50	62.7
Anclote	7NC6835	1403245.17	503193.26	66.8
Anclote	7NC4290	1403246.70	494287.58	61.6
Anclote	7NC5650	1403256.56	485051.19	54.7
Anclote	7NE3510	1403260.74	475637.21	47.0
Anclote	7NC4270	1403267.58	494781.12	60.9
Anclote	7NC4330	1403277.04	493473.98	60.1
Anclote	7NC6870	1403282.62	503464.46	66.9
Anclote	7NL0300	1403287.50	492967.50	59.7
Anclote	7NC6550	1403307.37	505053.40	68.5
Anclote	7NE4370	1403309.27	480111.94	50.9
Anclote	7NC6830	1403319.48	503029.31	66.8
Anclote	7NC4320	1403320.92	493308.61	60.9
Anclote	7NC6860	1403329.49	504045.70	67.3
Anclote	7NC7130	1403344.60	501702.99	66.3
Anclote	7NC7140	1403355.26	501978.95	66.3
Anclote	7NC4300	1403358.85	493551.48	60.9
Anclote	7NC7100	1403366.56	501205.36	68.0
Anclote	7NL0280	1403382.50	489352.50	58.5
Anclote	7NC5510	1403385.79	485955.57	55.7
Anclote	7NC6820	1403391.23	502880.80	66.3
Anclote	7NC6840	1403407.13	504279.55	67.3
Anclote	7NC6850	1403413.44	503546.54	66.9
Anclote	7NL0380	1403422.50	490527.50	58.5
Anclote	7NC0070	1403434.52	484075.83	57.1
Anclote	7NC0410	1403441.07	480937.31	51.1
Anclote	7NC4310	1403445.53	494177.34	60.7
Anclote	7NC7010	1403450.01	502505.63	66.3
Anclote	7NC5530	1403450.69	485411.28	54.9
Anclote	7NL0570	1403467.50	496382.50	63.1
Anclote	7NC7110	1403475.98	501321.98	66.3
Anclote	7NC3390	1403476.28	495537.72	63.3
Anclote	7NC4280	1403481.15	494966.03	60.8
Anclote	7NC0355	1403511.92	480140.52	51.5
Anclote	7NC7020	1403527.39	502492.32	66.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC5390	1403542.27	485334.92	55.8
Anclote	7NC0080	1403546.29	484040.09	55.9
Anclote	7NC5520	1403550.21	485608.02	55.7
Anclote	7NC0360	1403559.52	480289.13	51.5
Anclote	7NC6810	1403560.37	503573.39	66.9
Anclote	7NC5240	1403561.97	487585.50	58.1
Anclote	7NC0380	1403574.30	480488.73	52.0
Anclote	7NC7340	1403580.05	492684.62	60.2
Anclote	7NC6530	1403588.49	505816.12	67.8
Anclote	7NE4220	1403591.75	477655.08	47.0
Anclote	7NC6700	1403606.37	502848.43	68.3
Anclote	7NC5250	1403608.09	487920.00	58.3
Anclote	7NE4230	1403610.07	478812.45	49.1
Anclote	7NC5280	1403621.76	486543.50	56.6
Anclote	7NE4234	1403642.53	478427.67	47.4
Anclote	7NC5270	1403666.66	487252.09	57.4
Anclote	7NC5380	1403667.26	485694.26	56.2
Anclote	7NC6701	1403675.26	503082.17	67.2
Anclote	7NC0390	1403688.48	480648.14	51.5
Anclote	7NC4260	1403703.69	493512.98	60.7
Anclote	7NC7090	1403703.89	500858.98	66.3
Anclote	7NC6780	1403715.98	504740.08	70.5
Anclote	7NC7310	1403724.14	492542.94	60.7
Anclote	7NC5290	1403731.16	486539.24	56.5
Anclote	7NC3380	1403734.71	496183.14	62.7
Anclote	7NC0060	1403740.29	485117.61	56.4
Anclote	7NC0040	1403755.29	485526.15	56.8
Anclote	7NC5260	1403774.97	487249.43	60.5
Anclote	7NC3375	1403778.88	496243.24	62.7
Anclote	7NC0050	1403805.18	484900.86	56.4
Anclote	7NC3400	1403813.39	495910.84	63.3
Anclote	7NC6790	1403813.83	504601.94	68.2
Anclote	7NL0290	1403822.50	489732.50	58.5
Anclote	7NC7450	1403826.05	489462.35	60.3
Anclote	7NL0390	1403832.50	499782.50	68.0
Anclote	7NC5360	1403840.36	485552.36	56.8
Anclote	7NC7330	1403846.89	491652.51	59.6
Anclote	7NC5225	1403855.73	486901.92	56.8
Anclote	7NC6560	1403858.03	505693.84	67.6
Anclote	7NC5220	1403869.38	487146.68	56.8
Anclote	7NC5210	1403886.93	487379.37	58.5
Anclote	7NC5370	1403891.87	485786.25	56.8
Anclote	7NC7070	1403891.88	500372.81	66.3
Anclote	7NC7370	1403894.11	490442.41	58.8
Anclote	7NC6750	1403895.03	503925.55	67.2
Anclote	7NC7350	1403895.80	490800.88	59.1
Anclote	7NC7430	1403908.42	489041.80	60.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC7300	1403909.00	492772.56	60.7
Anclote	7NC7440	1403919.92	489454.17	60.8
Anclote	7NC6740	1403932.42	503665.58	67.8
Anclote	7NC7320	1403938.84	491680.47	59.7
Anclote	7NL0600	1403967.50	496572.50	62.7
Anclote	7NC0130	1403968.37	482805.93	51.6
Anclote	7NC5300	1403970.50	486452.09	56.8
Anclote	7NC6710	1403971.21	503281.39	67.2
Anclote	7NC7360	1403979.03	490272.70	61.2
Anclote	7NC7080	1403986.11	500444.78	66.3
Anclote	7NC7040	1404010.08	500053.03	66.3
Anclote	7NC6800	1404011.82	504301.48	67.2
Anclote	7NC7400	1404019.99	489419.93	59.8
Anclote	7NC7420	1404061.07	489680.81	59.7
Anclote	7NC7410	1404066.23	490021.13	60.2
Anclote	7NC6741	1404066.95	503714.22	67.2
Anclote	7NC5200	1404070.45	487451.45	58.5
Anclote	7NC7050	1404083.85	500109.71	66.3
Anclote	7NE3350	1404095.03	476175.97	47.0
Anclote	7NC7000	1404123.05	502326.65	66.4
Anclote	7NC3445	1404138.62	496203.45	63.3
Anclote	7NC5340	1404141.38	485943.14	57.1
Anclote	7NC6520	1404149.66	505402.44	69.8
Anclote	7NC3430	1404155.49	496565.73	65.0
Anclote	7NC7060	1404179.53	500178.10	66.3
Anclote	7NC0430	1404190.72	480779.29	50.7
Anclote	7NE4110	1404211.86	478838.86	49.1
Anclote	7NE4090	1404219.45	479907.11	49.7
Anclote	7NC3460	1404221.50	495600.57	63.3
Anclote	7NL0540	1404257.50	498422.50	62.7
Anclote	7NC6720	1404262.83	503162.58	67.2
Anclote	7NC3440	1404285.86	496581.62	63.3
Anclote	7NC3450	1404305.49	495965.11	63.3
Anclote	7NC6770	1404311.75	504387.67	68.5
Anclote	7NC6760	1404326.45	504135.52	69.8
Anclote	7NL0400	1404338.13	499245.84	65.6
Anclote	7NE4100	1404342.24	479318.53	49.1
Anclote	7NC5170	1404369.30	487231.95	56.9
Anclote	7NC3470	1404395.91	495050.36	60.7
Anclote	7NC7030	1404396.21	500954.85	66.3
Anclote	7NE3252	1404400.59	478055.08	47.5
Anclote	7NC3410	1404405.32	496939.48	64.2
Anclote	7NC7280	1404419.89	497101.26	63.1
Anclote	7NC7210	1404460.99	499645.22	66.7
Anclote	7NC7200	1404468.19	499771.16	67.0
Anclote	7NC3540	1404477.85	494595.75	62.1
Anclote	7NL0530	1404486.49	499216.16	65.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC3420	1404496.43	496871.43	63.2
Anclote	7NC2660	1404497.01	500068.18	67.3
Anclote	7NC0440	1404556.20	480522.43	50.3
Anclote	7NC7220	1404560.85	499286.27	64.8
Anclote	7NC6730	1404563.33	502920.53	67.2
Anclote	7NC5330	1404580.70	486182.85	57.4
Anclote	7NE3500	1404593.35	473878.99	46.8
Anclote	7NC5350	1404624.12	485404.23	57.1
Anclote	7NC2670	1404686.68	499898.17	67.2
Anclote	7NC2365	1404703.12	502019.67	66.9
Anclote	7NC7230	1404713.71	499075.89	62.7
Anclote	7NC3370	1404724.22	496232.28	63.3
Anclote	7NC5190	1404749.32	486873.02	56.8
Anclote	7NC7270	1404751.41	497672.14	62.9
Anclote	7NC2620	1404756.42	500141.44	65.9
Anclote	7NE3480	1404762.71	474972.16	46.8
Anclote	7NE3345	1404777.40	477818.66	47.0
Anclote	7NC2370	1404778.15	502008.77	66.4
Anclote	7NC3350	1404806.39	496809.24	64.7
Anclote	7NC2630	1404808.92	500330.92	64.9
Anclote	7NC2390	1404809.22	500983.58	66.2
Anclote	7NC2640	1404811.08	500197.01	64.9
Anclote	7NC4340	1404816.30	494033.05	60.7
Anclote	7NC6490	1404835.83	506085.07	72.8
Anclote	7NC5180	1404853.92	487805.21	56.9
Anclote	7NC5110	1404866.20	486367.48	56.8
Anclote	7NC0030	1404870.35	482743.39	52.1
Anclote	7NC2650	1404877.02	500096.93	64.0
Anclote	7NC5140	1404912.14	486555.77	56.8
Anclote	7NC4770	1404912.29	490424.14	59.7
Anclote	7NC5130	1404913.20	486635.42	56.8
Anclote	7NC7250	1404923.01	498897.54	64.0
Anclote	7NE3580	1404931.35	475454.66	47.0
Anclote	7NC2690	1404939.03	499375.54	64.0
Anclote	7NC7260	1404961.36	497892.48	64.7
Anclote	7NC4780	1404961.60	489125.03	59.7
Anclote	7NC6725	1404962.77	503123.35	68.2
Anclote	7NC0710	1405026.51	484071.42	54.1
Anclote	7NC2680	1405045.65	499772.18	64.0
Anclote	7NC6650	1405055.99	503647.45	71.0
Anclote	7NC3490	1405070.99	495913.41	64.2
Anclote	7NE3590	1405082.84	475277.01	47.0
Anclote	7NC5320	1405097.87	486165.47	58.3
Anclote	7NE3720	1405108.11	471750.55	48.3
Anclote	7NE3600	1405121.29	475229.38	46.9
Anclote	7NE3490	1405127.39	474383.04	46.8
Anclote	7NE4120	1405135.87	479436.10	49.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC2610	1405142.31	500007.97	64.9
Anclote	7NC3520	1405149.40	494913.31	62.7
Anclote	7NC2400	1405163.71	500976.20	65.7
Anclote	7NC3360	1405176.41	496987.96	64.7
Anclote	7NC0500	1405212.78	482190.80	50.6
Anclote	7NC6470	1405213.47	504371.03	71.2
Anclote	7NC4970	1405230.21	487152.72	57.5
Anclote	7NC5160	1405237.61	488197.50	56.9
Anclote	7NC4410	1405246.64	492600.94	59.8
Anclote	7NC5150	1405255.02	488334.28	58.8
Anclote	7NC6500	1405291.05	505640.98	68.9
Anclote	7NC6510	1405291.41	505260.96	68.8
Anclote	7NC5120	1405293.87	486799.18	56.9
Anclote	7NC3500	1405302.14	495384.02	61.4
Anclote	7NE4200	1405320.78	479176.96	49.1
Anclote	7NE4070	1405325.53	479869.10	50.9
Anclote	7NC0700	1405340.10	484143.54	54.1
Anclote	7NE4080	1405343.18	479807.99	50.2
Anclote	7NC3340	1405379.61	497341.68	64.7
Anclote	7NC0720	1405386.44	483961.72	52.9
Anclote	7NE3428	1405389.96	474100.86	46.8
Anclote	7NC0020	1405405.44	483033.99	52.1
Anclote	7NC3480	1405428.53	496056.42	64.6
Anclote	7NC0690	1405429.70	484380.64	54.1
Anclote	7NC5100	1405439.15	486732.73	58.2
Anclote	7NC2590	1405440.54	498491.00	64.2
Anclote	7NC0540	1405450.83	482711.13	52.4
Anclote	7NE4203	1405455.82	478366.11	47.8
Anclote	7NC6480	1405458.16	504733.52	70.7
Anclote	7NC0550	1405466.00	482612.71	51.1
Anclote	7NC6390	1405482.79	506550.30	71.5
Anclote	7NC2420	1405516.36	500867.26	66.5
Anclote	7NC3330	1405526.30	496927.65	65.2
Anclote	7NC4950	1405549.22	487636.00	56.9
Anclote	7NC7600	1405563.22	479883.83	51.6
Anclote	7NC2410	1405566.21	501070.36	65.7
Anclote	7NC2360	1405566.28	501768.50	65.7
Anclote	7NC7610	1405570.76	479974.33	51.7
Anclote	7NC7630	1405576.24	480056.60	51.1
Anclote	7NC2450	1405577.69	500032.05	64.6
Anclote	7NC2440	1405597.57	499961.46	64.9
Anclote	7NC2470	1405597.84	500262.95	64.5
Anclote	7NC4960	1405602.05	487179.68	57.8
Anclote	7NE3740	1405603.77	472615.23	46.7
Anclote	7NC6660	1405604.26	503889.19	72.3
Anclote	7NE3620	1405604.64	473788.01	46.8
Anclote	7NC4400	1405617.16	493188.72	59.9

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC2460	1405623.91	500149.96	64.6
Anclote	7NC3530	1405634.43	494875.58	61.9
Anclote	7NC2380	1405649.43	501221.40	65.7
Anclote	7NC1010	1405657.21	483359.61	52.4
Anclote	7NC6670	1405669.56	503637.94	69.2
Anclote	7NC6680	1405715.98	503447.54	69.0
Anclote	7NC3320	1405733.53	496740.85	64.7
Anclote	7NC4750	1405735.67	489526.42	60.6
Anclote	7NC4760	1405744.85	489323.63	59.7
Anclote	7NC5090	1405761.38	486616.24	60.3
Anclote	7NC4390	1405783.63	493027.27	62.0
Anclote	7NE3610	1405796.85	474642.40	46.8
Anclote	7NC2600	1405797.63	499361.76	64.1
Anclote	7NC4150	1405800.92	492151.93	61.8
Anclote	7NC0560	1405802.37	482779.69	52.0
Anclote	7NE4060	1405803.90	479447.34	49.4
Anclote	7NC0730	1405809.20	484064.70	52.7
Anclote	7NC2430	1405849.02	500881.72	65.7
Anclote	7NC7640	1405849.30	480217.55	50.6
Anclote	7NE3635	1405862.63	473790.68	46.7
Anclote	7NC0670	1405874.59	484201.64	53.4
Anclote	7NC4900	1405878.04	488815.51	59.8
Anclote	7NE4210	1405895.92	478106.11	47.7
Anclote	7NC3310	1405930.54	496628.48	64.9
Anclote	7NC7620	1405935.83	480012.79	51.7
Anclote	7NC0640	1405938.24	484825.80	54.1
Anclote	7NC4910	1405948.39	488343.69	57.0
Anclote	7NC3510	1405956.75	495044.16	62.4
Anclote	7NC2580	1405960.15	498916.22	64.2
Anclote	7NC6450	1405970.97	505462.84	70.4
Anclote	7NC6630	1405974.85	502046.53	67.2
Anclote	7NC3290	1406012.27	496040.37	64.9
Anclote	7NC6440	1406013.01	505172.71	70.4
Anclote	7NC6460	1406016.57	506071.01	70.4
Anclote	7NC0680	1406018.30	484031.52	53.3
Anclote	7NC5310	1406024.54	485258.01	57.4
Anclote	7NC2570	1406034.26	498678.65	66.0
Anclote	7NC2310	1406035.22	501084.30	65.7
Anclote	7NC2550	1406050.92	499501.13	66.2
Anclote	7NC4380	1406077.45	493197.11	59.9
Anclote	7NC3335	1406081.53	497404.90	64.7
Anclote	7NC6430	1406082.32	505126.33	71.5
Anclote	7NC2560	1406086.25	498438.28	64.2
Anclote	7NC4790	1406089.27	489264.89	59.7
Anclote	7NC3240	1406092.88	495392.60	61.7
Anclote	7NC0480	1406101.01	480526.26	50.3
Anclote	7NE3800	1406114.59	475476.31	46.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC6690	1406116.88	502727.88	67.2
Anclote	7NC6410	1406148.29	505259.44	70.6
Anclote	7NC6640	1406172.76	502180.89	67.2
Anclote	7NC4940	1406176.25	487726.68	59.4
Anclote	7NC4740	1406179.05	489343.51	59.7
Anclote	7NC7650	1406185.75	480066.81	50.3
Anclote	7NC3300	1406210.74	496262.19	64.8
Anclote	7NC2860	1406220.01	498149.99	65.5
Anclote	7NE3730	1406243.76	471963.83	46.7
Anclote	7NC6400	1406247.40	505746.33	70.4
Anclote	7NC4890	1406261.83	488658.23	57.1
Anclote	7NC2340	1406264.43	500306.71	67.9
Anclote	7NC0660	1406268.09	484219.96	53.3
Anclote	7NE3775	1406298.59	477021.40	47.0
Anclote	7NC2350	1406304.73	500908.08	65.7
Anclote	7NC0650	1406306.33	484768.38	53.3
Anclote	7NC4160	1406325.46	491228.14	61.8
Anclote	7NC0510	1406327.33	482116.96	50.3
Anclote	7NC0630	1406339.16	485067.00	54.3
Anclote	7NC2540	1406365.28	499326.49	66.2
Anclote	7NC4880	1406370.15	488916.26	59.7
Anclote	7NC6395	1406372.36	505888.72	70.4
Anclote	7NC4360	1406386.13	493012.77	63.1
Anclote	7NE3750	1406400.55	473073.78	46.7
Anclote	7NC0490	1406410.42	480536.75	50.3
Anclote	7NC6420	1406414.05	505253.22	70.7
Anclote	7NC0570	1406425.63	482959.40	51.5
Anclote	7NC4730	1406429.08	489372.13	59.7
Anclote	7NC3250	1406433.65	495283.12	61.2
Anclote	7NC5080	1406447.01	486798.72	59.4
Anclote	7NC4370	1406449.30	493222.12	59.9
Anclote	7NC4720	1406449.83	489595.91	59.7
Anclote	7NC1020	1406451.87	483050.16	51.5
Anclote	7NC4930	1406457.92	487732.51	59.5
Anclote	7NE4195	1406460.51	479244.51	49.5
Anclote	7NC2520	1406472.51	499826.27	64.9
Anclote	7NC2530	1406501.67	499251.64	66.2
Anclote	7NC4870	1406514.01	488507.67	59.7
Anclote	7NC1980	1406523.36	504516.48	70.9
Anclote	7NC3280	1406539.54	496415.22	64.7
Anclote	7NE3780	1406554.97	476109.18	46.8
Anclote	7NC2330	1406560.68	501094.76	65.7
Anclote	7NE4030	1406561.00	479728.09	50.4
Anclote	7NC5020	1406562.91	486391.77	60.2
Anclote	7NC4685	1406585.41	490887.06	59.8
Anclote	7NE3630	1406587.06	473927.06	46.7
Anclote	7NC0470	1406591.12	480077.35	50.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC4140	1406600.69	491407.85	60.0
Anclote	7NC4920	1406609.43	487664.52	59.5
Anclote	7NC6380	1406610.62	506544.30	70.4
Anclote	7NC3220	1406627.27	496012.53	64.7
Anclote	7NC1015	1406629.51	483097.93	51.5
Anclote	7NC5060	1406637.16	487177.19	59.8
Anclote	7NC4350	1406673.74	493032.42	63.1
Anclote	7NE4130	1406704.01	478977.59	49.5
Anclote	7NE3790	1406711.09	475765.24	46.8
Anclote	7NC1040	1406713.42	482639.16	50.4
Anclote	7NC1030	1406716.74	482816.34	51.5
Anclote	7NE3765	1406721.38	478066.64	48.5
Anclote	7NC2890	1406754.56	498528.67	64.9
Anclote	7NC4130	1406759.57	491552.39	60.9
Anclote	7NC0740	1406784.91	483970.73	52.6
Anclote	7NC3230	1406795.24	495790.90	62.7
Anclote	7NC4210	1406801.39	494914.50	63.8
Anclote	7NC3270	1406809.24	497239.21	64.7
Anclote	7NC5010	1406811.24	486604.46	61.5
Anclote	7NE4040	1406824.84	479556.31	49.5
Anclote	7NE3670	1406826.43	475155.46	46.8
Anclote	7NC6610	1406829.03	502608.14	68.6
Anclote	7NC4700	1406850.17	489669.48	59.7
Anclote	7NC4200	1406851.09	495102.50	64.3
Anclote	7NC6370	1406853.57	506294.66	70.5
Anclote	7NC4850	1406859.93	489133.49	59.7
Anclote	7NE4020	1406870.16	479760.33	51.6
Anclote	7NC2300	1406888.50	501626.66	68.1
Anclote	7NC4110	1406896.22	492080.06	60.0
Anclote	7NC2490	1406897.76	500065.75	66.0
Anclote	7NC4630	1406899.98	489887.10	61.6
Anclote	7NC2510	1406906.66	499749.62	64.9
Anclote	7NE4050	1406914.67	479344.15	49.5
Anclote	7NC4690	1406921.32	489484.38	59.8
Anclote	7NC4120	1406923.82	491491.17	61.2
Anclote	7NC4990	1406926.04	486369.06	61.5
Anclote	7NC6620	1406931.82	502848.67	67.9
Anclote	7NC4220	1406936.72	494434.58	63.7
Anclote	7NC2320	1406940.38	501010.18	65.7
Anclote	7NC4250	1406952.29	494191.50	60.7
Anclote	7NE3770	1406968.52	476478.20	46.8
Anclote	7NC2870	1406974.46	498304.88	65.2
Anclote	7NC1050	1406979.23	482646.39	50.4
Anclote	7NC3200	1406985.69	496080.21	64.6
Anclote	7NC0610	1406990.46	484844.11	54.8
Anclote	7NC4650	1407008.10	490673.11	61.9
Anclote	7NC4180	1407031.85	495797.06	64.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC1970	1407040.74	505069.52	70.7
Anclote	7NC2491	1407046.84	500048.77	64.9
Anclote	7NC3260	1407051.45	497371.42	65.6
Anclote	7NC0600	1407066.22	485009.22	53.9
Anclote	7NC6360	1407077.62	506659.83	72.3
Anclote	7NC5030	1407077.79	486981.56	60.7
Anclote	7NC5070	1407079.55	487299.72	59.4
Anclote	7NC4670	1407092.66	490471.70	60.0
Anclote	7NE3640	1407106.81	473638.97	46.7
Anclote	7NC4190	1407108.24	495593.03	64.3
Anclote	7NC4860	1407121.77	488244.34	60.0
Anclote	7NC2500	1407125.28	499908.67	64.9
Anclote	7NC5000	1407169.21	486493.39	61.5
Anclote	7NC2900	1407177.46	498617.11	64.6
Anclote	7NE3710	1407185.63	474380.70	46.7
Anclote	7NC2270	1407188.85	500694.48	67.2
Anclote	7NE3680	1407194.03	475088.51	46.8
Anclote	7NC4660	1407200.81	490654.39	61.5
Anclote	7NC5050	1407209.73	487588.95	59.4
Anclote	7NC4640	1407214.35	490187.34	61.5
Anclote	7NC0595	1407219.02	484378.93	53.1
Anclote	7NC0460	1407222.59	480349.65	50.3
Anclote	7NE3760	1407222.70	476231.78	47.2
Anclote	7NC3210	1407243.60	495901.64	62.9
Anclote	7NC2980	1407245.19	497407.02	65.7
Anclote	7NE4160	1407247.32	477854.47	49.1
Anclote	7NC0520	1407253.07	482225.45	50.3
Anclote	7NC4170	1407268.14	495396.39	64.3
Anclote	7NC6600	1407273.79	503211.43	71.8
Anclote	7NC2281	1407274.45	500096.68	64.9
Anclote	7NC3180	1407295.75	496160.17	62.9
Anclote	7NC0590	1407297.45	484927.23	55.3
Anclote	7NC4230	1407339.54	494023.33	61.7
Anclote	7NE4140	1407339.84	479068.37	49.3
Anclote	7NC2280	1407339.98	500255.47	67.2
Anclote	7NC4100	1407352.32	492300.20	61.4
Anclote	7NE4168	1407360.18	477665.04	49.1
Anclote	7NC5045	1407366.88	488251.32	60.0
Anclote	7NC0750	1407397.59	484284.91	55.0
Anclote	7NC4070	1407400.92	491886.25	62.6
Anclote	7NE3660	1407403.15	475411.93	46.8
Anclote	7NC5040	1407406.89	487605.02	59.9
Anclote	7NE3700	1407410.00	474791.16	46.8
Anclote	7NC4840	1407427.24	488992.06	59.7
Anclote	7NC4980	1407437.97	486634.17	61.6
Anclote	7NC2910	1407468.50	498683.04	64.1
Anclote	7NC4240	1407478.47	494198.58	63.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC4680	1407496.49	490968.11	59.8
Anclote	7NE4150	1407500.65	478891.27	49.3
Anclote	7NC4830	1407512.52	489669.37	61.8
Anclote	7NC2055	1407516.84	501115.93	66.6
Anclote	7NC3140	1407525.50	496342.60	64.4
Anclote	7NC2060	1407562.04	501327.10	66.6
Anclote	7NC2810	1407580.92	499723.89	66.3
Anclote	7NC3190	1407582.86	495936.06	62.9
Anclote	7NC2290	1407588.00	500301.08	66.9
Anclote	7NC2260	1407614.36	500504.67	67.2
Anclote	7NC4060	1407646.31	491804.47	61.8
Anclote	7NC3110	1407674.88	495731.50	62.9
Anclote	7NC4090	1407678.00	492184.60	61.8
Anclote	7NC3950	1407686.83	492782.24	62.5
Anclote	7NC4020	1407694.72	491409.66	59.8
Anclote	7NC2800	1407702.67	499928.25	66.3
Anclote	7NC0450	1407713.16	480150.70	50.3
Anclote	7NC2990	1407713.20	497186.38	65.6
Anclote	7NC2920	1407716.13	498438.63	66.2
Anclote	7NC3000	1407717.45	497307.85	65.6
Anclote	7NC3870	1407717.61	494132.26	61.7
Anclote	7NC0580	1407718.76	484965.22	57.7
Anclote	7NC2030	1407724.08	501915.22	72.0
Anclote	7NC2930	1407735.11	498091.63	64.5
Anclote	7NC3060	1407737.06	495534.68	63.7
Anclote	7NC3150	1407743.03	496310.91	62.9
Anclote	7NC4050	1407766.13	491758.59	61.8
Anclote	7NC4030	1407776.88	491532.14	62.7
Anclote	7NC1080	1407781.92	482653.50	50.3
Anclote	7NC1070	1407792.68	482852.98	50.6
Anclote	7NC3070	1407815.20	495358.76	63.7
Anclote	7NC1960	1407833.35	506620.39	69.7
Anclote	7NC2250	1407846.68	500536.40	67.3
Anclote	7NC3890	1407904.06	493765.14	62.7
Anclote	7NC2820	1407912.59	499893.77	66.3
Anclote	7NC3920	1407914.64	493030.52	61.6
Anclote	7NE4170	1407918.41	477986.29	49.3
Anclote	7NC4080	1407925.07	492461.22	61.8
Anclote	7NC3080	1407933.70	495206.23	63.7
Anclote	7NC2940	1407966.83	498140.33	64.0
Anclote	7NC4620	1407970.54	490090.38	61.0
Anclote	7NC2850	1407983.09	498945.45	65.5
Anclote	7NC4810	1407992.64	489093.26	60.3
Anclote	7NC3940	1407998.86	492871.94	61.4
Anclote	7NC3910	1408003.34	493250.92	61.6
Anclote	7NC1990	1408005.89	504372.64	69.6
Anclote	7NC4040	1408021.04	491679.07	62.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC4820	1408027.70	489379.46	61.0
Anclote	7NC3050	1408043.91	495005.26	63.7
Anclote	7NC4610	1408047.53	489934.47	61.0
Anclote	7NC4600	1408048.61	489911.18	61.0
Anclote	7NC0800	1408059.23	484987.69	53.5
Anclote	7NC3130	1408060.71	496308.63	64.0
Anclote	7NC5810	1408065.33	487898.40	60.8
Anclote	7NC3010	1408067.87	497216.23	65.0
Anclote	7NC4590	1408069.94	489910.43	61.4
Anclote	7NC0760	1408072.62	485955.12	59.6
Anclote	7NC2830	1408075.03	499683.85	66.1
Anclote	7NC4800	1408076.23	488808.07	60.3
Anclote	7NC3880	1408089.55	493995.33	62.2
Anclote	7NC1950	1408095.15	506939.41	71.3
Anclote	7NC5800	1408096.81	488382.52	60.8
Anclote	7NE3980	1408111.47	479708.23	52.3
Anclote	7NC0530	1408117.50	481852.22	50.3
Anclote	7NC5840	1408123.35	487787.99	61.7
Anclote	7NC2000	1408138.47	503073.46	70.5
Anclote	7NE4180	1408151.06	478624.28	49.3
Anclote	7NC3930	1408151.17	492955.26	61.4
Anclote	7NE3950	1408180.33	479618.02	51.8
Anclote	7NE3960	1408183.54	479568.00	50.7
Anclote	7NC1060	1408184.96	483770.36	51.9
Anclote	7NC2970	1408187.30	498265.28	64.0
Anclote	7NC0790	1408188.11	485030.23	59.9
Anclote	7NC2840	1408197.01	499568.19	66.1
Anclote	7NC4015	1408210.30	491730.15	62.8
Anclote	7NC1940	1408224.04	506930.83	71.6
Anclote	7NC5820	1408257.66	488265.49	60.8
Anclote	7NC5850	1408259.96	487716.87	61.7
Anclote	7NC1100	1408271.92	482674.86	50.3
Anclote	7NE4187	1408276.65	477654.58	49.3
Anclote	7NC2040	1408276.93	501694.09	68.2
Anclote	7NC0820	1408292.01	484499.02	52.0
Anclote	7NC3100	1408299.22	495826.53	62.9
Anclote	7NC1090	1408304.34	482817.27	50.6
Anclote	7NC1930	1408319.85	505798.61	69.6
Anclote	7NC4010	1408332.26	491751.16	62.9
Anclote	7NC4550	1408334.44	490028.41	60.6
Anclote	7NC4580	1408337.84	489857.58	61.0
Anclote	7NC2050	1408354.32	502175.65	68.2
Anclote	7NC0780	1408356.98	484913.28	53.5
Anclote	7NC3090	1408363.68	495233.54	62.9
Anclote	7NC3960	1408365.70	492618.62	62.5
Anclote	7NC1920	1408367.39	505959.25	70.9
Anclote	7NC2950	1408380.34	498473.36	65.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NE4185	1408405.27	478204.36	49.3
Anclote	7NC3020	1408424.69	497281.72	64.0
Anclote	7NC4000	1408449.68	491643.80	63.1
Anclote	7NC2070	1408482.13	501015.35	66.1
Anclote	7NC3990	1408482.78	491912.42	63.0
Anclote	7NC2960	1408483.83	497790.31	65.6
Anclote	7NC3030	1408493.50	496777.99	63.4
Anclote	7NC5860	1408528.27	487554.00	61.0
Anclote	7NC4570	1408548.94	489803.88	61.0
Anclote	7NC4540	1408563.20	490063.04	60.6
Anclote	7NC3970	1408564.79	492333.52	62.5
Anclote	7NC1880	1408567.25	506117.85	69.6
Anclote	7NE3970	1408591.56	479258.74	49.3
Anclote	7NC0770	1408609.72	484871.98	57.1
Anclote	7NC0810	1408611.78	484689.82	53.3
Anclote	7NC4530	1408628.90	490266.12	60.7
Anclote	7NC1850	1408631.76	506580.15	71.7
Anclote	7NC1860	1408632.81	506988.99	71.6
Anclote	7NC5830	1408650.70	488389.20	60.4
Anclote	7NC4520	1408652.27	489948.21	60.8
Anclote	7NC1130	1408739.67	482687.98	50.3
Anclote	7NC4560	1408741.30	489575.70	60.8
Anclote	7NC0830	1408755.58	486705.16	61.3
Anclote	7NC3040	1408829.79	496013.20	63.2
Anclote	7NC1190	1408846.35	481351.26	50.3
Anclote	7NC2010	1408852.34	503304.20	67.7
Anclote	7NC2240	1408903.92	497810.47	64.9
Anclote	7NC3980	1408905.71	492377.03	62.6
Anclote	7NC5880	1408925.71	488881.15	61.4
Anclote	7NC5910	1408946.16	488110.91	60.0
Anclote	7NC3860	1408969.09	494582.78	62.8
Anclote	7NC2090	1408975.36	500754.57	66.0
Anclote	7NC2120	1408981.74	499909.91	65.9
Anclote	7NC1120	1408992.16	482833.81	50.6
Anclote	7NC6330	1409012.52	507244.61	74.8
Anclote	7NC1870	1409017.91	506848.75	69.6
Anclote	7NC6350	1409023.15	507422.47	74.2
Anclote	7NC1180	1409041.39	482562.46	50.3
Anclote	7NC5900	1409115.68	488483.33	60.7
Anclote	7NC2210	1409124.67	498448.25	65.7
Anclote	7NC5940	1409153.33	489217.36	60.3
Anclote	7NC1110	1409173.18	483504.91	51.2
Anclote	7NC2100	1409174.72	500346.28	65.9
Anclote	7NC0840	1409195.50	486518.55	58.0
Anclote	7NC0912	1409195.74	484787.73	55.1
Anclote	7NC0980	1409212.56	484522.19	52.7
Anclote	7NF2821	1409221.56	479477.32	51.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF2820	1409224.56	479255.85	50.7
Anclote	7NF2814	1409243.26	479515.66	51.8
Anclote	7NC0960	1409248.98	484592.34	50.9
Anclote	7NF2815	1409250.60	479601.17	52.1
Anclote	7NF2816	1409260.97	479690.13	52.0
Anclote	7NC4500	1409323.53	489383.05	60.5
Anclote	7NC5950	1409346.02	489246.13	60.3
Anclote	7NC3095	1409354.41	495462.52	62.8
Anclote	7NC2140	1409371.43	499518.95	65.7
Anclote	7NC2020	1409394.88	502567.35	66.4
Anclote	7NC6340	1409418.66	507790.20	76.4
Anclote	7NC2220	1409435.68	498708.64	65.7
Anclote	7NC5930	1409481.70	489114.31	60.2
Anclote	7NC5870	1409509.01	487492.44	61.4
Anclote	7NC2230	1409529.78	497840.86	64.9
Anclote	7NC1710	1409554.15	501755.88	67.8
Anclote	7NC2110	1409556.56	499877.65	65.9
Anclote	7NC2080	1409557.10	500686.70	68.4
Anclote	7NC1720	1409560.05	502110.01	66.4
Anclote	7NF2813	1409566.99	479486.73	52.2
Anclote	7NC1160	1409571.93	482695.42	50.2
Anclote	7NF5397	1409597.55	480302.90	48.8
Anclote	7NC0990	1409608.04	484084.83	51.2
Anclote	7NC0935	1409620.42	484646.24	51.7
Anclote	7NC3810	1409621.16	496245.72	65.1
Anclote	7NC0950	1409622.34	484597.26	51.7
Anclote	7NC5920	1409632.75	488758.91	60.5
Anclote	7NC0914	1409633.02	484789.26	54.3
Anclote	7NC1170	1409640.69	482180.28	50.2
Anclote	7NC0970	1409646.61	484542.34	52.2
Anclote	7NC4510	1409673.61	490004.61	60.6
Anclote	7NC2200	1409678.07	498396.17	66.4
Anclote	7NC5960	1409688.33	489182.45	60.0
Anclote	7NC0850	1409693.88	485882.58	54.6
Anclote	7NC4450	1409720.64	491848.81	62.0
Anclote	7NC1670	1409737.12	501649.64	66.6
Anclote	7NC1660	1409744.99	501846.38	67.0
Anclote	7NC3840	1409779.72	494472.59	62.1
Anclote	7NC1150	1409790.60	483326.22	50.2
Anclote	7NC5980	1409810.03	488141.24	60.0
Anclote	7NC2130	1409820.11	499705.24	65.7
Anclote	7NC3820	1409868.16	496018.68	64.8
Anclote	7NC1140	1409873.47	482617.80	50.2
Anclote	7NF5398	1409877.50	481422.50	48.8
Anclote	7NC1680	1409933.86	501629.97	66.6
Anclote	7NC1650	1409937.05	501351.53	66.6
Anclote	7NC3800	1409938.83	496956.03	64.6

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NC0910	1409948.09	485011.55	52.6
Anclote	7NC6320	1409971.68	507277.98	76.5
Anclote	7NC4490	1409973.39	489382.83	60.4
Anclote	7NC3826	1409983.05	497663.40	65.4
Anclote	7NC1700	1409985.54	502407.03	66.4
Anclote	7NC0920	1409995.57	484752.81	52.4
Anclote	7NC3900	1410054.77	493630.35	61.5
Anclote	7NC1470	1410079.06	500019.70	65.9
Anclote	7NC0930	1410079.98	484571.47	52.4
Anclote	7NC6310	1410097.22	507053.59	76.5
Anclote	7NC0940	1410164.81	484655.06	52.4
Anclote	7NC1840	1410166.03	506660.19	69.6
Anclote	7NC3828	1410169.21	497382.96	65.1
Anclote	7NC0870	1410184.20	485853.48	54.6
Anclote	7NC6300	1410196.51	507258.51	76.7
Anclote	7NC1000	1410212.44	484371.76	50.5
Anclote	7NF5396	1410227.50	482302.50	48.8
Anclote	7NC5970	1410231.04	488459.68	60.8
Anclote	7NC1460	1410246.51	500129.72	67.7
Anclote	7NC5990	1410272.40	487865.21	59.8
Anclote	7NC1440	1410295.72	500926.34	65.9
Anclote	7NC2150	1410328.30	499228.68	67.1
Anclote	7NC1890	1410362.26	504675.92	73.3
Anclote	7NC1690	1410366.99	501870.34	66.5
Anclote	7NC1900	1410415.60	505871.77	69.6
Anclote	7NC3830	1410423.30	495911.35	62.8
Anclote	7NC1800	1410482.12	507574.73	76.6
Anclote	7NC2160	1410498.05	498574.85	66.5
Anclote	7NC1810	1410519.55	507030.54	76.6
Anclote	7NC0900	1410537.22	484816.72	52.3
Anclote	7NF5395	1410554.85	484474.86	50.2
Anclote	7NC1620	1410563.86	503100.66	68.1
Anclote	7NC0880	1410575.02	486310.81	55.4
Anclote	7NC1630	1410622.53	502691.73	66.6
Anclote	7NC2190	1410637.02	498092.93	65.8
Anclote	7NC0890	1410718.50	485725.42	53.7
Anclote	7NC1450	1410726.62	500235.29	65.9
Anclote	7NC3790	1410766.96	496481.56	64.9
Anclote	7NC4480	1410789.57	490278.24	60.7
Anclote	7NC2170	1410798.25	499043.07	66.5
Anclote	7NC1820	1410823.79	506650.35	71.9
Anclote	7NC3770	1410824.46	495262.10	62.3
Anclote	7NC1780	1410839.89	507178.59	76.9
Anclote	7NC1430	1410868.19	501137.47	65.9
Anclote	7NC0860	1410877.47	486765.40	59.2
Anclote	7NF5394	1410887.50	485552.50	52.7
Anclote	7NC3680	1410953.20	496054.72	63.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5393	1410955.68	484396.09	50.1
Anclote	7NC1740	1410989.73	507526.04	77.4
Anclote	7NC3780	1411004.07	496575.82	65.2
Anclote	7NC1730	1411019.29	507723.89	76.8
Anclote	7NC3650	1411029.20	497410.61	65.4
Anclote	7NC3690	1411037.06	496234.81	63.7
Anclote	7NF2812	1411041.86	479426.56	48.4
Anclote	7NC6030	1411052.81	488707.44	60.7
Anclote	7NC6060	1411060.06	487932.01	59.6
Anclote	7NC4460	1411085.72	491158.08	61.0
Anclote	7NC3670	1411099.15	496311.97	63.8
Anclote	7NC4440	1411112.48	492404.15	61.4
Anclote	7NF5392	1411115.42	485067.59	52.6
Anclote	7NC1580	1411123.45	503300.80	69.2
Anclote	7NC6010	1411162.57	487568.15	59.6
Anclote	7NC1600	1411165.78	502993.25	66.9
Anclote	7NF5390	1411192.50	484392.50	50.1
Anclote	7NC6000	1411211.95	487423.21	59.2
Anclote	7NC1760	1411236.06	507446.59	77.1
Anclote	7NC3700	1411249.77	495924.76	63.5
Anclote	7NC1750	1411252.68	507586.72	77.1
Anclote	7NF5391	1411258.02	479948.09	48.8
Anclote	7NC3750	1411280.79	494953.46	62.3
Anclote	7NC1770	1411297.74	507129.56	77.1
Anclote	7NC6040	1411308.53	488213.45	59.9
Anclote	7NC6020	1411330.31	488849.02	60.8
Anclote	7NF5388	1411333.09	481142.41	48.8
Anclote	7NF2818	1411365.68	479090.34	49.6
Anclote	7NC1590	1411415.48	503207.55	67.9
Anclote	7NC1830	1411440.08	506047.14	77.6
Anclote	7NC1530	1411465.32	505250.91	76.6
Anclote	7NC1610	1411494.50	502430.47	66.8
Anclote	7NC6050	1411499.07	488187.09	59.5
Anclote	7NC1790	1411510.56	506147.71	78.6
Anclote	7NC2180	1411528.09	498922.31	66.0
Anclote	7NF2811	1411529.28	479277.01	50.2
Anclote	7NC6070	1411536.48	487927.80	59.5
Anclote	7NF5389	1411580.12	485509.28	53.6
Anclote	7NF5387	1411592.50	481572.50	48.8
Anclote	7NC3660	1411598.28	496926.48	63.3
Anclote	7NC1420	1411635.93	500876.43	66.4
Anclote	7NF5386	1411674.68	487912.83	58.5
Anclote	7NC4430	1411725.79	489481.93	60.6
Anclote	7NC4470	1411749.25	490137.82	60.6
Anclote	7NC3740	1411789.92	495883.86	62.8
Anclote	7NF5385	1411792.50	482547.50	48.8
Anclote	7NC1400	1411802.29	499642.86	67.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5384	1411833.32	479825.62	48.8
Anclote	7NC4420	1411906.21	489215.76	60.5
Anclote	7NF5383	1411917.50	481852.50	48.8
Anclote	7NF2808	1411928.79	479243.84	51.7
Anclote	7NF2809	1411937.92	479332.81	51.8
Anclote	7NC1585	1411942.00	503062.09	69.1
Anclote	7NF2810	1411947.25	479420.03	51.8
Anclote	7NC3640	1411958.86	496844.70	63.3
Anclote	7NC3760	1411961.62	494327.33	62.0
Anclote	7NC3730	1411979.71	496380.06	62.9
Anclote	7NF5382	1412037.61	482262.35	48.8
Anclote	7NC1550	1412059.21	504495.03	73.7
Anclote	7NF5380	1412119.32	482805.80	48.9
Anclote	7NC1410	1412124.53	500314.98	66.5
Anclote	7NC1540	1412145.23	505552.30	78.0
Anclote	7NF5381	1412161.87	479522.79	48.8
Anclote	7NF5379	1412238.08	489430.93	59.5
Anclote	7NC3720	1412267.41	496073.17	62.8
Anclote	7NF5378	1412346.06	488805.99	58.4
Anclote	7NC3710	1412475.36	496303.13	62.8
Anclote	7NC1560	1412506.46	502469.80	69.1
Anclote	7NC1565	1412508.37	502614.90	69.1
Anclote	7NF5377	1412517.32	481701.28	48.8
Anclote	7NC1570	1412557.70	503504.51	69.1
Anclote	7NC1520	1412574.23	504295.35	74.3
Anclote	7NC3620	1412650.58	496066.05	64.7
Anclote	7NF2805	1412673.54	479119.58	49.7
Anclote	7NC3630	1412695.65	496801.11	65.0
Anclote	7NF5376	1412707.50	480535.15	48.8
Anclote	7NC6170	1412768.94	491880.63	60.5
Anclote	7NF5375	1412772.50	490177.50	58.9
Anclote	7NF5374	1412782.50	491227.50	59.0
Anclote	7NC6180	1412893.85	491794.26	60.4
Anclote	7NC1350	1412935.43	502246.57	68.2
Anclote	7NC6160	1412945.10	492921.12	60.9
Anclote	7NF2807	1412987.31	479148.38	52.2
Anclote	7NF2806	1412996.06	479229.67	52.3
Anclote	7NF5373	1413025.22	487047.59	53.8
Anclote	7NC6120	1413068.83	496110.04	62.1
Anclote	7NC3580	1413126.74	496515.64	64.9
Anclote	7NC1360	1413143.83	501381.39	66.8
Anclote	7NC3590	1413158.01	496711.47	64.8
Anclote	7NC3600	1413173.83	497014.32	64.1
Anclote	7NC1380	1413191.24	500314.57	66.5
Anclote	7NC6150	1413411.97	493671.65	61.5
Anclote	7NC1510	1413424.42	503382.40	70.3
Anclote	7NC3610	1413447.87	497266.93	63.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5366	1413473.04	479557.39	48.0
Anclote	7NF5372	1413512.37	482737.07	48.9
Anclote	7NF5430	1413528.10	491859.04	60.1
Anclote	7NF5371	1413548.30	485789.41	51.7
Anclote	7NC1390	1413560.26	499674.81	66.5
Anclote	7NF5367	1413570.39	488085.27	55.9
Anclote	7NF5369	1413762.50	488942.50	58.1
Anclote	7NC6130	1413800.98	495830.04	61.8
Anclote	7NC6110	1413803.08	496230.95	64.2
Anclote	7NF5368	1413817.26	480314.24	48.8
Anclote	7NF5197	1413821.42	494185.22	61.6
Anclote	7NC1490	1413849.79	504168.41	70.8
Anclote	7NC1480	1413852.01	503951.70	70.8
Anclote	7NF5365	1413853.03	489687.27	58.2
Anclote	7NC6140	1413863.89	495110.35	61.8
Anclote	7NF2325	1413865.07	479226.64	51.8
Anclote	7NF5370	1413876.62	490635.23	58.4
Anclote	7NF5198	1413896.35	493569.70	61.6
Anclote	7NF2328	1413918.70	479048.61	52.3
Anclote	7NF2327	1413928.39	479132.78	52.3
Anclote	7NF5364	1413931.99	492591.73	60.2
Anclote	7NF2326	1413936.58	479219.19	51.8
Anclote	7NF5363	1413962.50	484097.50	48.8
Anclote	7NF5362	1413997.50	486312.50	52.4
Anclote	7NF2404	1414073.61	478919.38	48.1
Anclote	7NF5233	1414077.83	493605.24	62.2
Anclote	7NC1370	1414091.41	501172.79	67.3
Anclote	7NF2239	1414096.17	479501.91	51.1
Anclote	7NF5361	1414107.50	493092.50	61.6
Anclote	7NC3570	1414136.59	497323.39	63.8
Anclote	7NF5358	1414155.03	487807.17	54.4
Anclote	7NF5360	1414174.83	480455.59	48.8
Anclote	7NB3390	1414178.73	504298.62	78.2
Anclote	7NF5357	1414218.52	494244.82	62.2
Anclote	7NB3380	1414226.52	504474.75	78.2
Anclote	7NC6100	1414258.08	496040.66	64.2
Anclote	7NC1500	1414315.68	503265.91	72.7
Anclote	7NF5356	1414337.50	489627.50	58.1
Anclote	7NF5355	1414352.50	492202.50	59.8
Anclote	7NF5354	1414423.29	487025.04	53.3
Anclote	7NF2329	1414425.81	478948.70	49.7
Anclote	7NF5359	1414477.90	481327.19	48.8
Anclote	7NF5353	1414536.87	479746.18	48.3
Anclote	7NF5415	1414542.45	493513.02	62.1
Anclote	7NF5352	1414589.61	482602.70	48.8
Anclote	7NC3550	1414604.90	496836.24	66.0
Anclote	7NF5351	1414607.50	494502.50	62.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5350	1414631.69	493164.26	61.7
Anclote	7NC3560	1414652.56	497093.04	66.0
Anclote	7NF5341	1414713.99	485490.98	49.0
Anclote	7NF5349	1414777.50	479277.50	48.3
Anclote	7NF5347	1414801.14	490949.69	58.7
Anclote	7NF5408	1414828.48	496734.66	65.3
Anclote	7NF5346	1414832.50	492622.50	61.7
Anclote	7NF5344	1414841.53	481985.52	48.4
Anclote	7NF5348	1414842.02	489586.12	58.1
Anclote	7NF5345	1414938.53	479854.63	48.3
Anclote	7NC1330	1415033.81	500544.04	67.5
Anclote	7NF5343	1415057.50	497342.50	65.3
Anclote	7NF5337	1415077.85	484611.51	48.9
Anclote	7NF5342	1415137.50	496997.50	65.3
Anclote	7NC1340	1415147.22	501477.03	67.7
Anclote	7NF5339	1415261.19	481217.20	48.8
Anclote	7NF5340	1415282.50	488732.50	56.1
Anclote	7NB3320	1415294.69	503987.27	78.4
Anclote	7NF5338	1415317.50	496342.50	65.3
Anclote	7NC1320	1415351.24	502190.54	67.7
Anclote	7NF5334	1415366.91	490124.98	58.0
Anclote	7NF5336	1415392.50	482392.50	48.4
Anclote	7NF4984	1415407.50	498287.50	67.2
Anclote	7NF5412	1415412.22	493145.10	63.2
Anclote	7NF5413	1415437.29	493485.09	63.8
Anclote	7NF2403	1415452.90	478129.77	47.4
Anclote	7NF5335	1415462.73	480520.24	48.2
Anclote	7NF5411	1415567.68	495532.78	65.9
Anclote	7NF5332	1415662.50	497512.50	65.5
Anclote	7NC1310	1415670.40	501977.77	68.6
Anclote	7NF5331	1415721.12	481016.95	48.2
Anclote	7NF4979	1415737.50	498092.50	65.6
Anclote	7NF5324	1415740.84	483779.74	48.8
Anclote	7NF5325	1415784.15	485543.45	49.2
Anclote	7NF5330	1415797.50	494637.50	63.7
Anclote	7NF5328	1415846.80	489788.69	57.2
Anclote	7NF5329	1415872.83	491386.27	60.2
Anclote	7NF5333	1415891.52	479229.07	47.8
Anclote	7NF5321	1415978.78	486847.67	51.6
Anclote	7NF4965	1415979.13	498956.50	68.6
Anclote	7NF5326	1416000.47	480630.60	48.2
Anclote	7NF5327	1416027.50	495667.50	65.6
Anclote	7NF5322	1416057.38	494232.12	63.5
Anclote	7NC1307	1416071.05	501583.99	68.4
Anclote	7NF4969	1416092.50	498207.50	65.6
Anclote	7NF5421	1416122.93	481286.45	48.6
Anclote	7NF2461	1416124.44	476273.96	46.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5323	1416141.56	488674.60	55.6
Anclote	7NF5320	1416151.29	494654.70	64.4
Anclote	7NC1305	1416183.99	501686.07	71.3
Anclote	7NF5414	1416212.12	496353.37	65.9
Anclote	7NF5318	1416212.50	497187.50	65.6
Anclote	7NF5316	1416262.50	495982.50	65.7
Anclote	7NF5317	1416267.50	496322.50	65.9
Anclote	7NF5319	1416294.70	495037.47	64.4
Anclote	7NF4645	1416357.42	477496.38	46.8
Anclote	7NF5315	1416382.50	494387.50	63.5
Anclote	7NB3350	1416395.21	503435.70	73.6
Anclote	7NF5314	1416502.50	494047.50	63.5
Anclote	7NF5312	1416537.78	489664.86	56.6
Anclote	7NF4958	1416545.53	498098.40	65.6
Anclote	7NF4957	1416547.50	497302.50	65.6
Anclote	7NF5313	1416554.46	482627.76	48.3
Anclote	7NB3330	1416579.91	503993.08	75.2
Anclote	7NF5311	1416664.05	494447.77	63.5
Anclote	7NB3370	1416666.54	502581.47	73.6
Anclote	7NF5306	1416686.91	492013.58	59.8
Anclote	7NC1300	1416703.47	502046.71	71.5
Anclote	7NF4953	1416707.50	497082.50	66.1
Anclote	7NC1290	1416709.46	500954.57	72.8
Anclote	7NB3340	1416723.26	503875.46	74.7
Anclote	7NF5307	1416767.31	492909.90	60.0
Anclote	7NF5310	1416777.50	495272.50	65.5
Anclote	7NF4947	1416812.75	499392.68	68.9
Anclote	7NF5308	1416847.50	488257.50	54.8
Anclote	7NF4952	1416852.52	499593.95	69.7
Anclote	7NF5309	1416862.39	481572.50	47.9
Anclote	7NF2400	1416877.22	477749.69	46.8
Anclote	7NF2401	1416880.75	478166.03	46.8
Anclote	7NB3400	1416963.98	502373.70	73.6
Anclote	7NF2460	1416967.24	476520.11	46.8
Anclote	7NB3360	1417000.63	502803.98	73.6
Anclote	7NB3255	1417029.45	503977.88	76.1
Anclote	7NF5305	1417035.49	481182.46	47.8
Anclote	7NB3245	1417045.44	504565.71	76.5
Anclote	7NB3250	1417098.19	504277.62	76.5
Anclote	7NF4944	1417139.12	497515.42	67.0
Anclote	7NB3310	1417145.70	502723.07	73.6
Anclote	7NF5300	1417216.69	496738.13	67.0
Anclote	7NF5303	1417242.50	494702.50	64.8
Anclote	7NF5304	1417245.03	489334.11	55.8
Anclote	7NF5301	1417247.50	485117.50	48.7
Anclote	7NF5302	1417247.50	493322.50	62.0
Anclote	7NB3240	1417285.16	504803.32	76.8

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB3300	1417322.43	503633.65	74.8
Anclote	7NF5299	1417331.30	486374.47	51.0
Anclote	7NB3260	1417331.35	503754.11	76.0
Anclote	7NF5298	1417337.50	479352.50	47.4
Anclote	7NF2462	1417346.97	477560.74	46.8
Anclote	7NF2459	1417400.85	475165.98	46.5
Anclote	7NF2402	1417448.81	477079.32	46.8
Anclote	7NB3230	1417551.98	502431.98	73.6
Anclote	7NF2287	1417565.31	476059.52	46.8
Anclote	7NB3290	1417579.91	503721.12	76.0
Anclote	7NF2323	1417617.82	478901.49	52.3
Anclote	7NF2322	1417619.59	478990.81	51.4
Anclote	7NF2473	1417620.15	477576.10	46.8
Anclote	7NF2324	1417620.46	478819.39	52.5
Anclote	7NC7800	1417629.46	501045.18	72.8
Anclote	7NB3270	1417672.53	503928.46	76.1
Anclote	7NF2240	1417676.72	479205.83	49.8
Anclote	7NF2321	1417693.35	478993.06	51.7
Anclote	7NF5297	1417702.50	481742.50	47.5
Anclote	7NF5296	1417717.50	494192.50	63.3
Anclote	7NF5295	1417742.50	495792.50	67.5
Anclote	7NB3280	1417819.67	503558.35	75.5
Anclote	7NF5294	1417825.74	488509.04	55.3
Anclote	7NF2399	1417893.11	473332.68	45.6
Anclote	7NF4932	1417902.50	500032.50	67.7
Anclote	7NB3210	1417937.85	502728.88	73.6
Anclote	7NF4930	1417952.50	497057.50	67.0
Anclote	7NF5292	1418042.50	494622.50	64.9
Anclote	7NF2464	1418077.77	478508.71	46.9
Anclote	7NF5293	1418090.52	486520.92	51.4
Anclote	7NF5291	1418097.50	489937.50	58.6
Anclote	7NF5290	1418104.77	493846.75	63.3
Anclote	7NB3220	1418156.87	501654.43	73.6
Anclote	7NF5289	1418162.50	488156.46	54.8
Anclote	7NF4907	1418190.07	498718.08	67.7
Anclote	7NF5288	1418202.50	484592.50	48.4
Anclote	7NF5287	1418229.92	486095.11	51.1
Anclote	7NF5407	1418256.21	493309.37	62.8
Anclote	7NF2463	1418273.84	477961.53	46.9
Anclote	7NB3170	1418285.05	505887.70	76.9
Anclote	7NF5286	1418297.50	479897.50	47.4
Anclote	7NF2440	1418299.86	476950.85	46.8
Anclote	7NF4921	1418402.50	500027.50	70.9
Anclote	7NF5285	1418407.50	481107.50	47.5
Anclote	7NF5284	1418425.88	482142.53	47.6
Anclote	7NF5282	1418447.50	495567.50	65.7
Anclote	7NF5283	1418519.12	479121.83	47.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF2458	1418527.99	473781.49	45.6
Anclote	7NF5278	1418528.74	492561.61	61.8
Anclote	7NF2465	1418529.59	478665.71	46.9
Anclote	7NF5281	1418572.50	493602.50	63.3
Anclote	7NF5280	1418612.50	494282.50	63.7
Anclote	7NB3160	1418647.06	505659.30	76.9
Anclote	7NF5279	1418668.94	480553.74	47.4
Anclote	7NF4911	1418752.50	500297.50	71.7
Anclote	7NF5277	1418787.50	490017.50	60.3
Anclote	7NF5276	1418796.98	481469.26	47.5
Anclote	7NF5275	1418822.50	494477.50	64.4
Anclote	7NB3150	1418869.24	505881.48	75.4
Anclote	7NF5422	1418885.99	490563.43	61.5
Anclote	7NF5274	1418897.50	491717.50	62.8
Anclote	7NF5266	1418945.64	482674.62	47.5
Anclote	7NF5264	1418988.22	487119.75	53.8
Anclote	7NF2457	1419002.61	475080.55	46.5
Anclote	7NB3200	1419034.49	502991.15	74.8
Anclote	7NF5272	1419037.50	484202.50	48.0
Anclote	7NF5271	1419052.50	496052.50	66.8
Anclote	7NF4902	1419082.15	500403.67	70.4
Anclote	7NF5269	1419113.75	490848.60	61.5
Anclote	7NF2398	1419137.57	476487.96	46.7
Anclote	7NF5236	1419139.17	490319.32	61.5
Anclote	7NF5270	1419165.85	486146.35	51.6
Anclote	7NF5268	1419222.50	493777.50	63.3
Anclote	7NF5263	1419246.29	484819.59	48.5
Anclote	7NF2439	1419253.38	477724.57	46.9
Anclote	7NF5235	1419269.27	490502.89	61.5
Anclote	7NF5273	1419280.26	485489.89	50.0
Anclote	7NF5267	1419282.17	492082.81	62.2
Anclote	7NF5265	1419282.50	487427.50	54.3
Anclote	7NF4892	1419367.50	496942.50	67.2
Anclote	7NF2304	1419375.66	478759.92	47.2
Anclote	7NF2297	1419385.94	478915.08	47.3
Anclote	7NF2303	1419392.32	479078.48	47.4
Anclote	7NF2456	1419447.23	475988.70	46.7
Anclote	7NF5261	1419452.50	496362.50	66.9
Anclote	7NF5260	1419460.63	486340.05	51.6
Anclote	7NF5262	1419472.60	492885.54	62.2
Anclote	7NF5259	1419492.50	491532.50	62.3
Anclote	7NF5258	1419517.50	493637.50	63.4
Anclote	7NF5257	1419543.77	490398.65	61.5
Anclote	7NB2960	1419592.19	500939.27	71.8
Anclote	7NF4885	1419632.50	499852.50	67.8
Anclote	7NF5255	1419646.78	493832.27	64.0
Anclote	7NF2318	1419653.54	474947.77	46.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF4644	1419657.62	477593.53	46.9
Anclote	7NF5254	1419672.50	487732.50	56.1
Anclote	7NF5256	1419684.51	483403.76	47.7
Anclote	7NF5406	1419701.20	493479.57	63.8
Anclote	7NF5252	1419762.50	494952.50	65.5
Anclote	7NB3130	1419809.63	507447.44	74.8
Anclote	7NF5253	1419829.30	492600.32	61.9
Anclote	7NF5251	1419837.50	495217.50	65.5
Anclote	7NF5250	1419842.50	494717.50	65.5
Anclote	7NF5249	1419877.50	494537.50	65.5
Anclote	7NF2307	1419882.96	478675.08	47.1
Anclote	7NF2455	1419905.49	476234.93	46.7
Anclote	7NF5248	1419910.67	490733.22	61.5
Anclote	7NF5247	1419927.50	487052.50	53.0
Anclote	7NB2870	1419948.83	502136.20	73.6
Anclote	7NF2235	1419960.34	496715.72	67.5
Anclote	7NF5245	1419972.50	480707.50	47.5
Anclote	7NF5246	1419972.50	496112.50	66.0
Anclote	7NF2441	1419977.73	476983.97	46.8
Anclote	7NB2930	1419998.48	501403.00	72.3
Anclote	7NF5244	1420002.50	493432.50	64.5
Anclote	7NB2970	1420020.73	500227.95	71.8
Anclote	7NF5243	1420037.50	493987.50	65.4
Anclote	7NF5242	1420072.50	492247.50	62.0
Anclote	7NF4869	1420072.50	498687.50	68.2
Anclote	7NF5241	1420102.50	482837.50	47.7
Anclote	7NB3120	1420115.07	507882.27	75.0
Anclote	7NF5054	1420143.23	484778.53	49.6
Anclote	7NF5240	1420152.50	492742.50	63.0
Anclote	7NB3140	1420172.36	506688.31	74.8
Anclote	7NF5238	1420227.50	488257.50	58.7
Anclote	7NF4646	1420237.38	476031.75	46.3
Anclote	7NB2890	1420247.17	501856.92	72.6
Anclote	7NF4862	1420287.42	498066.72	68.2
Anclote	7NF5239	1420289.04	491400.53	63.3
Anclote	7NB2880	1420299.03	502297.13	72.6
Anclote	7NF5237	1420332.79	491828.73	63.4
Anclote	7NF2471	1420414.76	476421.44	46.8
Anclote	7NF5232	1420422.50	495402.50	65.7
Anclote	7NF2472	1420428.58	475241.72	46.2
Anclote	7NF5229	1420482.50	493132.50	63.8
Anclote	7NF5228	1420487.50	483027.50	49.0
Anclote	7NF5224	1420489.02	483991.35	49.2
Anclote	7NF5080	1420531.91	498613.96	68.2
Anclote	7NF5231	1420533.10	489891.78	60.2
Anclote	7NF4854	1420562.50	496517.50	68.2
Anclote	7NF5227	1420578.13	486935.67	54.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB3090	1420629.78	507480.69	76.0
Anclote	7NF5225	1420632.50	494397.50	65.7
Anclote	7NB2900	1420652.21	501747.51	72.5
Anclote	7NB3190	1420665.07	504935.95	74.8
Anclote	7NF5223	1420677.16	488109.47	58.6
Anclote	7NF5230	1420699.45	481709.22	47.5
Anclote	7NB3100	1420721.17	506996.26	75.2
Anclote	7NF5079	1420723.64	498092.74	69.1
Anclote	7NF2470	1420743.06	476888.25	46.8
Anclote	7NF5222	1420887.50	485257.50	50.4
Anclote	7NF5218	1420918.42	486793.62	53.9
Anclote	7NF5221	1420941.65	482921.72	48.4
Anclote	7NF5219	1420942.50	488352.50	59.5
Anclote	7NF4844	1420943.08	498081.35	68.1
Anclote	7NF5226	1420945.50	480987.53	47.5
Anclote	7NB2910	1420950.18	502016.17	71.9
Anclote	7NF4864	1421002.64	497179.55	68.1
Anclote	7NF2317	1421027.14	475558.02	46.4
Anclote	7NF5217	1421027.50	485227.50	51.6
Anclote	7NF5216	1421032.50	487427.50	55.3
Anclote	7NF4840	1421092.50	498742.50	69.4
Anclote	7NB2940	1421113.47	500992.59	71.9
Anclote	7NF5220	1421130.78	491160.41	63.5
Anclote	7NF5215	1421157.50	495117.50	66.9
Anclote	7NB3110	1421161.47	506439.80	75.4
Anclote	7NF4843	1421172.61	479124.83	47.4
Anclote	7NF2397	1421182.09	479443.30	49.5
Anclote	7NF5214	1421182.50	486629.03	53.7
Anclote	7NF5213	1421242.50	488027.50	59.1
Anclote	7NF5063	1421262.28	496772.12	68.0
Anclote	7NF5211	1421287.50	489337.50	60.1
Anclote	7NF5212	1421287.50	494567.50	66.3
Anclote	7NF5409	1421323.87	495062.54	66.5
Anclote	7NF2396	1421396.08	478496.06	47.5
Anclote	7NF5052	1421411.81	484749.73	51.6
Anclote	7NF5210	1421438.18	486271.41	53.5
Anclote	7NF4648	1421476.83	478715.50	47.5
Anclote	7NB2860	1421500.99	500530.17	72.0
Anclote	7NF2331	1421515.12	479042.56	51.1
Anclote	7NB2920	1421576.22	502134.69	71.9
Anclote	7NB3010	1421585.57	506953.04	76.7
Anclote	7NF5209	1421602.50	488297.50	59.5
Anclote	7NF2330	1421614.57	479048.15	51.0
Anclote	7NF2332	1421618.48	478945.91	52.0
Anclote	7NF2333	1421622.95	478850.37	52.0
Anclote	7NF5208	1421637.50	496257.50	67.3
Anclote	7NF4858	1421649.39	479542.39	47.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5207	1421687.50	487902.50	57.1
Anclote	7NF4828	1421710.15	498623.77	69.2
Anclote	7NB2630	1421742.39	503173.24	76.1
Anclote	7NF5204	1421787.50	488112.50	58.4
Anclote	7NF5206	1421806.98	480496.69	47.5
Anclote	7NF5203	1421817.50	488952.50	61.5
Anclote	7NF5202	1421842.50	490047.50	62.2
Anclote	7NF2232	1421899.35	487965.49	57.1
Anclote	7NB2640	1421906.63	503462.98	76.1
Anclote	7NF5410	1422009.30	495201.41	66.6
Anclote	7NF5201	1422072.50	485132.50	52.8
Anclote	7NB3080	1422074.91	505819.03	74.8
Anclote	7NB2650	1422104.41	503334.62	75.7
Anclote	7NF2454	1422147.57	478494.26	47.5
Anclote	7NF4820	1422167.50	497652.50	69.4
Anclote	7NB2810	1422188.95	500251.84	72.4
Anclote	7NF5195	1422215.76	489645.23	61.6
Anclote	7NB3070	1422230.26	505714.65	75.6
Anclote	7NB3040	1422232.21	506630.87	76.8
Anclote	7NF5196	1422288.82	482528.04	49.4
Anclote	7NB2850	1422317.08	501056.82	71.9
Anclote	7NF5205	1422348.57	492175.66	63.8
Anclote	7NF2288	1422357.82	476749.99	47.7
Anclote	7NF5200	1422398.89	486300.31	54.6
Anclote	7NB3000	1422416.28	507546.75	77.6
Anclote	7NF5193	1422457.50	490767.67	64.3
Anclote	7NB3020	1422473.36	507302.95	80.5
Anclote	7NF4815	1422512.50	497897.50	70.2
Anclote	7NF5192	1422532.50	485622.50	54.0
Anclote	7NF5194	1422576.85	481789.67	48.1
Anclote	7NF5191	1422597.05	484179.67	51.8
Anclote	7NB3030	1422597.65	506864.22	76.8
Anclote	7NF5190	1422647.50	497382.50	68.8
Anclote	7NB3060	1422659.42	506160.51	76.9
Anclote	7NF5199	1422721.26	479696.56	47.6
Anclote	7NB2840	1422735.13	499014.26	72.1
Anclote	7NF2289	1422762.50	478192.82	48.2
Anclote	7NF5056	1422775.04	484720.45	52.5
Anclote	7NF5188	1422782.50	490067.50	62.6
Anclote	7NF5189	1422822.61	487353.52	58.0
Anclote	7NF5187	1422827.50	495187.50	66.9
Anclote	7NB3050	1422914.93	505419.11	75.6
Anclote	7NF5404	1422942.68	491306.59	64.3
Anclote	7NF5176	1422980.90	481731.36	48.9
Anclote	7NF5186	1423003.93	496661.25	67.4
Anclote	7NF2466	1423036.35	478456.32	48.2
Anclote	7NB2620	1423049.74	504627.96	76.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NF5405	1423058.49	490973.93	64.9
Anclote	7NB2580	1423070.67	506718.17	77.9
Anclote	7NF4807	1423083.63	479328.94	47.5
Anclote	7NB3440	1423086.22	498111.65	72.1
Anclote	7NF5184	1423090.09	488417.01	60.5
Anclote	7NF5185	1423092.50	483782.50	51.9
Anclote	7NF2293	1423124.99	478851.54	47.5
Anclote	7NF5183	1423127.50	497127.50	68.8
Anclote	7NB2570	1423176.91	506922.55	77.6
Anclote	7NF5181	1423218.40	487102.11	58.0
Anclote	7NB2660	1423218.65	504003.79	75.7
Anclote	7NB2820	1423219.50	500333.16	72.0
Anclote	7NF2453	1423236.97	476078.51	47.7
Anclote	7NF5050	1423263.90	482483.67	49.7
Anclote	7NB2830	1423281.78	498668.04	72.4
Anclote	7NB2590	1423304.24	506537.43	77.5
Anclote	7NF5180	1423307.13	484435.55	53.6
Anclote	7NF5403	1423316.03	491587.34	65.0
Anclote	7NF5399	1423322.25	483172.47	51.8
Anclote	7NF5179	1423364.45	480296.99	49.5
Anclote	7NB2825	1423379.64	498681.76	72.4
Anclote	7NF5182	1423381.65	496388.06	66.9
Anclote	7NB2760	1423415.22	501844.75	73.6
Anclote	7NF5175	1423462.50	493132.50	67.3
Anclote	7NB2560	1423483.97	506708.09	77.5
Anclote	7NF5174	1423542.50	486642.50	58.8
Anclote	7NB2790	1423555.25	501069.70	72.0
Anclote	7NF5173	1423582.50	484627.50	53.7
Anclote	7NF5177	1423590.56	486246.03	56.9
Anclote	7NA1830	1423606.85	479237.68	52.6
Anclote	7NA1970	1423614.30	479079.75	52.7
Anclote	7NA1990	1423619.51	478957.59	52.0
Anclote	7NB2600	1423623.93	505848.87	76.1
Anclote	7NF5172	1423633.83	492190.00	65.8
Anclote	7NA2460	1423647.14	480106.11	50.0
Anclote	7NF5171	1423678.65	494376.35	67.4
Anclote	7NA1480	1423694.75	478956.84	53.1
Anclote	7NB2670	1423695.67	503300.42	74.3
Anclote	7NB2800	1423698.28	500471.56	72.0
Anclote	7NB2780	1423701.33	501409.03	72.7
Anclote	7NF5170	1423722.50	488822.50	60.5
Anclote	7NF5161	1423752.70	481965.85	51.2
Anclote	7NA1470	1423764.87	478841.41	50.2
Anclote	7NA2470	1423769.60	480155.86	50.0
Anclote	7NF5165	1423780.76	487825.14	60.7
Anclote	7NF5169	1423784.22	488141.21	60.7
Anclote	7NF5234	1423785.53	491499.23	65.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA0660	1423792.29	479387.46	47.4
Anclote	7NF5167	1423802.50	485027.50	54.2
Anclote	7NF5168	1423824.62	484009.86	52.0
Anclote	7NF5166	1423832.50	495842.50	68.9
Anclote	7NF5164	1423857.50	491897.50	65.0
Anclote	7NF5163	1423864.20	493756.63	67.5
Anclote	7NF5156	1423874.85	490937.56	65.0
Anclote	7NB2520	1423949.67	503939.84	75.6
Anclote	7NF5162	1423952.50	492967.50	67.3
Anclote	7NB2770	1423966.94	501442.92	72.7
Anclote	7NF5160	1423972.50	489922.50	63.1
Anclote	7NF5159	1423982.50	487312.50	62.8
Anclote	7NF5158	1424017.50	496082.50	68.7
Anclote	7NF5157	1424027.50	494542.50	68.3
Anclote	7NB2610	1424069.00	505008.03	76.1
Anclote	7NF5155	1424072.50	486672.50	59.1
Anclote	7NF5178	1424076.12	483382.70	51.9
Anclote	7NF5153	1424087.50	496807.50	68.7
Anclote	7NF5154	1424089.93	482405.11	52.9
Anclote	7NB2750	1424133.01	500483.43	72.0
Anclote	7NA1460	1424139.53	478840.01	48.6
Anclote	7NF5151	1424172.74	494028.99	67.6
Anclote	7NF5152	1424217.50	493652.50	67.6
Anclote	7NB2510	1424231.00	503248.85	74.4
Anclote	7NA0230	1424291.33	476762.24	46.6
Anclote	7NF5150	1424294.65	487166.00	61.7
Anclote	7NF5149	1424322.50	495517.50	69.0
Anclote	7NF5148	1424337.50	490307.50	64.2
Anclote	7NF5142	1424369.88	489671.36	63.1
Anclote	7NF5146	1424378.73	487684.71	62.9
Anclote	7NB2980	1424384.55	497192.40	73.3
Anclote	7NF5145	1424417.50	495867.50	68.7
Anclote	7NF5147	1424421.96	486706.17	59.4
Anclote	7NF5144	1424422.50	494427.50	68.6
Anclote	7NF5143	1424427.50	488197.50	62.2
Anclote	7NA0880	1424430.35	480563.15	50.9
Anclote	7NB2740	1424446.39	500686.00	72.0
Anclote	7NF5140	1424493.95	490108.68	63.1
Anclote	7NA0590	1424507.37	479489.21	51.1
Anclote	7NA1520	1424532.80	481932.33	51.2
Anclote	7NB2320	1424572.67	500004.66	71.9
Anclote	7NB1446	1424650.93	506084.36	78.0
Anclote	7NF5139	1424662.50	495662.50	68.7
Anclote	7NA0860	1424674.35	478069.03	47.3
Anclote	7NA2310	1424683.64	478828.04	49.6
Anclote	7NB1448	1424693.28	506036.71	77.7
Anclote	7NF5138	1424712.50	489992.50	63.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB2500	1424731.74	504144.50	75.7
Anclote	7NF5136	1424747.50	490757.50	65.1
Anclote	7NB2260	1424760.85	498534.85	71.7
Anclote	7NA1750	1424775.38	479546.20	51.1
Anclote	7NF5135	1424782.50	489647.50	63.1
Anclote	7NF5141	1424822.98	483784.62	53.0
Anclote	7NF5137	1424878.88	487179.64	60.0
Anclote	7NA0395	1424916.98	492749.96	68.1
Anclote	7NF5134	1424952.50	484827.50	56.0
Anclote	7NB2540	1424972.21	505495.48	77.8
Anclote	7NF5133	1424992.50	489317.50	62.5
Anclote	7NF5122	1424993.65	496173.24	68.7
Anclote	7NF5132	1425012.50	488457.50	62.5
Anclote	7NF5125	1425062.54	491570.09	65.0
Anclote	7NF5131	1425072.50	485702.50	58.4
Anclote	7NB2550	1425079.16	505221.06	76.9
Anclote	7NB2680	1425081.64	502640.41	74.2
Anclote	7NF5130	1425107.50	484087.50	54.3
Anclote	7NB2285	1425135.86	500014.95	71.5
Anclote	7NB1450	1425150.51	505918.22	76.8
Anclote	7NB2210	1425160.54	497714.86	72.4
Anclote	7NB2545	1425175.20	505449.33	77.2
Anclote	7NA2205	1425180.22	481436.13	52.0
Anclote	7NF5129	1425207.50	490272.50	66.3
Anclote	7NA1500	1425211.27	478966.96	54.1
Anclote	7NA0403	1425219.28	494639.73	66.6
Anclote	7NA2410	1425223.54	476697.77	46.6
Anclote	7NA2020	1425223.88	479333.56	53.5
Anclote	7NB2490	1425264.86	503568.44	75.4
Anclote	7NF5127	1425273.23	487720.90	61.8
Anclote	7NF5128	1425282.50	490977.50	65.1
Anclote	7NB2220	1425359.82	497717.88	72.3
Anclote	7NA0385	1425446.68	495038.35	68.1
Anclote	7NB2990	1425455.91	496447.27	71.6
Anclote	7NF5126	1425466.86	490083.79	66.2
Anclote	7NA2215	1425515.01	481446.96	51.5
Anclote	7NA2200	1425518.62	482253.83	52.1
Anclote	7NB1460	1425519.80	506651.76	77.2
Anclote	7NB2530	1425540.72	505031.46	77.8
Anclote	7NB2310	1425633.47	499616.47	71.4
Anclote	7NA2350	1425685.66	490325.76	65.8
Anclote	7NA0407	1425688.55	493231.65	64.8
Anclote	7NF5123	1425706.06	485052.72	58.4
Anclote	7NB1470	1425737.76	506328.53	76.5
Anclote	7NF5120	1425804.42	485910.09	58.4
Anclote	7NA0405	1425806.75	493919.45	66.6
Anclote	7NB2290	1425810.61	499991.59	71.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB2730	1425815.34	500985.69	72.0
Anclote	7NA0375	1425842.46	494913.37	68.2
Anclote	7NF5121	1425859.55	491875.40	65.5
Anclote	7NF5119	1425883.42	483829.34	56.2
Anclote	7NB2480	1425951.32	503316.14	74.2
Anclote	7NB2300	1425967.49	499398.50	71.4
Anclote	7NF5124	1426007.34	488031.12	63.6
Anclote	7NB2440	1426018.42	504344.74	77.5
Anclote	7NA0340	1426025.51	478462.50	48.5
Anclote	7NB2240	1426030.69	499405.79	71.8
Anclote	7NB2280	1426034.25	499698.78	71.4
Anclote	7NB2270	1426041.72	500212.40	71.6
Anclote	7NA1300	1426078.35	490209.41	64.9
Anclote	7NA0671	1426114.28	482412.44	53.3
Anclote	7NB3430	1426120.13	498532.22	71.4
Anclote	7NF5118	1426152.50	489392.50	63.8
Anclote	7NB2410	1426154.03	502833.83	75.5
Anclote	7NB2250	1426155.91	499068.98	71.4
Anclote	7NB2450	1426176.24	504031.65	77.1
Anclote	7NB1235	1426192.61	507443.12	78.6
Anclote	7NB2460	1426193.41	503830.35	76.2
Anclote	7NA0640	1426194.56	478949.16	54.2
Anclote	7NF5117	1426322.50	485192.50	58.9
Anclote	7NA2390	1426324.82	480720.29	50.9
Anclote	7NA2140	1426333.30	478240.21	48.0
Anclote	7NF5400	1426365.93	487492.70	63.6
Anclote	7NF5402	1426369.73	488606.84	63.6
Anclote	7NA0360	1426392.29	481530.19	51.0
Anclote	7NB2470	1426405.95	503111.22	74.9
Anclote	7NB1480	1426417.30	505855.47	76.1
Anclote	7NA0610	1426419.22	479417.20	50.9
Anclote	7NB2420	1426480.37	502954.02	75.7
Anclote	7NA1315	1426494.16	492877.92	64.3
Anclote	7NA1325	1426565.58	492464.28	64.2
Anclote	7NF5116	1426613.99	489199.91	63.7
Anclote	7NB2690	1426618.42	502836.28	74.9
Anclote	7NF5401	1426693.32	487651.32	63.7
Anclote	7NA2150	1426705.09	478347.91	48.4
Anclote	7NA2400	1426746.32	480123.75	50.9
Anclote	7NA2300	1426770.34	476793.21	46.9
Anclote	7NB1540	1426772.81	503898.51	76.2
Anclote	7NA0240	1426773.54	475477.77	46.4
Anclote	7NA1290	1426783.72	490383.93	64.8
Anclote	7NA0670	1426813.52	483148.06	56.4
Anclote	7NF5115	1426820.08	486475.39	61.3
Anclote	7NA1245	1426907.34	479730.60	50.9
Anclote	7NB2350	1426910.04	500520.34	72.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB2400	1426923.76	503194.92	76.3
Anclote	7NB1240	1426946.12	507601.37	77.0
Anclote	7NA0435	1426985.18	493701.42	65.1
Anclote	7NA1240	1427003.31	479421.28	51.6
Anclote	7NF5114	1427012.50	488047.50	63.6
Anclote	7NB1255	1427030.57	508067.84	78.7
Anclote	7NB2720	1427038.39	501022.00	72.0
Anclote	7NA1310	1427060.05	494810.30	66.9
Anclote	7NF5113	1427068.36	485193.86	59.9
Anclote	7NB2430	1427084.12	502710.20	73.6
Anclote	7NF5112	1427087.50	489372.76	63.7
Anclote	7NB1530	1427093.34	505128.80	75.9
Anclote	7NA1490	1427107.86	478861.93	51.3
Anclote	7NB2700	1427108.64	502280.56	73.4
Anclote	7NA1250	1427112.33	479047.41	52.3
Anclote	7NA2170	1427116.80	479226.94	52.3
Anclote	7NB2710	1427123.50	501398.12	72.0
Anclote	7NA2370	1427123.65	481388.88	51.1
Anclote	7NB1245	1427137.21	507355.88	76.1
Anclote	7NA1850	1427193.52	479212.04	52.9
Anclote	7NB1260	1427270.54	508393.87	77.3
Anclote	7NB1250	1427280.40	507702.12	76.1
Anclote	7NB2390	1427296.63	502704.06	74.8
Anclote	7NB1550	1427386.91	503729.34	75.9
Anclote	7NA0420	1427388.19	489536.73	64.1
Anclote	7NA0380	1427403.54	484587.77	60.5
Anclote	7NB2225	1427424.13	499090.72	72.0
Anclote	7NA2320	1427479.16	479458.58	51.6
Anclote	7NB2230	1427498.10	497097.99	71.4
Anclote	7NB2330	1427528.73	499709.55	73.9
Anclote	7NB2380	1427537.02	502837.83	75.6
Anclote	7NB1610	1427581.79	504197.36	75.9
Anclote	7NB1270	1427601.47	508251.01	76.1
Anclote	7NA0370	1427603.54	484347.77	60.5
Anclote	7NB2360	1427609.35	502256.91	76.1
Anclote	7NA0495	1427633.27	488692.94	63.7
Anclote	7NA1280	1427644.51	487116.91	63.6
Anclote	7NA0470	1427661.59	482976.53	56.3
Anclote	7NB2370	1427703.83	502807.58	75.9
Anclote	7NB2200	1427734.00	499186.21	72.8
Anclote	7NA1900	1427763.98	481282.15	50.9
Anclote	7NB1520	1427768.63	505091.02	75.9
Anclote	7NA0410	1427793.37	489627.38	63.8
Anclote	7NA0440	1427809.06	493023.63	65.1
Anclote	7NA0390	1427813.54	484577.77	60.5
Anclote	7NA1060	1427913.16	493440.20	65.5
Anclote	7NA0460	1427918.14	491532.89	64.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB1280	1427927.18	508712.25	76.9
Anclote	7NB2340	1427932.19	500191.15	73.1
Anclote	7NB2335	1428032.67	499937.43	73.3
Anclote	7NB1510	1428063.36	505796.18	75.7
Anclote	7NA1440	1428075.58	483865.42	59.3
Anclote	7NA2340	1428111.75	487539.26	63.6
Anclote	7NA0895	1428128.25	482674.55	56.7
Anclote	7NA1435	1428137.23	484395.67	60.5
Anclote	7NB2120	1428158.05	494637.06	70.2
Anclote	7NB1670	1428182.64	502919.59	76.2
Anclote	7NA0915	1428283.72	482507.60	56.2
Anclote	7NB1340	1428300.50	509352.43	76.2
Anclote	7NB2190	1428308.65	498150.92	71.5
Anclote	7NA1090	1428310.21	484863.24	60.5
Anclote	7NA0905	1428339.67	483208.24	59.1
Anclote	7NA1895	1428343.46	481156.18	51.4
Anclote	7NB1300	1428374.52	509912.00	76.2
Anclote	7NB1680	1428374.95	502399.67	75.7
Anclote	7NB2180	1428377.91	498651.15	71.8
Anclote	7NB1690	1428406.19	501620.31	75.7
Anclote	7NA0890	1428417.47	485696.19	60.6
Anclote	7NA0500	1428446.26	488615.50	63.6
Anclote	7NA0490	1428513.54	483077.77	58.4
Anclote	7NB1590	1428524.74	502893.81	76.2
Anclote	7NB1500	1428538.80	505794.21	75.7
Anclote	7NB1350	1428541.25	509110.96	76.1
Anclote	7NA0480	1428555.34	487153.85	63.5
Anclote	7NB1360	1428556.07	509123.92	76.1
Anclote	7NB1730	1428557.59	501842.47	75.5
Anclote	7NB1740	1428591.61	501906.19	74.9
Anclote	7NB1440	1428603.24	509125.93	76.1
Anclote	7NB1700	1428617.03	501021.76	74.6
Anclote	7NA1510	1428637.99	479641.55	51.2
Anclote	7NA0510	1428674.42	491707.42	65.1
Anclote	7NB1780	1428691.52	499638.52	73.4
Anclote	7NB1320	1428697.14	509401.45	76.4
Anclote	7NB1710	1428709.00	501355.70	74.6
Anclote	7NA0690	1428751.68	486666.63	63.3
Anclote	7NB1720	1428769.85	501618.89	74.0
Anclote	7NB2170	1428774.95	498948.55	71.8
Anclote	7NB1370	1428782.25	510086.11	76.1
Anclote	7NB1490	1428784.68	507482.59	76.1
Anclote	7NB1570	1428849.28	504692.36	76.3
Anclote	7NA0400	1428882.88	485101.51	60.6
Anclote	7NA0710	1428882.95	484669.55	61.3
Anclote	7NA0675	1428908.78	485730.76	60.6
Anclote	7NA1525	1428917.72	479212.24	50.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA2450	1428939.68	488703.88	63.6
Anclote	7NA0700	1428940.75	487408.36	63.4
Anclote	7NA0850	1428954.70	494158.08	65.7
Anclote	7NA0755	1428956.03	482758.08	56.6
Anclote	7NB2130	1428983.85	494222.90	65.8
Anclote	7NB1760	1429012.84	501890.37	73.4
Anclote	7NA0720	1429035.28	482071.48	55.3
Anclote	7NA0430	1429052.55	490027.61	63.9
Anclote	7NB1380	1429100.18	510414.49	76.1
Anclote	7NA0680	1429152.67	492646.16	67.3
Anclote	7NB1310	1429173.75	509062.04	77.4
Anclote	7NB1560	1429176.39	504685.51	76.8
Anclote	7NB1800	1429202.28	500594.56	73.4
Anclote	7NB2140	1429254.72	497370.55	71.4
Anclote	7NB1750	1429263.64	502143.73	74.3
Anclote	7NA0770	1429276.36	479560.23	51.3
Anclote	7NA0785	1429279.07	482418.13	56.0
Anclote	7NB2150	1429319.04	497175.04	71.4
Anclote	7NB1810	1429330.01	499577.24	73.4
Anclote	7NB2160	1429354.13	498621.59	74.6
Anclote	7NB1770	1429381.04	501617.55	74.0
Anclote	7NB1230	1429382.35	506815.35	76.1
Anclote	7NA0740	1429392.81	481463.05	53.1
Anclote	7NB1130	1429454.31	505314.88	76.7
Anclote	7NB1170	1429457.29	505813.28	76.7
Anclote	7NA0725	1429489.43	482044.37	54.9
Anclote	7NB1600	1429492.02	502625.83	75.7
Anclote	7NA0730	1429511.99	481688.86	53.4
Anclote	7NB1430	1429540.06	509961.06	76.1
Anclote	7NA0780	1429551.59	486732.08	63.6
Anclote	7NA0760	1429553.55	487107.70	63.7
Anclote	7NA2100	1429557.40	491068.52	63.9
Anclote	7NB1420	1429559.28	510336.15	76.4
Anclote	7NA0980	1429580.68	488193.73	63.6
Anclote	7NB1620	1429583.93	503118.92	75.7
Anclote	7NA0750	1429606.08	482730.09	58.1
Anclote	7NA0920	1429627.06	484186.75	61.3
Anclote	7NB1210	1429659.59	506120.83	76.6
Anclote	7NA0795	1429682.88	482018.08	54.9
Anclote	7NB1630	1429687.76	502347.29	76.2
Anclote	7NB1580	1429691.37	504784.38	75.7
Anclote	7NA1270	1429693.04	480934.75	51.9
Anclote	7NA0940	1429744.07	483275.80	58.1
Anclote	7NA0885	1429803.58	484494.31	61.3
Anclote	7NB0910	1429811.75	508656.08	77.4
Anclote	7NB1410	1429823.42	510224.85	76.4
Anclote	7NB1820	1429866.42	499159.38	73.4

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB1000	1429929.24	506761.07	77.4
Anclote	7NA1860	1429937.81	479088.39	53.7
Anclote	7NA0870	1429951.32	479271.54	53.5
Anclote	7NA0910	1429993.74	482090.17	55.0
Anclote	7NA0160	1430011.56	478899.92	54.6
Anclote	7NA1680	1430012.30	478989.31	54.8
Anclote	7NA1870	1430013.18	479088.39	54.0
Anclote	7NA0900	1430020.06	481644.95	53.6
Anclote	7NB1160	1430054.67	505307.02	76.7
Anclote	7NB0920	1430092.61	508427.52	77.5
Anclote	7NB0930	1430094.74	507745.59	77.5
Anclote	7NA1040	1430098.50	491971.63	64.6
Anclote	7NB2110	1430124.83	494447.18	70.6
Anclote	7NA0180	1430180.86	481048.09	52.1
Anclote	7NA0930	1430194.46	480278.47	51.9
Anclote	7NB1010	1430197.48	506784.98	77.4
Anclote	7NB1840	1430234.78	498298.67	71.9
Anclote	7NB1650	1430238.57	501908.74	76.8
Anclote	7NA0950	1430282.72	493261.18	68.4
Anclote	7NB0790	1430297.85	503636.51	75.7
Anclote	7NB1790	1430318.91	500570.11	73.5
Anclote	7NA0970	1430330.79	482528.87	55.6
Anclote	7NA1100	1430411.63	485173.99	60.9
Anclote	7NA0960	1430416.94	486528.46	63.5
Anclote	7NB1140	1430450.36	505713.99	76.7
Anclote	7NA1000	1430463.72	483077.76	56.3
Anclote	7NB0800	1430483.77	503533.71	75.7
Anclote	7NB1150	1430492.83	506023.07	76.6
Anclote	7NB0660	1430495.34	499667.76	72.0
Anclote	7NB0960	1430495.66	507490.30	77.5
Anclote	7NB1040	1430526.61	506776.93	77.4
Anclote	7NA0990	1430569.65	487655.61	63.3
Anclote	7NA1020	1430570.75	489897.72	64.8
Anclote	7NB0650	1430608.31	500005.20	72.8
Anclote	7NB1020	1430641.26	508060.24	77.5
Anclote	7NA1120	1430647.06	479389.51	51.5
Anclote	7NB0900	1430655.55	508857.50	77.5
Anclote	7NA1010	1430675.17	482327.62	55.4
Anclote	7NB0980	1430699.85	508549.30	77.5
Anclote	7NB1400	1430723.07	510230.40	76.1
Anclote	7NA0925	1430733.01	482509.68	55.5
Anclote	7NB0780	1430799.71	504741.35	75.6
Anclote	7NB0950	1430806.39	507180.89	77.5
Anclote	7NB0820	1430821.56	502673.23	75.4
Anclote	7NA1130	1430822.94	483903.05	57.3
Anclote	7NB1660	1430827.54	501600.71	73.5
Anclote	7NB1050	1430837.70	506447.96	77.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NB1640	1430937.27	501887.41	74.3
Anclote	7NA1121	1430955.38	480152.43	53.0
Anclote	7NA0840	1430990.51	493513.28	68.4
Anclote	7NA0935	1431057.62	482150.06	55.4
Anclote	7NB1120	1431064.04	505323.25	76.7
Anclote	7NB1390	1431083.75	509768.61	76.1
Anclote	7NB0940	1431126.45	507817.63	77.5
Anclote	7NB0640	1431165.78	500513.17	76.3
Anclote	7NB1110	1431177.65	505692.39	77.0
Anclote	7NA2110	1431228.20	488176.65	65.1
Anclote	7NB0890	1431232.90	508997.99	77.6
Anclote	7NA1030	1431242.63	480819.69	53.1
Anclote	7NB0690	1431248.42	502155.64	75.4
Anclote	7NA0210	1431262.91	481828.16	54.4
Anclote	7NA1110	1431274.32	489034.29	63.8
Anclote	7NB2100	1431287.27	494810.56	71.3
Anclote	7NB0565	1431288.41	501450.72	76.6
Anclote	7NB0810	1431314.36	503332.73	75.6
Anclote	7NB0990	1431345.49	508566.26	77.5
Anclote	7NA1180	1431352.09	487157.03	63.3
Anclote	7NB1850	1431396.24	496550.85	71.4
Anclote	7NB1090	1431433.23	506121.78	77.1
Anclote	7NA0817	1431469.61	485810.24	61.8
Anclote	7NA0835	1431515.89	482837.46	56.9
Anclote	7NA1890	1431550.54	479132.14	51.5
Anclote	7NB0567	1431551.96	501382.59	76.6
Anclote	7NB1100	1431554.62	505250.75	76.7
Anclote	7NB0620	1431577.48	500443.87	73.1
Anclote	7NB1030	1431594.30	508092.25	77.5
Anclote	7NB0970	1431605.56	507142.65	77.5
Anclote	7NA2360	1431621.01	493512.30	68.4
Anclote	7NB0630	1431641.46	500118.24	72.3
Anclote	7NB0770	1431662.44	503590.74	75.6
Anclote	7NB0760	1431670.94	504457.64	75.6
Anclote	7NB0680	1431701.78	502419.33	75.7
Anclote	7NA0825	1431727.56	485167.15	60.9
Anclote	7NB1860	1431770.92	495115.90	71.4
Anclote	7NB0595	1431817.63	500055.70	73.0
Anclote	7NB1830	1431829.69	498540.40	72.0
Anclote	7NA1050	1431831.51	481427.48	54.0
Anclote	7NB0570	1431841.19	501186.22	76.0
Anclote	7NB0670	1431920.05	502196.95	78.3
Anclote	7NB0720	1431927.66	504144.54	75.6
Anclote	7NB0560	1431940.54	501383.51	74.9
Anclote	7NB0860	1431961.81	505818.69	77.1
Anclote	7NA1145	1431993.65	482426.14	55.3
Anclote	7NA1170	1432076.17	481092.11	54.0

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA1200	1432084.61	480023.07	53.3
Anclote	7NA1670	1432111.49	478912.58	55.9
Anclote	7NA1980	1432112.23	479003.46	55.8
Anclote	7NA1880	1432112.23	479094.34	55.4
Anclote	7NB0730	1432119.12	504507.97	75.6
Anclote	7NB0740	1432123.89	505023.56	77.8
Anclote	7NA0805	1432145.69	488126.51	63.9
Anclote	7NA1150	1432154.93	488564.60	63.9
Anclote	7NB0710	1432155.87	503964.55	76.2
Anclote	7NB0590	1432166.31	501175.29	74.7
Anclote	7NB0850	1432174.65	505483.99	77.8
Anclote	7NA0310	1432186.72	479093.60	56.1
Anclote	7NA2090	1432188.01	489268.33	63.9
Anclote	7NB0580	1432203.53	501267.58	74.8
Anclote	7NA1220	1432250.98	492058.90	64.5
Anclote	7NB0550	1432260.45	501279.05	74.8
Anclote	7NA1140	1432269.18	481805.71	55.8
Anclote	7NB1080	1432275.02	506659.67	77.1
Anclote	7NB1870	1432276.08	497015.25	71.5
Anclote	7NA1210	1432276.88	480840.08	54.0
Anclote	7NB1070	1432282.99	507080.95	77.4
Anclote	7NA1910	1432295.98	482670.67	58.6
Anclote	7NA1160	1432314.91	484652.32	59.8
Anclote	7NA1230	1432329.45	489619.02	63.9
Anclote	7NA0190	1432351.70	479274.11	55.2
Anclote	7NB1077	1432428.62	506628.93	77.1
Anclote	7NB0840	1432438.27	505362.50	77.8
Anclote	7NB0830	1432453.48	505984.67	77.8
Anclote	7NB1060	1432470.81	507166.21	77.4
Anclote	7NB1075	1432522.48	506675.15	77.7
Anclote	7NB0440	1432546.12	500263.78	75.1
Anclote	7NA1190	1432547.84	482189.95	56.5
Anclote	7NA1205	1432611.58	480998.35	54.1
Anclote	7NB1900	1432621.19	496957.58	71.4
Anclote	7NA1340	1432649.42	484506.88	58.9
Anclote	7NB2090	1432671.08	494873.92	71.4
Anclote	7NA1420	1432707.32	479184.49	52.7
Anclote	7NA0815	1432716.48	486556.59	63.1
Anclote	7NB2080	1432724.66	493697.83	71.4
Anclote	7NB0530	1432745.78	498224.67	75.1
Anclote	7NB0610	1432750.98	498965.19	73.2
Anclote	7NA1370	1432751.22	489153.62	63.9
Anclote	7NB0700	1432754.83	504062.12	76.3
Anclote	7NB0540	1432759.67	498405.34	75.1
Anclote	7NA1360	1432763.34	481706.09	55.7
Anclote	7NA1390	1432765.99	484102.38	58.4
Anclote	7NA1395	1432773.30	485762.29	61.7

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA1415	1432782.35	484891.49	59.2
Anclote	7NA1320	1432818.85	479604.95	52.9
Anclote	7NB1890	1432852.90	496908.43	76.2
Anclote	7NA1330	1432857.03	488306.53	63.9
Anclote	7NA1350	1432864.99	482409.51	56.5
Anclote	7NB0870	1432876.74	508831.87	79.7
Anclote	7NB1880	1432885.91	497479.39	77.1
Anclote	7NA1380	1432934.30	480761.14	54.3
Anclote	7NA1450	1432945.86	478878.95	53.6
Anclote	7NB0450	1432962.54	500697.94	75.1
Anclote	7NB0880	1433071.82	508500.23	77.5
Anclote	7NA0685	1433115.82	482623.91	59.2
Anclote	7NB0600	1433132.51	499575.53	75.1
Anclote	7NA2080	1433157.03	489592.91	63.9
Anclote	7NA1405	1433159.26	485485.88	60.8
Anclote	7NA0830	1433226.00	492692.88	64.5
Anclote	7NB1940	1433238.08	496447.46	72.3
Anclote	7NA1410	1433273.54	485237.77	60.4
Anclote	7NB0490	1433322.19	499919.58	75.1
Anclote	7NB1970	1433391.61	495832.21	70.2
Anclote	7NB1990	1433435.70	494875.96	71.7
Anclote	7NA2070	1433448.32	489573.17	63.9
Anclote	7NB0500	1433541.18	498710.93	75.3
Anclote	7NA1400	1433547.92	484691.57	59.9
Anclote	7NB1980	1433554.51	494514.54	72.6
Anclote	7NB1960	1433579.42	496247.49	71.9
Anclote	7NA1940	1433621.27	482104.56	56.0
Anclote	7NB0510	1433630.72	499162.28	75.1
Anclote	7NA0820	1433631.12	493234.52	70.4
Anclote	7NB0430	1433643.47	499745.74	75.1
Anclote	7NB0480	1433646.69	500003.89	75.1
Anclote	7NA1550	1433676.04	480657.96	54.3
Anclote	7NA0280	1433682.03	486572.10	63.1
Anclote	7NA2065	1433704.18	489743.38	63.9
Anclote	7NB1910	1433751.67	497886.93	72.1
Anclote	7NB0520	1433801.91	498320.77	74.7
Anclote	7NB1950	1433803.89	496163.16	73.0
Anclote	7NA1545	1433848.02	480813.84	54.3
Anclote	7NA1430	1433849.28	486128.51	63.1
Anclote	7NA0270	1433867.82	488357.56	63.9
Anclote	7NA1530	1433905.90	482771.39	57.2
Anclote	7NB0470	1433933.35	500009.75	75.1
Anclote	7NA0837	1433957.24	492028.87	65.9
Anclote	7NB0340	1433966.52	493538.13	70.4
Anclote	7NA0790	1433995.24	479247.10	53.2
Anclote	7NB0410	1433996.35	500387.54	75.1
Anclote	7NB0460	1433999.12	500524.60	75.1

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA1760	1434001.99	490507.56	64.0
Anclote	7NB2060	1434008.39	495855.80	71.4
Anclote	7NB0420	1434013.23	499994.69	76.1
Anclote	7NB2085	1434048.57	495340.41	71.4
Anclote	7NB2050	1434069.34	495444.81	71.4
Anclote	7NB1925	1434099.76	497385.29	73.9
Anclote	7NA0822	1434135.26	492577.52	65.9
Anclote	7NA1540	1434182.68	486443.91	63.6
Anclote	7NA1560	1434229.95	485917.19	61.9
Anclote	7NB1920	1434282.19	497812.94	76.0
Anclote	7NA1590	1434324.49	484728.71	59.9
Anclote	7NB1930	1434372.91	497244.59	72.4
Anclote	7NB0310	1434418.96	494996.16	72.4
Anclote	7NA1755	1434446.36	491414.45	64.0
Anclote	7NB0100	1434452.29	499150.07	73.7
Anclote	7NB2040	1434470.81	496686.28	71.4
Anclote	7NB0400	1434486.65	499939.35	76.1
Anclote	7NB0140	1434489.45	498192.77	75.8
Anclote	7NB0110	1434511.86	499370.17	75.6
Anclote	7NA2195	1434542.98	478794.56	55.4
Anclote	7NA1585	1434569.09	485408.82	61.2
Anclote	7NA2190	1434608.52	479289.68	55.3
Anclote	7NA0620	1434634.50	490205.32	66.6
Anclote	7NA1570	1434674.38	483251.19	56.1
Anclote	7NB0150	1434721.62	497155.55	73.5
Anclote	7NB0120	1434754.22	498917.66	73.0
Anclote	7NB0320	1434756.15	494672.65	72.2
Anclote	7NA0625	1434830.01	483088.39	55.6
Anclote	7NA2380	1434847.32	490810.51	64.1
Anclote	7NB0355	1434851.43	493522.87	71.1
Anclote	7NA1580	1434854.58	484147.97	59.5
Anclote	7NA0350	1434868.09	485971.21	62.2
Anclote	7NB0330	1434921.66	494583.70	71.1
Anclote	7NA1610	1434940.06	491718.33	65.9
Anclote	7NB0090	1434947.43	498577.56	75.3
Anclote	7NA1600	1434967.34	491200.21	65.3
Anclote	7NA1620	1435000.08	482024.50	56.7
Anclote	7NA0695	1435017.81	485310.16	61.2
Anclote	7NB2070	1435081.44	495856.57	71.4
Anclote	7NB2020	1435100.12	495253.13	71.9
Anclote	7NB2030	1435109.11	496586.73	71.4
Anclote	7NA1720	1435178.57	481486.52	54.9
Anclote	7NB2010	1435181.19	495409.15	71.4
Anclote	7NA0810	1435203.54	492397.77	65.9
Anclote	7NA0635	1435276.93	482614.41	55.6
Anclote	7NB0130	1435374.29	499225.31	73.0
Anclote	7NA0520	1435387.94	484357.75	60.3

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA0615	1435426.63	483550.94	55.6
Anclote	7NA0585	1435521.76	479830.60	55.2
Anclote	7NA0255	1435529.97	488267.62	63.9
Anclote	7NB0180	1435552.46	498109.06	73.0
Anclote	7NB0170	1435568.08	497006.41	72.8
Anclote	7NA0260	1435579.99	488673.67	63.9
Anclote	7NA0580	1435596.23	479532.02	55.4
Anclote	7NB0220	1435596.50	496466.72	72.8
Anclote	7NA0655	1435601.76	481447.33	55.8
Anclote	7NA2040	1435601.81	485510.39	62.9
Anclote	7NA0605	1435647.48	483681.77	55.7
Anclote	7NA2330	1435719.98	490065.79	64.8
Anclote	7NB0300	1435721.40	494790.85	71.1
Anclote	7NA2060	1435743.96	489345.12	65.3
Anclote	7NA0645	1435756.23	482027.70	55.6
Anclote	7NA0530	1435768.15	484174.18	59.5
Anclote	7NB0080	1435769.31	499349.22	73.0
Anclote	7NB0360	1435795.66	494267.82	71.1
Anclote	7NA0595	1435831.42	483252.14	55.6
Anclote	7NA0570	1435862.25	480320.61	54.9
Anclote	7NB0190	1435883.57	497265.67	72.8
Anclote	7NA0650	1435938.40	486430.40	62.9
Anclote	7NA0545	1436014.01	482480.15	55.6
Anclote	7NA2050	1436017.08	485466.99	64.4
Anclote	7NB0160	1436024.13	497503.07	73.7
Anclote	7NA0630	1436044.73	483257.38	57.3
Anclote	7NB0020	1436047.53	499717.11	74.7
Anclote	7NB0230	1436100.39	496436.27	72.8
Anclote	7NA0560	1436117.83	481864.66	55.5
Anclote	7NB0200	1436133.46	496947.06	72.8
Anclote	7NB2000	1436144.16	495384.27	72.3
Anclote	7NB0350	1436153.60	492993.86	69.7
Anclote	7NB0070	1436167.03	499494.24	74.3
Anclote	7NA1770	1436167.20	491243.84	65.5
Anclote	7NA1730	1436183.92	483096.20	57.7
Anclote	7NB0030	1436206.57	499279.18	73.8
Anclote	7NB0040	1436227.18	498994.42	73.0
Anclote	7NB0290	1436246.19	494844.19	71.7
Anclote	7NA0552	1436274.14	480895.77	55.5
Anclote	7NB0210	1436283.40	495873.28	73.3
Anclote	7NA1780	1436358.09	489591.30	64.8
Anclote	7NA0800	1436358.09	491761.96	65.5
Anclote	7NA0575	1436362.36	480626.75	54.9
Anclote	7NB0060	1436417.58	498403.44	72.7
Anclote	7NA0574	1436454.28	482235.68	55.6
Anclote	7NB0010	1436492.41	499421.09	74.3
Anclote	7NA0565	1436651.12	482601.14	55.5

WATERSHED NAME	JUNCTION ID	NORTHING	EASTING	100 YR FLOOD ELEVATION
Anclote	7NA1710	1436671.27	489935.79	64.8
Anclote	7NA0540	1436703.34	483064.15	57.8
Anclote	7NB0370	1436823.56	494072.03	70.4
Anclote	7NB0260	1436884.71	493283.03	69.8
Anclote	7NB0280	1436969.65	495037.28	73.5
Anclote	7NA0555	1437005.21	482319.79	55.5
Anclote	7NA0550	1437058.56	481373.69	55.5
Anclote	7NA0080	1437262.96	491798.64	66.1
Anclote	7NA0250	1437268.89	488865.93	64.8
Anclote	7NB0390	1437381.19	492551.66	69.7
Anclote	7NB0270	1437429.68	494289.29	72.4
Anclote	7NA0090	1437437.96	491091.13	65.1
Anclote	7NB0380	1437634.44	493354.18	69.7
Anclote	7NA0100	1438032.44	489956.71	65.1
Anclote	7NB0250	1438201.39	493134.39	69.7
Anclote	7NB0240	1438298.10	492675.87	69.7

Appendix O
Community Outreach Meetings

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

PRESS RELEASE
FOR IMMEDIATE RELEASE
08/19/2013

FOR MORE INFORMATION, Contact:
Barbara A. Spaulding, 727-847-8137
bspaulding@pascocountyfl.net

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

Dade City	(352) 521-5137	**Office of Emergency Management**
Land O'Lakes	(813) 996-2411	Emergency Operations Center
New Port Richey	**(727) 847-8137**	8744 Government Drive, Building A
Facsimile	(727) 847-8004	New Port Richey, FL 34654-5598

Emergency Management Mitigation Committee to hold Public Meetings
~Public comment and informational sessions to mitigate flooding~

(PASCO COUNTY) --- The Pasco County Office of Emergency Management (OEM) will hold a series of public meetings to secure public input into the Local Mitigation Strategy (LMS). The LMS includes an assessment of hazard vulnerabilities faced by property owners and residents. It also includes discussion about how the community can better mitigate against such hazards to save lives, mitigate (lessen and avoid) property damage, and expedite post-disaster recovery.

Communities with plans approved by the State of Florida Division of Emergency Management and the Federal Emergency Management Agency, including Pasco County and its municipalities, may receive grants to pay for mitigation projects like improving stormwater management capabilities; buyout of properties repeatedly flooded; and other property and infrastructure improvements.

"Residents and employees are the life blood of Pasco County," said Emergency Management Director Annette Doying. "Several meetings have been scheduled across the county covering varying aspects of Pasco's Local Mitigation Strategy (LMS). These meetings are designed as stand-alone discussions of the plan, but together provide a comprehensive overview of the LMS, so residents are encouraged to attend one or more if interested."

The public is encouraged to participate in mitigation planning efforts. Those who are interested in participation should contact the Pasco County Office of Emergency Management. The date, location, and agenda for each meeting are as follows:

Monday, August 25, 2014
1:30 – 4:30 p.m.
Land O' Lakes Community Recreation Center,
5401 Land O'Lakes Boulevard, Land O' Lakes.
Agenda: *The Pasco County Local Mitigation Strategy, National Flood Insurance Program, Benefits of the Community Rating System, Hazard Vulnerability Assessment, and Coordination with other community plans*

Thursday, August 28, 2014,
1:30 – 4:30 p.m.
Pasco County Emergency Operations Center,
8744 Government Drive, Building A,
New Port Richey, FL
Agenda: *Assessing the Problem - Impact of Identified Hazards, and Goal setting – Addressing the Hazards*

2-2-2 FLOOD MITIGATION MEETINGS

Friday, September 5, 2014,
1:30 – 4:30 p.m.
Hugh Embry Branch Library,
14215 Fourth Street, Dade City, FL 33523,
Agenda: *Review Current Mitigation Activities and Propose New activities, Draft Action Plan*

Wednesday, September 10, 2014
1:30 – 4:30 p.m.
South Holiday Branch Library,
4649 Mile Stretch Drive,
Holiday, FL 34690,
Agenda: *Presentation of Proposed LMS*

Information concerning the LMS is on file and available for review in the Office of Emergency Management, Emergency Operations Center, 8744 Government Drive, New Port Richey. It is also available on the Pasco County web site at http://www.pascocountyfl.net/DocumentCenter/View/15938.

Those with questions or comments about the meetings should contact the Office of Emergency Management at (727) 847-8137. Written comments can be mailed to: Office of Emergency Management, 8744 Government Drive, Building A, New Port Richey, FL, 34654-5598.

Pursuant to the provisions of the Americans with Disabilities Act of 1990, persons requiring special accommodation to participate in this meeting should contact the Pasco County Office of Emergency Management at (727) 847-8137, no later than (5) five working days before the scheduled meeting date. If you are hearing or speech impaired, please call our TDD line at (727) 847-8949.

Interested parties with questions about the meetings are encouraged to contact Pasco County Mitigation and Recovery Coordinator Barbara Spaulding at bspaulding@pascocountyfl.net or 727-847-8137.

Pasco County Suncoast News
Wednesday, August 27, 2014

Window on Pasco

Pasco schedules flood mitigation meetings

NEW PORT RICHEY — Pasco County Office of Emergency Management invites the public to comment at meetings Aug. 28 and Sept. 10, so the county and cities might be eligible for grants to pay for flooding mitigation projects.

Grants could pay for stormwater management projects, buyout of properties repeatedly flooded and other improvements.

The first session in West Pasco will take place 1:30 to 4:30 p.m. Thursday, Aug. 28, at the Pasco Emergency Operations Center, 8744 Government Drive, Building A.

The second event is set for 1:30-4:30 p.m. Wednesday, Sept. 10, at South Holiday Branch Library, 4649 Mile Stretch Drive.

For information, call (727) 847-8137.

Bilirakis calls town hall on VA clinic location

NEW PORT RICHEY — U.S.

LEGAL NOTICE

NOTICE OF PUBLIC MEETING PASCO COUNTY HAZARD MITIGATION COMMITTEE

Public Notice is hereby given that the Pasco County Hazard Mitigation Committee will hold a series of meetings in several areas of the county. They will be held as follows:

08/25/2014: 1:30 – 4:30 p.m. Land O' Lakes Community Recreation Center 5401 Land O'Lakes Boulevard, Land O' Lakes.
Agenda Items: The Pasco County Local Mitigation Strategy, the National Flood Insurance Program, Community Rating System, Hazard Vulnerability Assessment, Coordination with other community plans.

08/28/2014: 1:30 – 4:30 p.m. Emergency Operations Center 8744 Government Drive, New Port Richey, FL 34654
Agenda Items: Assess the Problem: Impact of identified hazards, Goal setting: Addressing hazards.

09/05/2014: 1:30 – 4:30 p.m. Hugh Embry Branch Library 14215 Fourth Street, Dade City, FL 33523
Agenda Items: Review current activities, Propose new activities, Draft action Plan.

09/10/2014: 1:30 – 4:30 p.m. South Holiday Branch Library 4649 Mile Stretch Drive, Holiday, FL 34690
Agenda Items: Presentation of proposed document.

The LMS is a plan developed with input from residents, business and industry and local government to promote hazard mitigation and to manage post-disaster recovery. The plan must be reviewed annually with community input and updated as necessary. The purpose of these meetings is to discuss, in partnership with the municipalities and residents, plan updates, including the Committee project list. The County first developed a Local Mitigation Strategy (LMS) in 1998 as part of the State of Florida's "Breaking the Cycle" initiative. It was updated in 2009 to bring it into compliance with the mitigation requirements of the federal Disaster Mitigation Act of 2000.

A copy of the LMS is on file and available for review in the Office of Emergency Management, Emergency Operations Center, 8744 Government Drive, New Port Richey. It is also available on the Pasco County web site at http://www.pascocountyfl.net/DocumentCenter/View/15938. Those with questions or comments about the meetings or the LMS are directed to contact the Office of Emergency Management at (727) 847-8137. Written comments can be mailed to: Office of Emergency Management, 8744 Government Drive, Building A, New Port Richey, FL, 34654-5598.

Pursuant to the provisions of the Americans with Disabilities Act of 1990, persons requiring special accommodation to participate in this meeting should contact the Pasco County Office of Emergency Management at (727) 847-8137, no later than (5) five working days before the scheduled meeting date(s). If you are hearing or speech impaired, please call our TDD line at (727) 847-8949.

08/22/14, 08/29/14

205914-01

Design for Promotional Poster and Flyer

PASCO COUNTY, FLORIDA

"Bringing Opportunities Home"

OFFICE OF EMERGENCY MANAGEMENT (OEM)
MITIGATION COMMITTEE SEEKS COMMUNITY INPUT

Provide input into the Pasco County Local Mitigation Strategy (LMS)

- Assessment of hazard vulnerabilities faced by county property owners and residents
- How to mitigate (reduce risk) against hazards to save lives and lessen property damage
- Expedite the post-disaster recovery process.

Date/Time	Location/On-site Phone Number	Agenda
Monday ***08/25/2014*** 1:30 – 4:30 p.m.	***Land O' Lakes Community Recreation Center*** 5401 Land O'Lakes Boulevard Land O' Lakes, FL 34636 Meeting room in rear of building Phone: 813-929-1229	∗ The Pasco County Local Mitigation Strategy ∗ The National Flood Insurance Program ∗ Community Rating System - benefits ∗ Hazard Vulnerability Assessment ∗ Coordination with other community plans
Thursday ***08/28/2014*** 1:30 – 4:30 p.m.	***Pasco County Emergency Operations Center*** 8744 Government Drive Building A New Port Richey, FL 34654-5598 Phone: 727-824-8137	∗ Assess the Problem: Impact of identified hazards ∗ Goal setting: How to address hazard issues
Friday **09/05/2014** 1:30 – 4:30 p.m.	***Hugh Embry Branch Library*** 14215 Fourth Street Dade City, FL 33523 Phone: 352-567-3576	∗ Review current activities ∗ Propose new activities ∗ Draft action Plan
Wednesday **09/10/2014** 1:30 – 4:30 p.m.	***South Holiday Branch Library*** 4649 Mile Stretch Drive Holiday, FL 34690 Phone: 727-834-3331	∗ Presentation of proposed document

Plans approved by the State of Florida and the FEMA qualify for grants to pay for mitigation projects:

- Improved stormwater management capabilities
- Property buyouts for homeowners whose primary residence suffers repetitive flood loss
- Other property and infrastructure improvements

Meeting questions or comments? Call the Office Emergency Management at (727) 847-8137

View the LMS at, or send written comments to:
Office of Emergency Management, 8744 Government Drive, New Port Richey, FL, 34654-5598

Read the draft LMS online at http://www.pascocountyfl.net/DocumentCenter/View/15938

Pursuant to the provisions of the Americans with Disabilities Act of 1990, persons requiring special accommodation to participate in this meeting should contact the Pasco County Office of Emergency Management at (727) 847-8137, no later than (5) five working days before the scheduled meeting date. If you are hearing or speech impaired, please call the TDD line at (727) 847-8949.

Suncoast News (Pasco Edition), August 27, 2014

Timber Oaks seeks fix for longtime flooding

Pasco officials will seek ideas from residents

BY CARL ORTH
Suncoast News assistant editor

COURTESY PHOTO

Timber Oaks residents hope to find fixes for flooding problems that have vexed the Hudson-area neighborhood for two decades.

NEW PORT RICHEY — For some two decades, flooding has exasperated homeowners in Timber Oaks, a Hudson-area subdivision.

But now subdivision leaders hope potential solutions might be on the horizon, possibly by converting some of the former golf course for flood-control fixes.

A Timber Oaks representative, Vicki Chellberg, has photos going as far back as 1994.

At that time, the back nine of the old golf course appeared like a lake. High water threatened Ranch and Ponderosa roads.

In 2012, high water on Benton Drive and Winding Wood Drive remained 35 days after rains stopped from Tropical Storm Debby. Flooding often crept uncomfortably close to homes.

Other communities often find themselves in the same boat as Timber Oaks. Several Trinity-area neighborhoods were hit particularly hard in the wake of Tropical Storm Debby in June 2012 when high water closed or hindered sections of Little Road and S.R. 54.

Pasco County Office of Emergency Management invites West Pasco residents to comment at meetings Aug. 28 and Sept. 10 so the county and cities might be eligible for grants to pay for mitigation projects.

Grants to pay for stormwater management projects, buyout of properties repeatedly flooded and other improvements are an option.

The first session in West Pasco will take place 1:30-4:30 p.m. Thursday, Aug. 28, at the Pasco Emergency Operations Center, 8744 Government Drive, Building A.

Another public event is set for 1:30 to 4:30 p.m. Wednesday, Sept. 10, at South Holiday Branch Library, 4649 Mile Stretch Drive.

For information, call (727) 847-8137.

An opportunity arose in Timber Oaks to address problems when the county agreed to buy the former golf course property.

The county has been "very, very cooperative," Ellie Melilli, secretary of the homeowner association board, said. The county could help secure a more favorable interest rate.

"We're at the bottom of the fish bowl," Chellberg said about the community's flooding problems.

Fixes now might hinge on potential funding from Southwest Florida Water Management District, announced in February, Chellberg explained.

Failing that, Chellberg

FLOODING, Page 8

Flooding

From Page 3

added, residents might consider special assessments on themselves to try to get a handle on chronic flooding.

"We have to do something anyway," Chellberg commented. "The (former) golf course is becoming deplorable. We have coyotes living on it."

The assessments could take the form of a municipal services taxing unit for 20 years on 2,000 homes. The MSTU assessments would appear on tax bills. In a "worst-case scenario," Chellberg said, the charge might amount to $111 a year per homeowner.

The residents are still hoping for legislative help as well.

"There's so much that has to happen," Chellberg said about golf course contract negotiations and then flood-control designs. "We're not home free."

corth@suncoastnews.com
(727) 815-1068

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

Meeting Minutes
Pasco County Office of Emergency Management
Mitigation Community Outreach Meeting
August 25, 2014 * Pasco County Land O' Lakes Community Center * 1:30 – 4:30 PM

Annette Doying	Director, Pasco County Office of Emergency Management
Barbara Spaulding	Mitigation and Recovery Coordinator, Pasco County OEM
Jim Hircock	Director, Pasco County Utilities Department

Given the light turnout for the meeting, OEM staff took the opportunity to update themselves on developments in the Utilities Department that would affect mitigation activities. OEM's Annette Doying and Barbara Spaulding shared Local Mitigation Strategy updates with Utilities Director Jim Hircock and solicited his feedback on the LMS>

Among the topics addressed were the new FEMA flood maps and the map showing storm surge. They also reviewed evacuation areas and discussed priority work on utilities should a major weather event strike the community. Mr. Hircock discusses several utilities bottlenecks and how neighborhoods could help prevent same with proper disposal of lawn clippings and other yard waste.

Mr. Hircock agreed that the projects being presented in the LMS are appropriate and reiterated his support for both the plan and for OEM.

Minutes submitted by

Barbara A. Spaulding
Mitigation and Recovery Coordinator
Pasco County OEM

Top: The first Mitigation Community Outreach Meeting, held on August 25, 2014, at the Pasco County Land O' Lakes Community Center, provided a chance for Utilities Director Jim Hircock and Emergency Director Annette Doying to discuss flood hazards while looking at updated FEMA maps.

Below: EOM Coordinator of Mitigation and Recovery Barbara Spaulding presented information covered in the 2014 Disaster Guide for Pasco County.

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

Meeting Minutes
Pasco County Office of Emergency Management
Mitigition Community Outreach Meeting
August 28, 2014 * Pasco County Emergency Operations Center (EOC) * 1:30 – 4:30 PM

Annette Doying	Director, Pasco County Office of Emergency Management
Barbara Spaulding	Mitigation and Recovery Coordinator, Pasco County OEM
Jim Hircock	Director, Pasco County Utilities Department
Glen Baker	Director of Environmental Services, Sustainability and Safety, Baypoint Community Hospital
Joanne Jaquish	City of Port Richey, CRS Program
Veronica Hanson	City of Port Richey, Office of Development Services
Patricia Wyzlie	Member, Timber Oaks Community Association
Ron Wyzlie	Member, Timber Oaks Community Association
Anne K. Clapp	Member, Timber Oaks Community Association
Doral Shaker	Member, Timber Oaks Community Association
June Denoyiers	Member, Timber Oaks Community Association
Vickie Chelberg	Member, Timber Oaks Community Association
Ellie Melilli	Member, Timber Oaks Community Association
Chris Dosbrowski	Member, Timber Oaks Community Association
Eileen Dunn	Member, Timber Oaks Community Association
Marjorie Brown	Member, Shadow Ridge Community Association
Viola Skala	Member, Shadow Ridge Community Association
Jack Kemp	Member, Shadow Ridge Community Association
Joan Pittareffi	Member, Shadow Ridge Community Association
Joan Savin	Member, Shadow Ridge Community Association
Lucille Coretti	Member, Shadow Ridge Community Association
Jerry Gallagher	Member, Shadow Ridge Community Association
John Cadieux	Member, Shadow Ridge Community Association and Chairman, Stormwater Management Committee
Don Werbein	Anclote Acres Community
Gary Casper	Anclote Acres Community
Carol Casper	Anclote Acres Community
Carol Sword	Member, Timber Oaks Community Association

Annette Doying welcomed the audience and thanked them for coming to share their ideas about community hazards with the Office of Emergency Management. She started with asking the question, "Who are we?" in referring to the Office of Emergency Management (OEM), adding that the office is is unable to address hazards and areas of concern without community feedback. Only with this input will situations be brought to light, as local government is unaware of them.

She discussed OEM's position as the department called in instances of disruption that do not fall within response to general situations assigned to a specific department. These would include scenarios such as the fire department's call to a fire, the office of the tax assessor to handle taxes, or the need for Utilities to repair a broken water main. Ms. Doying emphasized the need to

address hazards in two ways. The first is to consider the array of hazards faced by Pasco County: hurricanes, severe storms, coastal and riverine (salt water and fresh water) flooding, tornadoes, wildfire, lightning, and erosion. The second is an understanding of which disasters hit all communities equally, and which communities are more prone to some hazards than others. She gave a brief overview of the many hazards faced by the community and responded to questions about the need for/availability/cost of flood insurance, and flood problems experienced in certain communities -- in particular, those in which audience members reside. As such, the content of this meeting would focus of the effect of hazards identified and developing effective ways to deal with them.

Staff and residents raised the following points.

* When neighborhoods continue to flood, which party should be held responsible for costly improvements? Citizens don't want to pay taxes for higher level of road and stormwater construction, so government is hamstringed by a limited budget.
* How should the community address flooding, and what is the best way to work with local government to address such problems.
* What mitigation efforts might be appropriate for a given property that would alleviate flooding>

Timber Oaks residents stated that they agreed to a special property assessment that would be used for addressing flooding issues.

At the end of the meeting, several homeowners asked if they could meet individually with staff to discuss mitigation avenues that might work on their properties. This was agreed to.

Staff reminded attendees that, while they are not today speaking with the Board of County Commissioners, Ms. Doying would address the Board when she presented the Local Mitigation Strategy for approval and might have a chance to mention neighborhood concerns.

Minutes submitted by

Barbara A. Spaulding
Mitigation and Recovery Coordinator
Pasco County OEM

PASCO COUNTY, FLORIDA

"Bringing Opportunities Home"

The second Mitigation Community Outreach Meeting held on August 28, 2014, at the Pasco County EOC.

Top (l to r): a) Pasco County Emergency Management Director Annette Doying developed rapport with the audience and fostered a lively conversation about local hazards and the best way to mitigate same. **b)** Utilities Director Jim Hircock (seated) answered questions for John Dedieux, Timber Oaks resident and Chairman of the community's Stormwater Management Committee. **c)** Glen Baker, Chairman of ESF-8 and Director of Environmental Services, Sustainability and Safety, Baypoint Community Hospital, was available for questions about mitigation and health-related issues. Seated to his right are Joanne Jacquish (back), CRS Manager for the City of Port Richey, and (in front of Jacquish) and Veronica Hanson, City of Port Richey, Office of Development Services.

Bottom: Residents of the Timber Oaks, Shadow Ridge, and Anclote Acres communities.

PASCO COUNTY, FLORIDA

"*Bringing Opportunities Home*"

Meeting Minutes
Pasco County Office of Emergency Management
Mitigation Community Outreach Meeting
September 5, 2014 * Dade City Public Library * 1:30 – 4:30 PM

Annette Doying	Director, Pasco County Office of Emergency Management
Barbara Spaulding	Mitigation and Recovery Coordinator, Pasco County OEM

MINUTES AND PHOTOS TO BE INSERTED AFTER MEETING

Minutes submitted by

Barbara A. Spaulding
Mitigation and Recovery Coordinator
Pasco County OEM

PASCO COUNTY, FLORIDA

"Bringing Opportunities Home"

Meeting Minutes
Pasco County Office of Emergency Management
Mitigation Community Outreach Meeting
September 10, 2014 * South Holiday Public Library * 1:30 – 4:30 PM

Annette Doying	Director, Pasco County Office of Emergency Management
Barbara Spaulding	Mitigation and Recovery Coordinator, Pasco County OEM

MINUTES AND PHOTOS TO BE INSERTED AFTER MEETING

Minutes submitted by

Barbara A. Spaulding
Mitigation and Recovery Coordinator
Pasco County OEM