Levy County Board of County Commissioners

Agenda Item Summary

1. *NAME/ORGANIZATION/TELEPHONE:*
FRED MOODY, COUNTY COORDINATOR 486-5218

2. *MEETING DATE:*
5/3/2016

3. *REQUESTED MOTION/ACTION:*

Request approval of Proclamation 2016-024, recognizing May 9, 2016 as Child Welfare Professionals Recognition Day.

4. *Agenda Presentation Time Requested:*_____
(Request will be granted if possible)
ALLOTED TIME NOT MORE THAN 15 MINUTES

5. *IS THIS ITEM BUDGETED (IF APPLICABLE) ?: YES*
BUDGET ACTION:
FINANCIAL IMPACT SUMMARY STATEMENT:

DETAILED ANALYSIS ATTACHED?: YES__ NO__ BUDGET OFFICER APPROVAL ____ DATE

6. *BACKGROUND: (WHY IS THE ACTION NECESSARY, AND WHAT ACTION WILL BE ACCOMPLISHED)*

7. *RECOMMENDED APPROVAL AND DATE (YES & NO BLOCK INDICATE IF APPROVAL IS/IS NOT REQUIRED)*

DEPARTMENT DIRECTOR	OTHER	OTHER	OTHER	COUNTY ATTORNEY	COUNTY COORDINATOR
YES X NO	YES__ NO	YES__ NO	YES__ NO	YES__ NO	YES__ NO

8. *COMMISSION ACTION:*

__ APPROVED
__ DENIED
__ DEFERRED DATE TO BRING BACK:
__ OTHER SPECIFY:

PROCLAMATION
2016-024

A PROCLAMATION OF THE BOARD OF COUNTY COMMISSIONERS OF LEVY COUNTY, FLORIDA RECOGNIZING MAY 9, 2016 AS CHILD WELFARE PROFESSIONALS RECOGNITION DAY.

WHEREAS, children are our most precious resource and our promise for a bright future; and

WHEREAS, "Child Welfare Professionals Recognition Day" was originally approved and signed into law by Governor Charlie Crist in 2008; and

WHEREAS, the Bill, Senate Bill 78, was sponsored by Congresswoman Frederica S. Wilson to ensure the professionals who are entrusted with the well-being of our children get the appreciation and positive recognition they rightfully deserve; and

WHEREAS, the vast majority of child welfare professionals are hardworking, conscientious, and compassionate when it comes to the safety of children and take their responsibilities toward ensuring our children are safe and well taken care of very seriously; and

WHEREAS, child welfare professionals are responsible for ensuring our children live free from maltreatment; enjoy long-term, secure relationships within strong families and communities; are physically and emotionally healthy and socially competent, and that families nurture, protect, and meet the needs of their children; and

WHEREAS, they form supportive partnerships with family members, relative caregivers, and foster and adoptive parents to achieve optimum communication, clear roles and responsibilities, and mutual accountability; and

WHEREAS, these professionals build rapport and trust with families and those who know and support them, and empower family members by identifying their strengths and making them aware of the resources that are available to assist them.

NOW, THEREFORE, BE IT PROCLAIMED by the Board of County Commissioners of Levy County, Florida hereby proclaims May 9, 2016, to be:

"***Child Welfare Professionals Recognition Day,***"

and offers its gratitude to all who invest their lives into ensuring the lives of our children are safe and happy.

PASSED AND ADOPTED this 3rd day of May, 2016.

BOARD OF COUNTY COMMISSIONERS
LEVY COUNTY, FLORIDA

_____
John Meeks, Chairman

ATTEST: Clerk of the Circuit Court
and Ex-Officio Clerk to the Board

_____
Danny J. Shipp, Clerk

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

Anne Bast Brown
Anne Bast Brown, County Attorney

(SEAL)

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LR2016-044

Levy County Board of County Commissioners

1. DEPARTMENT MAKING REQUEST/NAME/EXTENSION:	2. MEETING DATE:
Benny Jerrels, Director, Solid Waste Department	May 3, 2016

3. REQUESTED MOTION/ACTION: Approve the 2015-2016 Small County Consolidated Grant Agreement for State Assistance and authorize the Chair to sign the Agreement.

4. AGENDA	4. *Is this item budgeted (if applicable)?:* *Yes___ No _X_ If No, state action required*
Presentation time requested (Request will be granted if possible)	Budget Action: None Required Financial Impact Summary Statement: This grant will provide $90,909 grant dollars for the operation of our county landfill. Detailed analysis attached?: Yes___ No___ Budget Officer approval Date _____ Funding Source: Solid Waste Department Budget Account Number:_____

5. BACKGROUND: (WHY IS THE ACTION NECESSARY, AND WHAT ACTION WILL BE ACCOMPLISHED)

The application for the Small County Consolidated Grant Agreement was approved by the Board on April 5, 2016 for submission to the State. This is an annual and recurring grant. The grant is in the amount of $90,909. The Board on April 5, 2016 approved Resolution 2016-021, which authorizes the Director, Benny Jerrels to sign quarterly reimbursement documents. Approval of the Agreement is requested to allow acceptance of the grant funds for the 2015-2016 fiscal year.

ALL SUPPORTING DOCUMENTATION MUST BE ATTACHED

6. RECOMMENDED APPROVAL AND DATE (YES & NO BLOCK INDICATE IF APPROVAL IS/IS NOT REQUIRED)

DEPARTMENT DIRECTOR	OTHER	OTHER	OTHER	COUNTY ATTORNEY	COUNTY COORDINATOR
YES X___ NO ___	YES___ NO ___	YES___ NO___	YES___ NO ___	YES_X__ NO___	YES_X__ NO___

7. COMMISSION ACTION:

__ APPROVED
__ DENIED
__ DEFERRED DATE TO BRING BACK:
__ OTHER SPECIFY:

2015-2016 SMALL COUNTY CONSOLIDATED GRANT AGREEMENT FOR STATE ASSISTANCE UNDER SECTION 403.7095(3), FLORIDA STATUTES

PART I - GRANT NOTIFICATION INFORMATION

1. Grant Agreement Number: SC621

2. Date of Award: April 18, 2016

3. Grant Title: SMALL COUNTY CONSOLIDATED SOLID WASTE GRANT

4. Grant Period: October 1, 2015 - September 30, 2016, unless completed earlier in accordance with PART II, paragraph 2.

5. Grant Amount: $ 90,909

6. CSFA # and Project Name: 37.012 - Small County Consolidated Grants

7. Grantee(s): Levy County

   Address: Levy County Board of County Commissioners
   355 South Court Street
   Bronson, Florida 32621

8. Grantee Fiscal Year End: September 30, 2016

9. Federal Employer Identification Number: 59-6000717

10. Grantee's Authorized Representative:

Name:	John Meeks
Title:	Chairman, Levy County Board of County Commissioners
Address:	Post Office Box 1734 Bronson, Florida 32621
Phone:	(352) 486-3300
Email:	solidwaste@levycounty.org

If there is a change in the authorized representative during the Grant period, the Grantee must notify the Department in writing and provide appropriate documentation.

11. Grantee's Grant Manager:

Name:	Benny Jerrels
Title:	Levy County Solid Waste Director
Address:	Post Office Box 1734 Bronson, Florida 32621
Phone:	(352) 486-3300
Email:	solidwaste@levycounty.org

Any changes to the contact information shown above must be provided in writing to the Department's Grant Manager identified in paragraph 13.

12. Total county population from official April 1, 2014 population estimates: 40,473

13. Issuing Office/Department's Grant Manager:

Mr. Henry Garrigo, Grant Manager
Florida Department of Environmental Protection
Waste Reduction Program (MS 4555)
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
(850) 245-8822
Email: Henry.Garrigo@dep.state.fl.us

Any changes to the contact information shown above must be provided in writing to the Grantee's Grant Manager identified in paragraph 11, above.

PART II – GRANT CONDITIONS

1. COMPENSATION:

A. As consideration for the services rendered by the Grantee under the terms of this Agreement, the Department shall pay the Grantee on a cost reimbursement basis in an amount not to exceed $90,909 for all eligible direct project costs, upon the completion, submittal and approval of deliverables identified in **Attachment A, Grant Work Plan.** To be eligible for reimbursement, costs must be in compliance with laws, rules and regulations applicable to expenditures of State funds, including, but not limited to, the Department of Financial Services Reference Guide for State Expenditures available at http://www.fldfs.com/aadir/reference%5Fguide.

B. Prior written approval from the Department's Grant Manager shall be required for changes to this Agreement. Changes to approved budget categories within a single task that are less than 10% of the total approved task budget amount will require a formal Change Order to the Agreement. Changes that are 10% or greater of the total approved task budget amount, or changes that transfer funds from one task to another task, or changes that increase or decrease the project's total funding amount will require a formal Amendment to the Agreement.

2. PERIOD OF AGREEMENT: This Agreement shall begin upon execution by both parties and shall remain in effect until September 30, 2016, inclusive. The Grantee shall be eligible for reimbursement for work performed on or after October 1, 2015 until funds are fully expended or September 30, 2016, whichever occurs first.

3. NOTICE: All notices and written communication between the parties shall be sent by electronic mail, U.S. Mail, a courier delivery service, or delivered in person, to the individuals identified in PART I, paragraphs 10, 11, and 13. Notices shall be considered delivered when reflected by an electronic mail read receipt, a courier service delivery receipt, other mail service delivery receipt, or when receipt is acknowledged by recipient.

4. INVOICING REQUIREMENTS:

A. The Grantee, using **Attachment B, Payment Request Summary Form,** shall submit reimbursement requests upon the completion, submittal and approval of each deliverable identified in **Attachment A,** in accordance with the schedule therein. The Grantee may submit invoices no less frequently than quarterly and no more frequently than monthly. Invoices shall be submitted within thirty days following the completion of the invoice period. The Grantee shall submit a final invoice to the Department no later than October 31, 2016, to assure the availability of funds for final payment. An original of the Reimbursement Request Form, with summaries and appropriate contracts attached must be submitted. Reimbursement Request Forms must be signed by the designated authorized representative identified in Part I, Paragraph 10.

B. As an attachment to the Payment Request Summary Form, the Grantee must provide from its accounting system a listing of expenditures made under this Agreement. The listing shall include,

at a minimum, a description of the goods or services purchased, date of the transaction (check date), voucher number (if available), check number, amount paid, and vendor name and must be broken down by task. The Grantee shall comply with the minimum requirements set forth in **Attachment C, Contract Payment Requirements.** Authorized travel expenses are included in the amount of this Agreement and no additional travel expenses above those included in the allowable items described in Attachment A will be authorized without written approval from FDEP Grant Manager. Any requests for reimbursement of authorized travel expenses must be submitted in accordance with Section 112.061, Florida Statutes.

C. The Grantee shall utilize **Attachment D, Progress Report Form,** to describe the work performed, problems encountered, problem resolution, schedule updates and proposed work for the next reporting period. Reports shall be submitted to the Department's Grant Manager no later than thirty (30) calendar days following the completion of the invoice period described under Part II, Paragraph 4.A (no more frequently than monthly and no less frequently than quarterly). It is hereby understood and agreed by the parties that the term "monthly" shall reflect the calendar months and the term "quarterly" shall reflect the calendar quarters ending March 31, June 30, September 30 and December 31. The Department's Grant Manager shall have ten (10) calendar days to review the required reports and deliverables submitted by the Grantee.

D. The Grantee shall submit a final Payment Request Package, marking the submittal as the final request pursuant to this Agreement, to the Department no later than October 31, 2016, to assure the availability of funds for final payment. After the Department receives the final Payment Request Package, no additional Requests for Payment will be authorized.

5. PROOF OF PAYMENT: In addition to the requirements in the paragraph above, the Department may periodically request proof of a transaction (invoice, payroll register, etc.) to evaluate the appropriateness of costs to the Grant Agreement pursuant to State and Federal guidelines (including cost allocation guidelines), as appropriate. This information, when requested, must be provided within thirty (30) calendar days of such request. As described in paragraph 6.B below, the Department shall not reimburse the Grantee for indirect, overhead or general and administrative costs (excluding fringe benefits) under this Agreement. All bills for amounts due under this Grant Agreement shall be submitted in detail sufficient for a proper pre-audit and post-audit thereof and must be in compliance with the laws, rules and regulations applicable to expenditures of state funds. State guidelines for allowable costs can be found in the Department of Financial Services' Reference Guide for State Expenditures at http://www.myfloridacfo.com/aadir/reference_guide/.

6. EXPENDITURES:

A. Allowable costs for reimbursement under this Agreement include:

i. Solid waste management program operating costs;

ii. Purchasing or repairing solid waste scales;

iii. Planning;

iv. Construction and maintenance of solid waste facilities;

v. Recycling and education programs, which may include solid waste management education for employees or the public and recycling demonstration projects;

vi. Litter prevention and control; and

vii. Waste tire collection and disposal.

B. Prohibited costs for reimbursement under this Agreement include:

i. Cell phone expenditures;

ii. Indirect, overhead or administrative costs (excluding fringe benefits)

iii. Promotional items such as T-shirts and other items promoting the program;

iv. Vehicles, unless authorized by this Agreement or an executed amendment to this Agreement;

v. Handling fees such as set percent overages associated with purchasing supplies or equipment;

vi. Civil or administrative penalties;

vii. Attorney fees or court costs; and

viii. Any interest in real property.

ix. Grantee recognizes that Department is an agency of the State of Florida, which by virtue of its sovereignty is not required to pay any taxes on services or goods purchased under this Agreement. Department does not pay Federal excise or sales taxes on direct purchases of tangible personal property. Department will not pay for any personal property taxes levied on Grantee or for any taxes levied on employee's wages.

C. Specific costs authorized for this Agreement are identified in **Attachment A.**

D. For payment to subcontractors the following applies: Reimbursement requests for payments to subcontractors must be substantiated by copies of invoices with backup documentation identical to that required from the Grantee. Subcontracts which involve payments for direct salaries shall clearly identify the personnel involved, salary rate per hour, and hours/time spent on the project. Additionally, independent of the Grantee's contract obligations to the subcontractor, the Department shall not reimburse any of the charges enumerated in paragraph 6.B above. If such costs are charged by a Contractor, the Grantee shall be responsible for paying them from sources other than this Grant.

E. For fixed price/rate (vendor) subcontracts, the following provisions shall apply:

i. The Grantee may award, on a competitive basis, fixed price/rate subcontracts to consultants/contractors in performing the work described in **Attachment A.** Invoices submitted to the Department for fixed price subcontracted activities shall be supported with a copy of the subcontractor's invoice and a copy of the tabulation form for the competitive procurement process (Invitation to Bid or Request for Proposals) resulting in the fixed price/rate subcontract.

ii. The Grantee may request approval from the Department to award a fixed price/rate subcontract resulting from procurement methods other than those identified in the paragraph above. In this instance, the Grantee shall request the advance written approval from the Department's Grant Manager of the fixed price/rate negotiated by the Grantee. The letter of request shall be supported by a detailed budget and Scope of Services to be performed by the subcontractor. Upon receipt of the Department Grant Manager's approval of the fixed price/rate amount, the Grantee may proceed in finalizing the fixed price/rate subcontract.

iii. All subcontracts are subject to the provisions of this Agreement.

7. PROHIBITION AGAINST COMMINGLING OF FUNDS:

A. The accounting systems for all Grantees must ensure that these funds are not commingled with funds from other agencies. Funds from each agency must be accounted for separately. Grantees are prohibited from commingling funds on either a program-by-program or a project-by-project basis. Funds specifically budgeted and/or received for one project may not be used to support another project. Where a Grantee's, or subrecipient's, accounting system cannot comply with this requirement, the Grantee, or subrecipient, shall establish a system to provide adequate fund accountability for each project it has been awarded.

B. If the Department finds that these funds have been commingled, the Department shall have the right to demand a refund, either in whole or in part, of the funds provided to the Grantee under this Agreement for non-compliance with the material terms of this Agreement. The Grantee, upon such written notification from the Department shall refund, and shall forthwith pay to the Department, the amount of money demanded by the Department. Interest on any refund shall be calculated based on the prevailing rate used by the State Board of Administration. Interest shall be calculated from the date(s) the original payment(s) are received from the Department by the Grantee to the date repayment is made by the Grantee to the Department.

C. In the event that the Grantee recovers costs, incurred under this Agreement and reimbursed by the Department, from another source(s), the Grantee shall reimburse the Department for all recovered funds originally provided under this Agreement. Interest on any refund shall be calculated based on the prevailing rate used by the State Board of Administration. Interest shall be calculated from the date(s) the payment(s) are recovered by the Grantee to the date repayment is made to the Department by the Grantee.

8. DOCUMENT RETENTION AND AUDIT:

A. The Grantee shall maintain books, records and documents directly pertinent to performance under this Agreement in accordance with generally accepted accounting principles consistently applied. The Department, the State, or their authorized representatives shall have access to such records for audit purposes during the term of this Agreement and for five (5) years following Agreement completion. The Grantee agrees that it will expeditiously initiate and complete the program work for which assistance has been awarded under this Grant Agreement in accordance with all applicable provisions of Florida Statutes and the Florida Administrative Code. In the event any work is subcontracted, the Grantee shall similarly require each subcontractor to maintain and allow access to such records for audit purposes.

B. The Grantee understands its duty, pursuant to Section 20.055(5), Florida Statutes, to cooperate with the Department's Inspector General in any investigation, audit, inspection, review, or hearing. The Grantee will comply with this duty and ensure that its subcontracts issued under this Grant, if any, impose this requirement, in writing, on its subcontractors.

9. SPECIAL AUDIT REQUIREMENTS:

A. In addition to the requirements of the preceding paragraph, the Grantee shall comply with the applicable provisions contained in **Attachment E, Special Audit Requirements**, attached hereto and made a part hereof. **Exhibit 1** to **Attachment E** summarizes the funding sources supporting the Agreement for purposes of assisting the Grantee in complying with the requirements of **Attachment E**. A revised copy of **Exhibit 1** must be provided to the Grantee for each amendment which authorizes a funding increase or decrease. If the Grantee fails to receive a revised copy of **Exhibit 1**, the Grantee shall notify the Department's Grant Manager to request a copy of the updated information.

B. The Grantee is hereby advised that the Federal and/or Florida Single Audit Act Requirements may further apply to lower tier transactions that may be a result of this Agreement. The Grantee shall consider the type of financial assistance (federal and/or state) identified in **Attachment E, Exhibit 1** when making its determination. For federal financial assistance, the Grantee shall utilize the guidance provided under OMB Circular A-133, Subpart B, Section ___.210 for determining whether the relationship represents that of a subrecipient or vendor. For state financial assistance, the Grantee shall utilize the form entitled "Checklist for Nonstate Organizations Recipient/Subrecipient vs Vendor Determination" (form number DFS-A2-NS) that can be found under the "Links/Forms" section appearing at the following website:

https://apps.fldfs.com/fsaa

The Grantee should confer with its chief financial officer, audit director or contact the Department for assistance with questions pertaining to the applicability of these requirements.

10. TERMINATION:

A. The Department has the right to terminate a Grant award and demand refund of Grant funds for non-compliance with the terms of the award; Section 403.7095, Florida Statutes; or the Solid Waste Grants, Annual Reports, and Recycling Rule, Chapter 62-716, Florida Administrative Code. Such action may also result in the Department declaring the local government ineligible for further participation in the program until the local government complies with the terms of the Grant award. Prior to termination, the Department shall provide thirty (30) calendar days written notice of its intent to terminate and shall provide the Grantee an opportunity to consult with the Department regarding the reason(s) for termination.

B. The Department may terminate this Agreement for convenience by providing the Grantee with thirty (30) calendar days written notice.

11. FINANCIAL CONSEQUENCES FOR UNSATISFACTORY PERFORMANCE: No payment will be made for unsatisfactory deliverables. In the event that a deliverable is deemed unsatisfactory by the Department, the Grantee shall re-perform the services needed for submittal of a satisfactory deliverable, at no additional cost to the Department, within ten (10) calendar days of being notified of the unsatisfactory deliverable. If a satisfactory deliverable is not submitted within the specified timeframe, the Department may, either: 1) terminate this Agreement for failure to perform, or 2) the Department Grant Manager may, by letter specifying the failure of performance under this Agreement, request that a proposed Corrective Action Plan (CAP) be submitted by the Grantee to the Department. All CAPs must be able to be implemented and performed in no more than sixty (60) calendar days.

A. A CAP shall be submitted within ten (10) calendar days of the date of the letter request from the Department. The CAP shall be sent to the Department Grant Manager for review and approval. Within ten (10) calendar days of receipt of a CAP, the Department shall notify the Grantee in writing whether the CAP proposed has been accepted. If the CAP is not accepted, the Grantee shall have ten (10) calendar days from receipt of the Department letter rejecting the proposal to submit a revised proposed CAP. Failure to obtain the Department approval of a CAP as specified above shall result in the Department's termination of this Agreement for cause as authorized in this Agreement.

B. Upon the Department's notice of acceptance of a proposed CAP, the Grantee shall have ten (10) calendar days to commence implementation of the accepted plan. Acceptance of the proposed CAP by the Department does not relieve the Grantee of any of its obligations under the Agreement. In the event the CAP fails to correct or eliminate performance deficiencies by Grantee, the Department shall retain the right to require additional or further remedial steps, or to terminate this Agreement for failure to perform. No actions approved by the Department or steps taken by the Grantee shall preclude the Department from subsequently asserting any deficiencies in performance. The Grantee shall continue to implement the CAP until all deficiencies are corrected. Reports on the progress of the CAP will be made to the Department as requested by the Department Grant Manager.

C. Failure to respond to a Department request for a CAP or failure to correct a deficiency in the performance of the Agreement as specified by the Department may result in termination of the Agreement

The remedies set forth above are not exclusive and the Department reserves the right to exercise other remedies in addition to or in lieu of those set forth above, as permitted by the Agreement.

12. PERMITS: The Grantee shall obtain all necessary federal, state and local permits before initiating construction.

13. ANNUAL APPROPRIATION: The State of Florida's performance and obligation to pay under this Grant Agreement is contingent upon an annual appropriation by the Legislature. The parties hereto understand that this Agreement is not a commitment of future appropriations. Authorization for continuation and completion of work and payment associated therewith may be rescinded with proper notice at the discretion of the Department if Legislative appropriations are reduced or eliminated.

14. PUBLIC RECORDS: This Agreement may be unilaterally canceled by the Department for refusal by the Grantee to allow public access to all documents, papers, letters, or other material made or received by the Grantee in conjunction with this Agreement, and subject to disclosure under Chapter 119, F.S., and Section 24(a), Article I, Florida Constitution.

15. PROHIBITION FROM LOBBYING: Pursuant to Section 216.347, Florida Statutes, the Grantee is prohibited from using Grant funds for the purpose of lobbying the Legislature, the judicial branch, or a State Agency. Further, in accordance with Section 11.062, Florida Statutes, no state funds, exclusive of salaries, travel expenses, and per diem, appropriated to, or otherwise available for use by, any executive, judicial, or quasi-judicial department shall be used by any state employee or other person for lobbying purposes.

16. WORKER'S COMPENSATION INSURANCE: To the extent required by law, the Grantee will be self-insured against, or will secure and maintain during the life of this Grant Agreement, Workers' Compensation Insurance for all of its employees connected with the work of this project and, in case any work is subcontracted, the Grantee shall require the subcontractor similarly to provide Workers' Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Grantee. Such self-insurance program or insurance coverage shall comply fully with the Florida Workers' Compensation law. In case any class of employees engaged in hazardous work under this Grant Agreement is not protected under Workers' Compensation statutes, the Grantee shall provide, and cause each subcontractor to provide, adequate insurance satisfactory to the Department, for the protection of his employees not otherwise protected.

17. LIABILITY INSURANCE: The Grantee warrants and represents that it is self-funded for liability insurance, appropriate and allowable under Florida law, and that such self-insurance offers protection applicable to the Grantee's officers, employees, servants and agents while acting within the scope of their employment with the Grantee.

18. INDEMNIFICATION: Each party hereto agrees that it shall be solely responsible for the negligent or wrongful acts of its employees and agents. However, nothing contained herein shall constitute a waiver by either party of its sovereign immunity or the provisions of Section 768.28, Florida Statutes. Further, nothing herein shall be construed as consent by a state agency or subdivision of the State of Florida to be sued by third parties in any matter arising out of any contract or this Agreement.

19. CONFLICT OF INTEREST: The Grantee covenants that it presently has no interest and shall not acquire any interest, which would conflict in any manner or degree with the performance of services required.

20. EQUIPMENT: Upon satisfactory completion of this Grant Agreement, the Grantee may retain ownership of the equipment authorized in **Attachment A** and purchased under this Grant Agreement. However, the Grantee shall complete and sign a Property Reporting Form, provided as **Attachment F, Property**

Reporting Form, and forward it along with the appropriate invoice to the Department's Grant Manager. The following terms shall apply:

A. The Grantee shall have use of the equipment for the authorized purposes of the contractual arrangement as long as the required work is being performed.

B. The Grantee is responsible for the implementation of adequate maintenance procedures to keep the equipment in good operating condition.

C. The Grantee is responsible for any loss, damage, or theft of, and any loss, damage or injury caused by the use of, non-expendable personal property or equipment purchased with state funds and held in his possession for use in a contractual arrangement with the Department.

21. SUBCONTRACTING:

A. The Grantee may subcontract work under this Agreement without the prior written consent of the Department's Grant Manager, subject to the limitations established in paragraph 6. above. The Grantee shall submit a copy of the executed subcontract to the Department prior to submitting any invoices for subcontracted work. The Grantee agrees to be responsible for the fulfillment of all work elements included in any subcontract and agrees to be responsible for the payment of all monies due under any subcontract. It is understood and agreed by the Grantee that the Department shall not be liable to any subcontractor for any expenses or liabilities incurred under the subcontract and that the Grantee shall be solely liable to the subcontractor for all expenses and liabilities incurred under the subcontract.

B. The Department of Environmental Protection supports diversity in its procurement program and requests that all subcontracting opportunities afforded by this Agreement embrace diversity enthusiastically. The award of subcontracts should reflect the full diversity of the citizens of the State of Florida. A list of minority owned firms that could be offered subcontracting opportunities may be obtained by contacting the Office of Supplier Diversity at (850) 487-0915. See the following website for assistance:

http://www.dms.myflorida.com/other_programs/office_of_supplier_diversity_osd

22. NONDISCRIMINATION:

A. No person, on the grounds of race, creed, color, religion, national origin, age, gender, or disability, shall be excluded from participation in; be denied the proceeds or benefits of; or be otherwise subjected to discrimination in performance of this Agreement. [287.134, Florida Statutes]

B. An entity or affiliate who has been placed on the discriminatory vendor list pursuant to Section 287.134, F.S., may not submit a bid on a contract to provide goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity. The Florida Department of Management Services is responsible for maintaining the discriminatory vendor list and intends to post the list on its website. Questions regarding the discriminatory vendor list may be directed to the Florida Department of Management Services, Office of Supplier Diversity, at (850) 487-0915.

23. PUBLIC ENTITY CRIMES: A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not perform work as a Grantee, contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for Category Two, for a period of thirty-six (36) months from the date of being placed on the convicted vendor list. [287.133, Florida Statutes]

24. HEALTH AND SAFETY REQUIREMENTS: The Grantee shall comply with all applicable federal, state and local rules and regulations in conducting the project funded under this Agreement. The Grantee acknowledges that this requirement includes, but is not limited to, compliance with all applicable federal, state and local health and safety rules and regulations. The Grantee further agrees to include this provision in all subcontracts issued as a result of this Grant Agreement.

25. CHANGE ORDERS: The Department may at any time, by written order designated to be a change order, make any change in the contact information identified in Part I of this Agreement. All change orders are subject to the mutual agreement of both parties as evidenced in writing. Any change, which causes an increase or decrease in the Grantee's cost or time, shall require formal amendment to this Agreement.

26. NO ACQUISITION OF REAL PROPERTY: The acquisition of real property or any interest in real property is not allowed under the terms of this Agreement.

27. PROHIBITED LOCAL GOVERNMENT CONSTRUCTION PREFERENCES:

A. Pursuant to Section 255.0991, Florida Statutes, for a competitive solicitation for construction services in which 50 percent or more of the cost will be paid from state-appropriated funds which have been appropriated at the time of the competitive solicitation, a state, college, county, municipality, school district, or other political subdivision of the state may not use a local ordinance or regulation that provides a preference based upon:

i. The contractor's maintaining an office or place of business within a particular local jurisdiction;

ii. The contractor's hiring employees or subcontractors from within a particular local jurisdiction; or

iii. The contractor's prior payment of local taxes, assessments, or duties within a particular local jurisdiction.

B. For any competitive solicitation that meets the criteria in Paragraph A., a state college, county, municipality, school district, or other political subdivision of the state *shall disclose in the solicitation document* that any applicable local ordinance or regulation does not include any preference that is prohibited by Paragraph A.

28. UNAUTHORIZED EMPLOYMENT: The employment of unauthorized aliens by any Grantee or its contractors ("subcontractors" under this agreement) is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the Grantee or a subcontractor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this Agreement. The Grantee shall be responsible for including this provision in all subcontracts with private organizations issued as a result of this Agreement.

29. PHYSICAL ACCESS AND INSPECTION:
As applicable, Department personnel shall be given access to and may observe and inspect work being performed under this Agreement, including by any of the following methods:

A. Grantee shall provide access to any location or facility on which Grantee is performing work, or storing or staging equipment, materials or documents;

B. Grantee shall permit inspection of any facility, equipment, practices, or operations required in performance of any work pursuant to this Agreement; and

C. Grantee shall allow and facilitate sampling and monitoring of any substances, soils, materials or parameters at any location reasonable or necessary to assure compliance with any work or legal requirements pursuant to this Agreement.

30. SEVERABILITY: This Agreement has been delivered in the State of Florida and shall be construed in accordance with the laws of Florida. Wherever possible, each provision of this Agreement shall be

interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Agreement. Any action hereon or in connection herewith shall be brought in Leon County, Florida.

31. MODIFICATIONS REQUIRED BY LAW: The Department reserves the right to revise this Agreement to include additional language required by federal agency(ies) or other sources awarding funding to Department in support of this Agreement; or to include changes necessitated by Department rule changes.

32. ATTORNEY'S FEES: In the event of any legal action to enforce the terms of this Agreement, each party shall bear its own attorney's fees and costs.

33. HEADINGS: The headings contained herein are for convenience only and do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

34. EXECUTION IN COUNTERPARTS: This Agreement may be executed in two or more counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

35. ENTIRE AGREEMENT: This Agreement represents the entire Agreement of the parties. Any alterations, variations, changes, modifications or waivers of provisions of this Agreement shall only be valid when they have been reduced to writing, duly signed by each of the parties hereto, and attached to the original of this Agreement, unless otherwise provided herein.

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PART III - OFFER AND ACCEPTANCE

The State of Florida, acting by and through the Department of Environmental Protection, hereby offers assistance to the County of Levy for all allowable costs incurred up to and not exceeding $90,909.

THE STATE OF FLORIDA BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION:

Secretary or designee _____ Date _____

Print Name and Title _____

Approved as to form and legality:

DEP Attorney _____

In accepting this award and any payments made pursuant thereto, (1) the undersigned represents that they are duly authorized to act on behalf of the recipient county, and (2) the Grantee does hereby agree to perform in accordance with the terms and conditions set forth in this Agreement, **Attachment A, Grant Work Plan**, and all attachments and exhibits named herein which are attached hereto and incorporated by reference. For purposes of this Agreement, the terms "Contract" and "Agreement" and the terms "Grantee", "Recipient" and "Contractor", are used interchangeably.

BY AND ON BEHALF OF THE DESIGNATED RECIPIENT COUNTY:

Signature of Authorized Representative _____ Date _____
Name
Chairman, Board of County Commissioners

Please return to:

APPROVED AS TO FORM AND LEGAL SUFFICIENCY Anne Bast Brown
Anne Bast Brown, County Attorney

Department of Environmental Protection
Division of Waste Management - M.S. #4550
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

List of attachments/exhibits included as part of this Agreement:

Specify Type	Letter/ Number	Description (include number of pages)
Attachment	A	Grant Work Plan (6 Pages)
Attachment	B	Payment Request Summary Form and Instructions (3 Pages)
Attachment	C	Contract Payment Requirements (1 Page)
Attachment	D	Progress Report Form (1 Page)
Attachment	E	Special Audit Requirements (5 Pages)

ATTACHMENT A
GRANT WORK PLAN

Project Title: Levy County Small County Consolidated Solid Waste Management Grant

Project Authority: Levy County (Grantee) received funding from the Florida Legislature in the amount of $90,909.00, through Specific Appropriation Line Item No.1693, Solid Waste Management Trust Fund, Fiscal Year (FY) 2015 - 2016, General Appropriations Act. The Grantee meets the threshold for a small county (population under 100,000) and received this funding under the Small County Consolidated Grants program for the purpose of subsidizing its solid waste transfer station costs. Authority for this Project is specified in Section 403.7095 Florida Statutes, and Chapter 62-716, Florida Administrative Code. Monitoring and auditing guidelines, as related to the Florida Single Audit Act, are specified in the Florida Catalog of State Financial Assistance (CSFA), No. 37.012.

Project Location: Levy County Solid Waste Landfill, 12051 NE 69th Lane, Williston, Florida 32696, Levy County. The household solid waste will be collected from the Levy County Landfill and then transported and disposed of in the New River Solid Waste Association in Union County.

Project Background: The Grantee operates a Class III landfill which is limited to the disposal of items that do not require a lined cell, such as yard trash, construction and demolition debris, waste tires, carpet, cardboard, paper, glass, plastic, furniture (other than appliances) and other similar items approved by the Department that are not expected to produce leachate. The Grantee also operates a transfer station for items that do require a lined cell, like general non-hazardous household, commercial, industrial and agricultural waste. Waste received at the transfer station must be transported to New River Solid Waste Association in Union County.

The Grantee needs this funding to help offset these costs because of its small population and limited funding resources.

Project Description: The Grantee currently hauls waste from its transfer station to New River Solid Waste Association in Union County utilizing two (2) aging 1999 Summit trailers and one (1) aging 2000 Summit trailer. The grant funding will allow the Grantee to replace one (1) of these trailers with a new SPEC 58 Travis 53' Trailer. Additionally, the Grantee will replace its two (2) aging 2000 Gravley mowers currently used to maintain the landfill, transfer station and recycling facility compound grounds.

Tasks and Deliverables:

Task 1: Equipment Purchases

Task Description: The Grantee utilizes two (2) aging 1999 Summit trailers currently to haul the municipal solid waste (MSW) from its transfer station to New River Solid Waste Association in Union County, a permanent waste site out of the county. The Grantee also has a fleet of four (4) out of service trailers, three (3) of which will be traded in to off-set the cost for the new trailer. The estimated cost of the new Travis trailer is approximately $75,465.00, with the trade-in value of the Grantee's three (3) old trailers being $37,500.00. The approximate cost of the new Travis trailer, after trade-in, is $37,965.00.

The landfill is part of a larger facility compound that includes the transfer station and the Grantee's recycling facility. Currently the grounds are maintained by two (2) aging 2000 Gravley mowers. The Grantee plans to purchase two (2) new Pro-Turn 472 35 HP Kawasaki commercial zero turn mowers via the current Florida Sheriffs Association, Florida Association of Counties and Florida Fire Chief's Association state contract. The estimated cost for the replacement mowers is $22,078.40.

Deliverables: Purchase of the equipment as evidenced by: purchase order(s); vendor invoice(s) for delivery, installation and start up; proof of payment to vendor; Bills of Lading; and pictures of equipment purchased. Completed **Attachment F, Property Reporting Form**, with invoice copies. Additionally, the Grantee will submit paid fuel invoice(s), mileage log(s), hauling schedules, and proof of payment for any fuels costs associated with landfill vehicles and equipment. All deliverables may be submitted electronically, unless paper copies are requested by the Department's Grant Manager.

Performance Measure: The Department's Grant Manager will review each deliverable to verify that it meets the specifications in the Grant Work Plan and this task description. Upon review and written acceptance by the Department's Grant Manager of required deliverable(s) under this task, the Grantee may proceed with payment request submittal.

Budget: Allowable costs for this task are not to exceed $37,965.00 for the purchase of the replacement trailer and $22,078.40 for the purchase of the two (2) new mowers (Equipment); and $30,865.60 for fuels costs associated with landfill vehicles and equipment (Miscellaneous/Other Expenses).

Project Timeline: The tasks must be completed by the end of each task timeline and all deliverables must be received by the designated due date.

Task No.	Task Title	Task Start Date	Task End Date	Deliverable Due Date/ Frequency
1	Equipment Purchases	10/1/2015	9/30/2016	Upon delivery of equipment and purchase of fuel.

Budget Detail by Task:

Task No.	Budget Category	Budget Amount
1	Equipment	$60,043.40
	Miscellaneous/Other Expenses	$30,865.60
	Total for Task:	**$90,909.00**

Project Budget Summary: Cost reimbursable grant funding must not exceed the category totals for the project as indicated below.

Category Totals	Grant Funding, Not to Exceed, $
Equipment Total	$60,043.40
Miscellaneous/Other Expenses Total	$30,865.60
Total:	**$90,909.00**

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ATTACHMENT B
PAYMENT REQUEST SUMMARY FORM

DEP Agreement No.: _____ Agreement Effective Dates: _____

Grantee: _____ Grantee's Grant Manager: _____

Mailing Address: _____

Payment Request No. _____ Date of Payment Request: _____

Performance Period (*Start date – End date*): _____

Task/Deliverable No(s). _____ Task/Deliverable Amount Requested: $_____

GRANT EXPENDITURES SUMMARY SECTION

[Effective Date of Grant through End-of-Grant Period]

CATEGORY OF EXPENDITURE	AMOUNT OF THIS REQUEST	TOTAL CUMULATIVE PAYMENT REQUESTS	MATCHING FUNDS FOR THIS REQUEST	TOTAL CUMULATIVE MATCHING FUNDS
Salaries/Wages	$	$	$	$
Overhead/Indirect/G&A Costs	$	$	$	$
Fringe Benefits	$	$	$	$
Indirect Cost	$	$	$	$
Contractual (Subcontractors)	$	$	$	$
Travel (if authorized)	$	$	$	$
Equipment Purchases (if authorized)	$	$	$	$
Rental/Lease of Equipment	$	$	$	$
Other Expenses	$	$	$	$
Land (if authorized)	$	$	$	$
TOTAL AMOUNT	$	$	$	$
TOTAL TASK/DELIVERABLE BUDGET AMOUNT	$	[redacted]	$	[redacted]
Less Total Cumulative Payment Requests of:	$		$	
TOTAL REMAINING IN TASK	$		$	

GRANTEE CERTIFICATION

Complete Grantee's Certification of Payment Request on Page 2 to certify that the amount being requested for reimbursement above was for items that were charged to and utilized only for the above cited grant activities.

Grantee's Certification of Payment Request

I, _____,
(Print name of Grantee's Grant Manager designated in the Agreement)

on behalf of _____, do hereby certify that:
(Print name of Grantee/Recipient)

☑ The disbursement amount requested is for allowable costs for the project described in Attachment A of the Agreement.

☑ All costs included in the amount requested have been satisfactorily purchased, performed, received, and applied toward completing the project; such costs are documented by invoices or other appropriate documentation as required in the Agreement.

☑ The Grantee has paid such costs under the terms and provisions of contracts relating directly to the project; and the Grantee is not in default of any terms or provisions of the contracts.

Check all that apply:

☐ All permits and approvals required for the construction, which is underway, have been obtained.

☐ Construction up to the point of this disbursement is in compliance with the construction plans and permits.

☐ The Grantee's Grant Manager relied on certifications from the following professionals that provided services for this project during the time period covered by this Certification of Payment Request, and such certifications are included:

Professional Service Provider (Name / License No.)	Period of Service (mm/dd/yy – mm/dd/yy)

_____ _____
Grantee's Grant Manager's Signature Grantee's Fiscal Agent

_____ _____
Print Name Print Name

_____ _____
Telephone Number Telephone Number

INSTRUCTIONS FOR COMPLETING PAYMENT REQUEST SUMMARY FORM

DEP AGREEMENT NO.: This is the number on your grant agreement.
AGREEMENT EFFECTIVE DATES: Enter agreement execution date through end date.
GRANTEE: Enter the name of the grantee's agency.
GRANTEE'S GRANT MANAGER: This should be the person identified as grant manager in the grant Agreement.
MAILING ADDRESS: Enter the address that you want the state warrant sent.
PAYMENT REQUEST NO.: This is the number of your payment request, not the quarter number.
DATE OF PAYMENT REQUEST: This is the date you are submitting the request.
PERFORMANCE PERIOD: This is the beginning and ending date of the performance period for the task/deliverable that the request is for (this must be within the timeline shown for the task/deliverable in the Agreement).
TASK/DELIVERABLE NO.: This is the number of the task/deliverable that you are requesting payment for and/or claiming match for (must agree with the current Grant Work Plan).
TASK/DELIVERABLE AMOUNT REQUESTED: This should match the amount on the "*TOTAL TASK/DELIVERABLE BUDGET AMOUNT*" line for the "*AMOUNT OF THIS REQUEST*" column.

GRANT EXPENDITURES SUMMARY SECTION:

"AMOUNT OF THIS REQUEST" COLUMN: Enter the amount that was expended for this task during the period for which you are requesting reimbursement for this task. This must agree with the currently approved budget in the current Grant Work Plan of your grant Agreement. Do not claim expenses in a budget category that does not have an approved budget. Do not claim items that are not specifically identified in the current Grant Work Plan. Enter the column total on the "*TOTAL AMOUNT*" line. Enter the amount of the task on the "*TOTAL TASK BUDGET AMOUNT*" line. Enter the total cumulative amount of this request **and** all previous payments on the "*LESS TOTAL CUMULATIVE PAYMENT REQUESTS OF*" line. Deduct the "*LESS TOTAL CUMULATIVE PAYMENT REQUESTS OF*" from the "*TOTAL TASK BUDGET AMOUNT*" for the amount to enter on the "*TOTAL REMAINING IN TASK*" line.

"TOTAL CUMULATIVE PAYMENT REQUESTS" COLUMN: Enter the cumulative amounts that have been requested to date for reimbursement by budget category. The final request should show the total of all requests; first through the final request (this amount cannot exceed the approved budget amount for that budget category for the task you are reporting on). Enter the column total on the "*TOTALS*" line. **Do not enter anything in the shaded areas.**

"MATCHING FUNDS" COLUMN: Enter the amount to be claimed as match for the performance period for the task you are reporting on. This needs to be shown under specific budget categories according to the currently approved Grant Work Plan. Enter the total on the "*TOTAL AMOUNT*" line for this column. Enter the match budget amount on the "*TOTAL TASK BUDGET AMOUNT*" line for this column. Enter the total cumulative amount of this and any previous match claimed on the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" line for this column. Deduct the "*LESS TOTAL CUMULATIVE PAYMENTS OF*" from the "*TOTAL TASK BUDGET AMOUNT*" for the amount to enter on the "*TOTAL REMAINING IN TASK*" line.

"TOTAL CUMULATIVE MATCHING FUNDS" COLUMN: Enter the cumulative amount you have claimed to date for match by budget category for the task. Put the total of all on the line titled "*TOTALS.*" The final report should show the total of all claims, first claim through the final claim, etc. **Do not enter anything in the shaded areas.**

GRANTEE'S CERTIFICATION: Check all boxes that apply. Identify any licensed professional service providers that certified work or services completed during the period included in the request for payment. **Must be signed by both the Grantee's Grant Manager as identified in the grant agreement and the Grantee's Fiscal Agent.**

NOTES:
If claiming reimbursement for travel, you must include copies of receipts and a copy of the travel reimbursement form approved by the Department of Financial Services, Chief Financial Officer.

Documentation for match claims must meet the same requirements as those expenditures for reimbursement.

ATTACHMENT C

Contract Payment Requirements
Florida Department of Financial Services, Reference Guide for State Expenditures
Cost Reimbursement Contracts

Invoices for cost reimbursement contracts must be supported by an itemized listing of expenditures by category (salary, travel, expenses, etc.) Supporting documentation must be provided for each amount for which reimbursement is being claimed indicating that the item has been paid. Check numbers may be provided in lieu of copies of actual checks. Each piece of documentation should clearly reflect the dates of service. Only expenditures for categories in the approved contract budget should be reimbursed.

Listed below are examples of the types of documentation representing the minimum requirements:

(1) Salaries: A payroll register or similar documentation should be submitted. The payroll register should show gross salary charges, fringe benefits, other deductions and net pay. If an individual for whom reimbursement is being claimed is paid by the hour, a document reflecting the hours worked times the rate of pay will be acceptable.

(2) Fringe Benefits: Fringe Benefits should be supported by invoices showing the amount paid on behalf of the employee (e.g., insurance premiums paid). If the contract specifically states that fringe benefits will be based on a specified percentage rather than the actual cost of fringe benefits, then the calculation for the fringe benefits amount must be shown.

Exception: Governmental entities are not required to provide check numbers or copies of checks for fringe benefits.

(3) Travel: Reimbursement for travel must be in accordance with Section 112.061, Florida Statutes, which includes submission of the claim on the approved State travel voucher or electronic means.

(4) Other direct costs: Reimbursement will be made based on paid invoices/receipts. If nonexpendable property is purchased using State funds, the contract should include a provision for the transfer of the property to the State when services are terminated. Documentation must be provided to show compliance with Department of Management Services Rule 60A-1.017, Florida Administrative Code, regarding the requirements for contracts which include services and that provide for the contractor to purchase tangible personal property as defined in Section 273.02, Florida Statutes, for subsequent transfer to the State.

(5) In-house charges: Charges which may be of an internal nature (e.g., postage, copies, etc.) may be reimbursed on a usage log which shows the units times the rate being charged. The rates must be reasonable.

For contracts between state agencies, and for contracts between universities, alternative documentation may be submitted to substantiate the reimbursement request. This may be in the form of FLAIR reports or other similarly detailed reports.

The Florida Department of Financial Services, online Reference Guide for State Expenditures can be found at this web address: http://www.fldfs.com/aadir/reference_guide.htm

ATTACHMENT D

PROGRESS REPORT FORM

DEP Agreement No.:	SC621		
Grantee Name:	Levy County		
Grantee Address:	Post Office Box 1734, Bronson, Florida 32621		
Grantee's Grant Manager:	Benny Jerrels	**Telephone No.:**	(352) 486-3300
Reporting Period:			
Project Number and Title:			

Provide the following information for all tasks and deliverables identified in the Grant Work Plan: a summary of project accomplishments for the reporting period; a comparison of actual accomplishments to goals for the period; if goals were not met, provide reasons why; provide an update on the estimated time for completion of the task and an explanation for any anticipated delays and identify by task.
NOTE: Use as many pages as necessary to cover all tasks in the Grant Work Plan.

The following format should be followed:
Task 1:
Progress for this reporting period:
Identify any delays or problems encountered:

This report is submitted in accordance with the reporting requirements of DEP Agreement No. SC621 and accurately reflects the activities associated with the project.

Signature of Grantee's Grant Manager _____ Date _____

ATTACHMENT E

SPECIAL AUDIT REQUIREMENTS

The administration of resources awarded by the Department of Environmental Protection *(which may be referred to as the "Department", "DEP", "FDEP" or "Grantor", or other name in the contract/agreement)* to the recipient *(which may be referred to as the "Contractor", Grantee" or other name in the contract/agreement)* may be subject to audits and/or monitoring by the Department of Environmental Protection, as described in this attachment.

MONITORING

In addition to reviews of audits conducted in accordance with OMB Circular A-133 and Section 215.97, F.S., as revised (see "AUDITS" below), monitoring procedures may include, but not be limited to, on-site visits by Department staff, limited scope audits as defined by OMB Circular A-133, as revised, and/or other procedures. By entering into this Agreement, the recipient agrees to comply and cooperate with any monitoring procedures/processes deemed appropriate by the Department of Environmental Protection. In the event the Department of Environmental Protection determines that a limited scope audit of the recipient is appropriate, the recipient agrees to comply with any additional instructions provided by the Department to the recipient regarding such audit. The recipient further agrees to comply and cooperate with any inspections, reviews, investigations, or audits deemed necessary by the Chief Financial Officer or Auditor General.

AUDITS

PART I: FEDERALLY FUNDED

This part is applicable if the recipient is a State or local government or a non-profit organization as defined in OMB Circular A-133, as revised.

1. In the event that the recipient expends $500,000 or more in Federal awards in its fiscal year, the recipient must have a single or program-specific audit conducted in accordance with the provisions of OMB Circular A-133, as revised. EXHIBIT 1 to this Attachment indicates Federal funds awarded through the Department of Environmental Protection by this Agreement. In determining the Federal awards expended in its fiscal year, the recipient shall consider all sources of Federal awards, including Federal resources received from the Department of Environmental Protection. The determination of amounts of Federal awards expended should be in accordance with the guidelines established by OMB Circular A-133, as revised. An audit of the recipient conducted by the Auditor General in accordance with the provisions of OMB Circular A-133, as revised, will meet the requirements of this part.

2. In connection with the audit requirements addressed in Part I, paragraph 1, the recipient shall fulfill the requirements relative to auditee responsibilities as provided in Subpart C of OMB Circular A-133, as revised.

3. If the recipient expends less than $500,000 in Federal awards in its fiscal year, an audit conducted in accordance with the provisions of OMB Circular A-133, as revised, is not required. In the event that the recipient expends less than $500,000 in Federal awards in its fiscal year and elects to have an audit conducted in accordance with the provisions of OMB Circular A-133, as revised, the cost of the audit must be paid from non-Federal resources (i.e., the cost of such an audit must be paid from recipient resources obtained from other than Federal entities).

4. The recipient may access information regarding the Catalog of Federal Domestic Assistance (CFDA) via the internet at http://12.46.245.173/cfda/cfda.html.

PART II: STATE FUNDED

This part is applicable if the recipient is a nonstate entity as defined by Section 215.97(2)(m), Florida Statutes.

1. In the event that the recipient expends a total amount of state financial assistance equal to or in excess of $500,000 in any fiscal year of such recipient, the recipient must have a State single or project-specific audit for such fiscal year in accordance with Section 215.97, Florida Statutes; applicable rules of the Department of Financial Services; and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General. EXHIBIT 1 to this Attachment indicates state financial assistance awarded through the Department of Environmental Protection by this Agreement. In determining the state financial assistance expended in its fiscal year, the recipient shall consider all sources of state financial assistance, including state financial assistance received from the Department of Environmental Protection, other state agencies, and other nonstate entities. State financial assistance does not include Federal direct or pass-through awards and resources received by a nonstate entity for Federal program matching requirements.

2. In connection with the audit requirements addressed in Part II, paragraph 1; the recipient shall ensure that the audit complies with the requirements of Section 215.97(7), Florida Statutes. This includes submission of a financial reporting package as defined by Section 215.97(2), Florida Statutes, and Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General.

3. If the recipient expends less than $500,000 in state financial assistance in its fiscal year, an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, is not required. In the event that the recipient expends less than $500,000 in state financial assistance in its fiscal year, and elects to have an audit conducted in accordance with the provisions of Section 215.97, Florida Statutes, the cost of the audit must be paid from the non-state entity's resources (i.e., the cost of such an audit must be paid from the recipient's resources obtained from other than State entities).

4. For information regarding the Florida Catalog of State Financial Assistance (CSFA), a recipient should access the Florida Single Audit Act website located at https://apps.fldfs.com/fsaa for assistance. In addition to the above websites, the following websites may be accessed for information: Legislature's Website at http://www.leg.state.fl.us/Welcome/index.cfm, State of Florida's website at http://www.myflorida.com/, Department of Financial Services' Website at http://www.fldfs.com/ and the Auditor General's Website at http://www.state.fl.us/audgen.

PART III: OTHER AUDIT REQUIREMENTS

(NOTE: This part would be used to specify any additional audit requirements imposed by the State awarding entity that are solely a matter of that State awarding entity's policy (i.e., the audit is not required by Federal or State laws and is not in conflict with other Federal or State audit requirements). Pursuant to Section 215.97(8), Florida Statutes, State agencies may conduct or arrange for audits of State financial assistance that are in addition to audits conducted in accordance with Section 215.97, Florida Statutes. In such an event, the State awarding agency must arrange for funding the full cost of such additional audits.)

PART IV: REPORT SUBMISSION

1. Copies of reporting packages for audits conducted in accordance with OMB Circular A-133, as revised, and required by PART I of this Attachment shall be submitted, when required by Section .320 (d), OMB Circular A-133, as revised, by or on behalf of the recipient directly to each of the following:

A. The Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

B. The Federal Audit Clearinghouse designated in OMB Circular A-133, as revised (the number of copies required by Sections .320 (d)(1) and (2), OMB Circular A-133, as revised, should be submitted to the Federal Audit Clearinghouse), at the following address:

Federal Audit Clearinghouse
Bureau of the Census
1201 East 10th Street
Jeffersonville, IN 47132

Submissions of the Single Audit reporting package for fiscal periods ending on or after January 1, 2008, must be submitted using the Federal Clearinghouse's Internet Data Entry System which can be found at http://harvester.census.gov/fac/

C. Other Federal agencies and pass-through entities in accordance with Sections .320 (e) and (f), OMB Circular A-133, as revised.

2. Pursuant to Section .320(f), OMB Circular A-133, as revised, the recipient shall submit a copy of the reporting package described in Section .320(c), OMB Circular A-133, as revised, and any management letters issued by the auditor, to the Department of Environmental Protection at one the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

3. Copies of financial reporting packages required by PART II of this Attachment shall be submitted by or on behalf of the recipient directly to each of the following:

A. The Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

B. The Auditor General's Office at the following address:

State of Florida Auditor General
Room 401, Claude Pepper Building
111 West Madison Street
Tallahassee, Florida 32399-1450

4. Copies of reports or management letters required by PART III of this Attachment shall be submitted by or on behalf of the recipient directly to the Department of Environmental Protection at one of the following addresses:

By Mail:

Audit Director
Florida Department of Environmental Protection
Office of the Inspector General, MS 40
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Electronically:
FDEPSingleAudit@dep.state.fl.us

5. Any reports, management letters, or other information required to be submitted to the Department of Environmental Protection pursuant to this Agreement shall be submitted timely in accordance with OMB Circular A-133, Florida Statutes, or Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, as applicable.

6. Recipients, when submitting financial reporting packages to the Department of Environmental Protection for audits done in accordance with OMB Circular A-133, or Chapters 10.550 (local governmental entities) or 10.650 (nonprofit and for-profit organizations), Rules of the Auditor General, should indicate the date that the reporting package was delivered to the recipient in correspondence accompanying the reporting package.

PART V: RECORD RETENTION

The recipient shall retain sufficient records demonstrating its compliance with the terms of this Agreement for a period of 5 years from the date the audit report is issued, and shall allow the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General access to such records upon request. The recipient shall ensure that audit working papers are made available to the Department of Environmental Protection, or its designee, Chief Financial Officer, or Auditor General upon request for a period of 3 years from the date the audit report is issued, unless extended in writing by the Department of Environmental Protection.

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EXHIBIT – 1

FUNDS AWARDED TO THE RECIPIENT PURSUANT TO THIS AGREEMENT CONSIST OF THE FOLLOWING:

Federal Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following:

Federal Program Number	Federal Agency	CFDA Number	CFDA Title	Funding Amount	State Appropriation Category

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Matching Resources for Federal Programs:

Federal Program Number	Federal Agency	CFDA	CFDA Title	Funding Amount	State Appropriation Category

State Resources Awarded to the Recipient Pursuant to this Agreement Consist of the Following Resources Subject to Section 215.97, F.S.:

State Program Number	Funding Source	State Fiscal Year	CSFA Number	CSFA Title or Funding Source Description	Funding Amount	State Appropriation Category
Original Agreement	General Appropriations Act, Line Item 1693, Solid Waste Management Trust Fund	2015-2016	37.012	Small County Consolidated Grants	$90,909	140134
				Total Award	$90,909	

For each program identified above, the recipient shall comply with the program requirements described in the Catalog of Federal Domestic Assistance (CFDA) [http://12.46.245.173/cfda/cfda.html] and/or the Florida Catalog of State Financial Assistance (CSFA) [https://apps.fldfs.com/fsaa/searchCatalog.aspx]. The services/purposes for which the funds are to be used are included in the Contract scope of services/work. Any match required by the recipient is clearly indicated in the Contract.

ATTACHMENT F
PROPERTY REPORTING FORM FOR DEP AGREEMENT NO. SC621

GRANTEE: List non-expendable equipment/personal property* costing $1,000 or more purchased under the above Agreement. Also list all upgrades* under this Agreement, costing $1,000 or more, of property previously purchased under a DEP agreement (identify the property upgraded and the applicable DEP agreement on a separate sheet). Complete the serial no./cost, location/address and property control number columns of this form.

DESCRIPTION OF PROPERTY	SERIAL NO. OR OTHER ID NO.	COST**	ACQUISITION DATE	LOCATION/ADDRESS

*Not including software. **Attach copy of invoice, bill of sale, or other documentation to support purchase.

GRANTEE:	Grantee's Project Manager:	Date:

BELOW FOR DEP USE ONLY

DEP CONTRACT MANAGER: **MAINTAIN THIS DOCUMENT WITH A COPY OF THE INVOICES SUPPORTING THE COST OF EACH ITEM IDENTIFIED ABOVE IN YOUR AGREEMENT FILE. IF THE AGREEMENT IS A COST REIMBURSEMENT AGREEMENT, SEND THIS COMPLETED FORM ALONG WITH INVOICES SUPPORTING THE COST OF THE ITEMS TO FINANCE AND ACCOUNTING FOR THE PROCESSING OF THE GRANTEE'S/ INVOICE FOR PAYMENT.**

DEP Grant Manager Signature: _____ Date: _____

DEP FINANCE AND ACCOUNTING: No processing required by Finance & Accounting as the Grantee/Contractor is responsible for retaining ownership of the equipment/property upon satisfactory completion of the Contract.

DEP PROPERTY MANAGEMENT: No processing required by the Property Management section as the Grantee/Contractor will retain ownership of the equipment/property upon satisfactory completion of the Contract.

Meek

Levy County Board of County Commissioners

Agenda Item Summary

1. NAME/ORGANIZATION/TELEPHONE:	2. MEETING DATE:
GRANT COORDINATOR/GRANT DEPARTMENT	May 3, 2016

3. REQUESTED MOTION/ACTION:

Request Gail Gold as the replacement for Bruce Wilson in the Tourism Industry Representative position on the RESTORE Act committee.

4. Agenda Presentation Time Requested: 10 minutes	5. IS THIS ITEM BUDGETED (IF APPLICABLE) ?: YES X NO _ IF NO, STATE ACTION REQUIRED
(Request will be granted if possible) ALLOTED TIME NOT	BUDGET ACTION: FINANCIAL IMPACT SUMMARY STATEMENT: DETAILED ANALYSIS ATTACHED ?: YES__ NO__ BUDGET OFFICER APPROVAL ____ DATE

6. BACKGROUND: (WHY IS THE ACTION NECESSARY, AND WHAT ACTION WILL BE ACCOMPLISHED)

The RESTORE Act committee needs a representative for the Tourism Industry. Bruce Wilson has moved out of Levy County, but recommended the Gail Gold serve as his replacement on the RESTORE Act Committee. Gail Gold meets all of the requires to serve as the Tourism Industry Representative. The RESTORE Act committee voted to approve this item at the April 19, 2016 RESTORE Act committee meeting.

7. RECOMMENDED APPROVAL AND DATE (YES & NO BLOCK INDICATE IF APPROVAL IS/IS NOT REQUIRED)

DEPARTMENT DIRECTOR	OTHER	OTHER	OTHER	COUNTY ATTORNEY	COUNTY COORDINATOR
YES__ NO	YES__ NO	YES__ NO	YES__ NO	YES__ NO	YES__ NO

8. COMMISSION ACTION:

__ APPROVED

__ DENIED

__ DEFERRED DATE TO BRING BACK:

__ OTHER SPECIFY:

Levy County Board of County Commissioners
Agenda Item Summary

1. *Department Making Request/Name/Extension:*	2. *Meeting Date:*
Emergency Management, John MacDonald, 5213	May 3, 2016

3. *Requested Motion/Action*

A) Board Approval to adopt by resolution the 5 year Local Mitigation Strategy Plan Update.

4. *Is this item budgeted (if applicable) ?:* *Yes X No _ If No, state action required*

Budget Action:

Financial Impact Summary Statement:

Detailed analysis attached?: Yes__ No__ Budget Officer Approval _____ Date

Background: (Why is the action necessary, and What action will be accomplished)

A Local Mitigation Strategy (LMS) is a plan developed by the county to reduce and or eliminate the risks associated with natural and man-made hazards. These plans must be in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) . DMA 2000 is a mechanism for collaboration between state and local entities that encourages pre-disaster planning, recognizes need for mitigation, and designates funding for projects through Federal grant opportunities. Without an approved LMS a county will be unable to apply for many Federal grants, and the LMS must be updated every five years to remain compliant.

Department Director	Other	Other	Other	County Attorney	County Coordinator
Yes X No	Yes__ No	Yes _ No	Yes__ No	Yes X No	Yes__ No

7. *Commission Action:*

__ Approved

__ Denied

__ Deferred Date to Bring Back:

__ Other Specify:

RESOLUTION NO. 2016-026

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF LEVY COUNTY, FLORIDA ADOPTING THE LEVY COUNTY LOCAL MITIGATION STRATEGY 2016 UPDATE AND PRIORITIZED LIST OF PROJECTS AND INITIATIVES.

WHEREAS, Levy County is vulnerable to the human and economic cost of natural, technological and societal disasters; and

WHEREAS, Levy County realizes the importance of reducing or eliminating those vulnerabilities for the overall good and welfare of the County; and

WHEREAS, Levy County representatives and staff have identified, justified and prioritized a number of proposed projects and programs needed to mitigate vulnerabilities to the impacts of future disasters throughout Levy County; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 requires that all local organizations (governmental, tribal and not-for-profits), have an approved local mitigation plan in accordance with 44 CFR 201.6 prior to receiving Hazard Mitigation Grant Program (HMPG) funding; and

WHEREAS, the Levy County Department of Emergency Management and the Levy County Local Mitigation Strategy Working Group previously prepared the 1999 Levy County Local Mitigation Strategy, with 2004 and 2011 updates, and recently revised the Plan and provided it to the Board of County Commissioners and the elected officials of each municipality; and

WHEREAS, the Plan has been updated to ensure consistency with the Federal Disaster Mitigation Act 2000; and

WHEREAS, the Board finds that adopting the Plan will promote the health, safety, and welfare of the citizens of Levy County.

NOW, THEREFORE BE IT RESOLVED by the Levy County Board of County Commissioners that the Levy County Local Mitigation Strategy 2016 update is adopted as the Local Mitigation Strategy for Levy County.

ADOPTED AND APPROVED this the 3rd day of May, 2016.

BOARD OF COUNTY COMMISSIONERS
LEVY COUNTY, FLORIDA

_____
John Meeks, Chairman

ATTEST: Clerk of Court and
Ex-Officio Clerk to the Board

_____

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

_____
Anne Bast Brown, County Attorney

Z:\2016 lms resolution
LR2016-045

Levy County
Local Mitigation Strategy

2016 Update

PLAN AND APPENDICES

June 28, 2016

Technical Assistance for the preparation of this document was provided by
The North Central Florida Regional Planning Council

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Florida is very susceptible to storm-induced flooding. The average elevation throughout the state is approximately 100 feet above mean sea level (msl). The flooding created by hurricanes is a threat to the life and property of coastal residents. The most critical threat is to those residents within the category 1 surge zone developed with updated Sea, Lake, and Overland Surges from Hurricanes (SLOSH) data by the National Hurricane Center. This zone shows all areas that would be inundated with water from a land falling category 1 hurricane, defined as having sustained winds of 74 to 95 miles per hour. The category 1 hurricane evacuation zone generally includes all of Florida's barrier islands, even those with areas of elevation above the category 1 level. The Coastal High Hazard Area is defined as the category 1 hurricane evacuation zone but as it is designated by the most recent regional evacuation study. The Coastal High Hazard Area is used by the Florida Department of Economic Opportunity (DEO) to review land use issues as part of the Comprehensive Planning process.

As previously stated, populations within the category 1 hurricane surge zone face a greater risk than those outside of this zone due to their immediate vulnerability to low intensity hurricanes. The population at risk includes residential property owners, tourists and visitors who may be using facilities in the coastal area, and the general population residing in mobile homes.

The size of the population in coastal high hazard areas is a good indicator of a potential risk to human health. Additionally, the insured value of property in coastal hazard areas is also an indicator of risk to property. Recent hurricane events demonstrate that insured losses can be significant and create a tremendous burden for homeowners, private insurers, and local, state, and federal governments. As insured value of property in coastal hazard areas rises, the state is faced with increasing responsibility for the fiscal impacts caused by natural disasters. Florida has numerous mobile homes in the coastal areas, all of which are extremely susceptible to the effects of hurricane force winds and thus their location and installation need to be regulated.

The cost of post-disaster recovery has grown at such an alarming rate throughout the United States that the issue of hazard mitigation has gained attention from all levels of government. The Federal Emergency Management Agency (FEMA) has developed a National Mitigation Strategy and the state of Florida has created a Statewide Mitigation Strategy. These strategies view planning for disasters as the way to ensure a safer community and reduce recovery costs. Additional funding is becoming available to support hazard mitigation efforts. This funding will provide mitigation planning opportunities for local governments that have been affected by a disaster or are vulnerable to disasters.

What is Hazard Mitigation?

Hazard mitigation is any action taken to permanently reduce or eliminate long-term risk to people and their property from the effects of hazards. Tools of hazard mitigation include land use planning techniques that limit the infrastructure in high hazard areas and programs for retrofitting existing structures to meet new building codes and standards. Ideally, a community can minimize the effects of future hazards through a mix of code enforcement, planning, and responsible development. The result of incorporating mitigation into development practices will be the creation of safer and more economically resilient communities.

The Hazard Mitigation Strategy

The Local Mitigation Strategy is a plan that a community can develop to promote hazard mitigation and to manage post-disaster recovery. Developing these strategies in Florida is important because the state is

The Strategy was developed as a separate working document that compiles hazard mitigation planning, projects and programs from a range of existing sources such as the local comprehensive land use plan, the comprehensive emergency management plan, and other related codes and ordinances. From this point, mitigation initiatives can be identified and prioritized, allowing a community to address mitigation in a manageable way. In the Levy County Local Mitigation Strategy, the various policies, programs and ordinances have been analyzed and included in the *Community Guiding Principles* chapter of this document. A list of mitigation programs and projects included in *Hazard Mitigation Projects and Initiatives* chapter will help local governments more effectively access available funding - both post-disaster and on an ongoing basis.

As a planning tool, local governments, including planners, emergency managers, building officials, public safety directors, public works directors, as well as elected and appointed officials, are encouraged to use this Strategy to develop a comprehensive hazard Mitigation Strategy.

goals for the Working Group to work toward and focus on as part of the development of this document such as:

- Identify policies to establish a local mitigation Working Group to oversee the development of the Local Mitigation Strategy.
- Identify procedures to ensure that a cross-section of the community has input in the planning process.
- Identify procedures to coordinate local government mitigation activities with those of the business communities.
- Identify procedures for formally recognizing the Local Mitigation Strategy, such as through adopting the plans and policies that constitute the Strategy.

The operational Working Group was used to develop procedures encouraging public participation in the development and revision of the Local Mitigation Strategy. The principal task of the Working Group was to identify criteria to rank mitigation projects submitted for inclusion in the LMS and to rank those projects. In addition to guiding the Strategy, the Working Group also took further measures to increase private sector participation through the various chambers of commerce in Levy County including educational materials on developing a Business Continuation Plan to local business owners. The necessary public participation in the mitigation process should be maintained through ongoing educational efforts.

Local Mitigation Strategy Working Group 2015

As with the previous 2009 LMS Working Group, each jurisdiction in Levy County was asked to participate in the 2015 updates of the LMS. The Working Group had been retained from 2009 and with several changes throughout the years, had maintained a functioning Working Group roster and yearly updates. In May 2015, an initial invitation was sent to all Working Group contacts as well as various community partners known to work with Levy County Emergency Management. The invitation to participate in the plan update process was provided through phone calls, email correspondence, and a notice on the County website.

Existing and new members were asked to designate a voting member to the existing Working Group. That person would attend approximately 6-10 meetings at the Levy County Emergency Operations Center in Bronson. During these meetings, members of the Working Group would be responsible for presenting projects from the jurisdiction they represented and consequently vote to rank these projects. Each of the voting members also had the option to appoint an alternate that can perform all of the same duties as the voting member. Each of the jurisdictions was granted 1 voting member and 1 alternate. County departments also had the same opportunity as each jurisdiction to join the Working Group.

The local jurisdictions exist primarily in the same organizational pattern as state and regional bodies. Inclusion of the neighboring communities, regional, state and other interested parties is an in the LMS is an important goal in Levy County. Coordination came in the form of the North Central Florida Regional Planning Council acting as the facilitators of the Working Group meetings. Meeting attendees included representatives from the majority of cities and towns in the county. No new agencies were present in the Working Group. These representatives were included in the discussion for their expertise in a variety of areas. The meetings were announced on the internet for neighboring counties to be aware of the process. Fanning Springs participated in both the Levy County and the Gilchrist County LMS and served as a

Representation

The following table includes the names, affiliation, and contact information of all participating agencies, municipalities, interested citizens and organizations on the Levy County Local Mitigation Strategy Working Group.

Table II-1. Levy County Local Mitigation Working Group, 2016

Name/Title	*Affiliation*	*Address*	*Telephone*	*Email*
John MacDonald Chair*	*Levy County Emergency Management, Director*	*P.O. Box 221 Bronson, FL 32621*	*486-5213 FAX: 486-5152*	johnmacdonald@levydisaster.com
David Peaton Vice Chair	*Levy County Emergency Management*	*P.O. Box 221 Bronson, FL 32621*	*486-5213*	davidpeaton@levydisaster.com
Bill Hammond	*Levy County Zoning/Building Adm.*	*P.O. Box 672 Bronson, FL 32621*	*486-5198 FAX: 486-5246*	hammond-bill@levycounty.org
Grace Romero (alt.)	*Levy County Zoning/Building Adm.*	*P.O. Box 672 Bronson, FL 32621*	*486-5198 FAX: 486-5246*	romero-grace@levycounty.org
Shenley Neely	*Levy County Planning Director*	*P.O. Box 1373 Bronson, FL 32621*	*486-5405 FAX: 486-5549*	neely-shenley@levycounty.org
Pamela Whitehead	*Town of Bronson Town Clerk*	*P.O. Box 266 Bronson, FL 32621*	*486-2354 FAX: 486-6262*	bronsonclerk@townofbronson.org
Erik Wise(alt.)	*Town of Bronson Public Works*	*P.O. Box 266 Bronson, FL 32621*	*486-2354 FAX: 486-6262*	publicworks@townofbronson.org
Michael Hancock	*City of Cedar Key Assistant City Clerk*	*P.O. Box 339 Cedar Key, FL 32625*	*543-5132 FAX: 866-674-2419*	mhancock@cedarkeyfl.us
Robert Robinson (alt.)	*City of Cedar Key*	*P.O. Box 339 Cedar Key, FL 32625*	*543-5132 FAX: 866-674-2419*	rrobinson@cedarkeyfl.us
Laurie Copeland	*City of Chiefland Building & Zoning*	*214 Park Avenue Chiefland, FL 32626*	*493-6711 FAX: 493-6714*	laurie@chieflandfla.com
Howell Lancaster	*City of Fanning Springs Mayor*	*17651 N.W. 90th Court*	*463-2855*	mayorlancaster@gmail.com

III. COMMUNITY GUIDING PRINCIPLES

Importance of Community Guiding Principles
One of the most important reasons for having a Local Mitigation Strategy is to help a local government make decisions that will reduce its overall vulnerability to hazards. While many of these decisions are made after a disaster strikes, it is important to have a strategy in place to ensure that these actions reflect prior planning and coordination. The strategy can also help to ensure that the daily activities of a local jurisdiction, such as issuing building permits and approving development plans, promote a safer community.

First In 1999 and again in 2015, the Levy County Working Group and staff developed the Strategy's overall vision for hazard mitigation. The guiding principles that are listed here should work as a road map to assist Levy County and its municipalities in promoting hazard mitigation - before and after a disaster. In recognition of the efforts of the previous assemblies of the Local Mitigation Strategy Working Group, those participating in the 2015 update have chosen to continue with the goals and objectives as adopted by previous members of the Working Group.

The Process
The Levy County LMS Working Group and staff reviewed and referenced the existing Local Mitigation Strategy plan, other existing plans, policies, and ordinances that relate to public safety, hazard mitigation, and long-term recovery. Many of the same ideas, such as public safety and loss reduction are repeated in these documents. When collated together through an indexing process, several common themes were evident. These common themes helped establish the Levy County LMS guiding principles for its Mitigation Strategy.

In order to create a successful LMS the documents, studies and plans that currently exist should be reviewed with each update

SLOSH Models and Atlas

Statewide Regional Evacuation Study

US Census (2010 and 2013 estimates)

County Business Patterns

Bureau of Business and Economic Research (BEBR) Economic Outlook

Florida Statistical Abstract

County Tax Assessor

Florida Department of Transportation

Levy County CEMP

Florida Geographic Data Library

Hazardous Materials Emergency Plan for the Withlacoochee Region

County and Municipality Comprehensive Plans

Objective 3.2 Assist business and industry in the preparation of emergency operations plans.

Objective 3.3 Encourage public-private partnerships.

GOAL 4. Ensure intergovernmental coordination in disaster preparedness, response, recovery and mitigation between all applicable local governments.

Objective 4.1 Maintain and update (as necessary) the Comprehensive Emergency Management Plan.

Objective 4.2 Coordinate emergency evacuation procedures.

Objective 4.3 Coordinate inter-jurisdictional resources during recovery efforts.

Objective 4.4 Conduct annual updates and revisions (as necessary) to the Local Mitigation Strategy.

Objective 4.5 Coordinate and prioritize applications for hazard mitigation grants.

GOAL 5. Develop and implement guidelines for post-disaster redevelopment.

Objective 5.1 Expedite post-disaster recovery through the development of a Post-disaster Recovery Ordinance.

Objective 5.2 Enable small businesses to utilize public property in the event of a disaster.

Objective 5.3 Advocate property acquisition in repetitive loss areas.

Objective 5.4 Encourage mitigation initiatives in the Coastal High Hazard Area.

Objective 5.5 Consider options to mitigation initiatives that may result in substantial reduction of the local tax base.

Objective 5.6 Establish and implement a plan for long-term temporary housing.

Objective 5.7 Encourage the diversion of Community Development Block Grant funds to disaster recovery.

GOAL 6. Encourage the protection of natural resources.

Objective 6.1 Participate with the state in the acquisition of lands for environmental protection.

Objective 6.2 Conserve and improve wetlands.

Objective 6.3 Limit discharge and protect natural resources from toxic substances and harmful pollutants.

Objective 9.8 Continue compliance with Floodplain Management Plans.

GOAL 10. Regulate the impacts of development and redevelopment through code enforcement.

Objective 10.1 Prohibit new development of mobile home parks in flood zones.

Objective 10.2 Prohibit development of critical care facilities in the Coastal High Hazard Area.

Objective 10.3 Ensure compliance with the Coastal Construction Code for all construction.

Objective 10.4 Provide and protect open space.

Objective 10.5 Preserve natural vegetation.

Objective 10.6 Ensure new development and redevelopment complies with Federal Flood Insurance regulations.

Objective 10.7 Encourage the inclusion of window and door protection standards in the Building Codes.

Objective 10.8 Require lot grading plans addressing drainage with each building permit.

Objective 10.9 Encourage mitigation for repetitive loss properties.

Objective 10.10 Enforce wellhead protection ordinances.

GOAL 11. Regulate, limit and prioritize the construction of critical facilities.

Objective 11.1 Maintain or improve critical evacuation routes.

Objective 11.2 Prioritize and retrofit existing critical facilities.

Objective 11.3 Control the siting and development of new critical facilities within the Coastal High Hazard Area.

GOAL 12. Establish pre- and post-disaster mitigation initiatives through the Local Mitigation Strategy.

Objective 12.1 Limit public expenditures that support new development in the Coastal High Hazard Area.

Objective 12.2 Encourage capital improvement expenditures for critical evacuation routes.

Objective 12.3 Implement Stormwater Management programs.

IV. COMMUNITY PROFILES

A. Levy County Profile

Located in North Central Florida, Levy County is bordered on the northwest by Dixie County and the Suwannee River; on the north by Gilchrist County; on the east by Alachua County and on the east and southeast by Marion County; on the south by Citrus County and the Withlacoochee River and on the west by the Gulf of Mexico. This general area has several regional labels such as the "Big Bend Area" or the "Nature Coast." Levy County is also a part of the Withlacoochee Region.

From west to east Levy County begins as a marshy coastal wetlands area with swampy hammocks drained by the Suwannee, Waccasassa and Withlacoochee Rivers. Central forested flatlands rise to rolling hills and pasture. An inland ridge known as the Brooksville Ridge runs in a generally north and south direction through the eastern part of the County.

The elevation of the County's topography generally increases from west to east. The area from the Gulf of Mexico to U.S. 19 is typically less than 50 feet above sea level. The majority of the remaining land mass is 50 to 70 feet above sea level. The highest elevations exist around the community of Morriston, approximately 100 feet.

Land use in Levy County is largely agricultural with mixed land uses that include residential, commercial and light industrial areas. Coastal areas also include increased recreational and tourism uses.

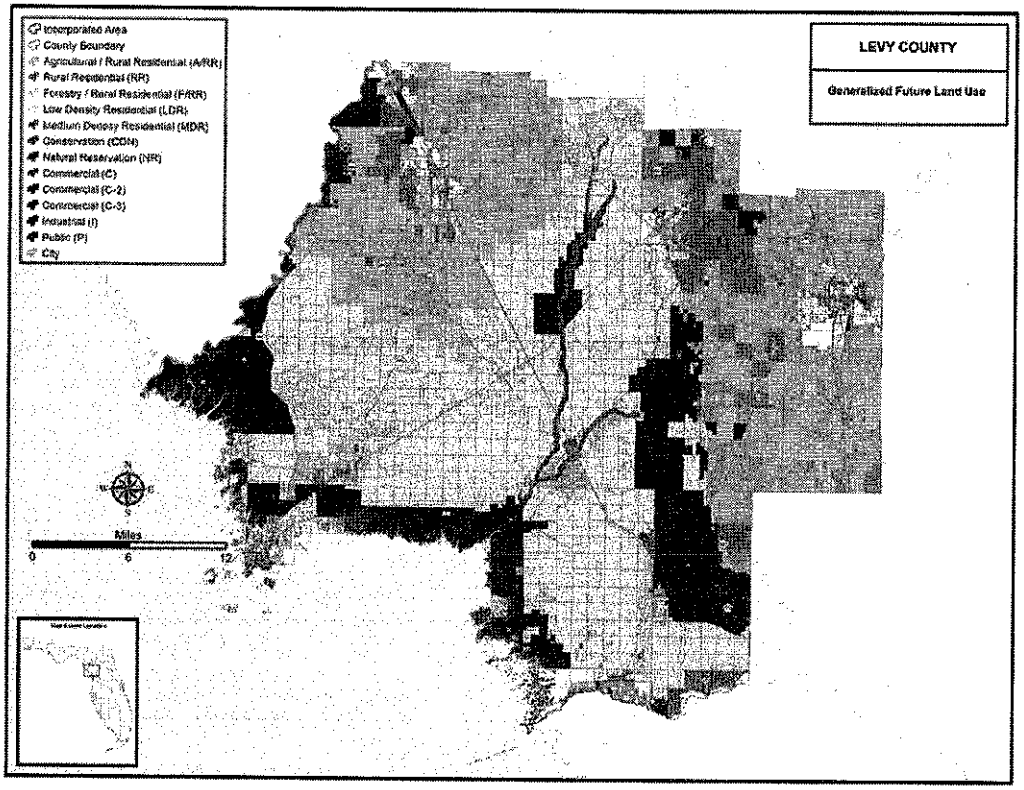
The total land area of Levy County is 704,000 acres. As much as 684,000 acres (97.2%) are considered to be "farm" acres. Many farm acres include mixed uses. The breakdown of agricultural land usage is:

- Crops 20%
- Forestry 67%
- Other Agriculture 13%

A more specific breakdown of land use in addition to agriculture include:

- Active Agriculture 434,207 acres (61%)
- Residential 147,176 (21%)
- Conservation 106,000 (15%)
- Vacant 18,389 (3%)
- Public Facilities 5,394 (0.8%)
- Industrial 1,516 (0.2%)
- Recreation 720 (0.1%)
- Commercial 450 (0.06%)
- Historical Resources 200 (0.02%)

Figure IV-1. Levy County Generalized Future Land Use



The Levy County planning department maintains and works with the floodplain management mapping and monitoring process. Each municipality maintains their own compliance with NFIP standards. The actions needed at the municipality level for continued compliance with the NFIP is at the will of the community. With the majority of the county participating in NFIP, the following tasks will ensure continued compliance. The county and each participating municipality will ensure these tasks are completed in compliance with FEMA regulations.

- Continue to enforce their adopted Floodplain Management Ordinance requirements, which include regulation all new development and substantial improvements in Special Flood hazard Areas (SFHA).
- Continue to maintain all records pertaining to floodplain development, which shall be available for public inspection.
- Continue to notify the public when there are proposed changes to the floodplain ordinance of Flood Insurance Rate Maps (FIRM).
- Maintain the map and Letter of Map Change repositories.
- Continue to promote and encourage all property owners to seek and maintain flood insurance.
- Continue their Community Rating System outreach programs

Funding Source(s): Pre-Disaster Mitigation funds (PDM) or Emergency Management Preparedness Assistance (EMPA) would be the most appropriate source of funding. Community Development Building Grant (CDBG) could also serve as funding source.

Estimated Cost: $100,000 to 500,000 or more (depending on the need for retrofit measures).

Comments: This opportunity provides the foundation to co-locate cellular telephone equipment to improve communications among both civilian and emergency personnel in the areas of Cedar Key and the surrounding parts of the County. This project can be implemented and administered by Emergency Management in 6 to 12 months as money becomes available.

Hazards Mitigated: All Hazards in all jurisdictions. This project will mitigate existing building and any new construction which would be serviced by this project.

Jurisdiction Mitigated: All

Levy County 800MHZ Radio Upgrade- Williston (Rank 9, Score 63.25)
Upgrade communication equipment to serve the communications needs of The City of Williston and surrounding areas.

Problem Statement: Presently there is a gap in the coverage of the existing 800MHZ radio communication system ability in and around The City of Williston.

Mitigation: Protects the life health and safety of the all residents in the County who rely on emergency services in the case of a declared disaster or event.

Funding Source(s): Pre-Disaster Mitigation funds (PDM) or Emergency Management Preparedness Assistance (EMPA) would be the most appropriate source of funding. Community Development Building Grant (CDBG) could also serve as funding source.

Estimated Cost: $100,000 to 500,000 or more (depending on the need for retrofit measures).

Comments: The equipment needed could be located on one of the City water towers or be co-located with cellular telephone equipment to improve communications among both civilian and emergency personnel in and around the City of Williston and the surrounding parts of the County. This project can be implemented and administered by Emergency Management in 6 to 12 months as money becomes available.

Hazards Mitigated: All Hazards in all jurisdictions. This project will mitigate existing building and any new construction which would be serviced by this project.

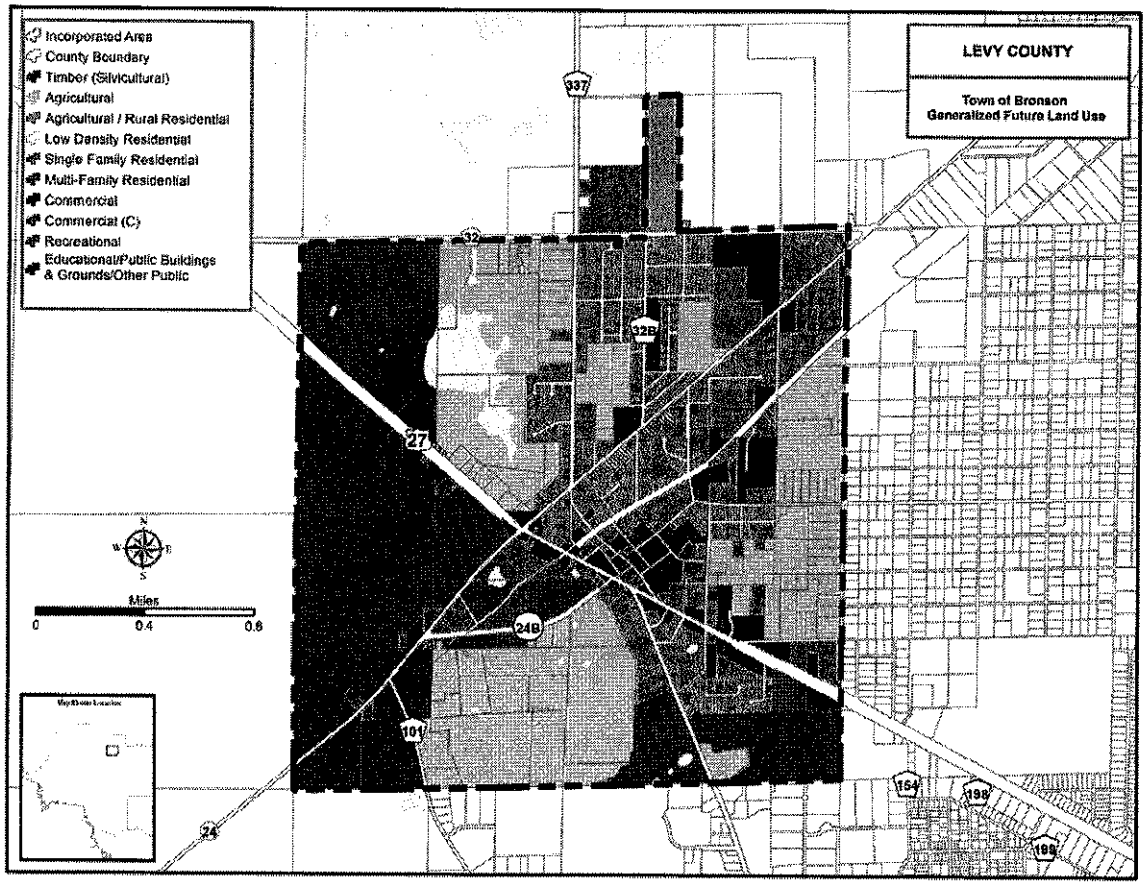
Jurisdiction Mitigated: All

Levy County- Public Outreach- (Rank 13, Score 61.5)
Distribute all hazards information to all communities and residents of Levy County.

major employers in Levy County. Other industries located in Bronson are related to forestry and agriculture. The 2010 US Census list the Bronson population at 1,113 and according to BEBR the 2015 population is estimated at 1,187. It should be noted that the daytime population of Bronson is significantly higher due to schools, the courthouse, and commercial activity. Bronson has residential areas within the 100-year floodplain and areas of undeveloped floodplain that could pose potential problems if developed.

The Town of Bronson participated in the 2015-2016 Local Mitigation Strategy rewrite process. Town working group members recommended and placed two projects on the current project list.

Figure IV-2. Town of Bronson Generalized Future Land Use



Critical Facilities

The Critical Facilities Inventory for the Town of Bronson is located in the Critical Facilities Inventory.

Essential Public Buildings

- Old Town Hall and Bronson Fire Department - 660 E. Hathaway Avenue, Bronson, FL 32621
- Public Works Compound
- Town Hall- 650 Oak Street, Bronson, FL 32621

Comments: The construction project would aim to improve stormwater runoff and to decrease the pooling of water in and around Oak Street. This project can be implemented and administered by the municipal public works department in 12 to 18 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate new improvements.

Jurisdiction Mitigated: Town of Bronson

City of Cedar Key Profile

As an early growth center, Cedar Key was an important port that also provided a significant economic link to the regional railroad system. The major industry was the manufacture of pencils which drew upon the community's cedar forests. Senator Yulee constructed one of the state's first railroads, with one terminus at Cedar Key in the present Levy County. As a result of that early development, Cedar Key has a large inventory of historic structures and a local economy based partly on eco/heritage tourism. Major stakeholders are owner-operated, tourism-oriented small businesses and the commercial seafood industry. The 2010 census lists the population at 702 and the 2015 BEBR population estimates list 696 residents. Note that Cedar Key also has a significant seasonal population based on tourism.

Cedar Key is very vulnerable to wind, wave, tidal flooding and evacuation issues due to its isolated coastal location. There may be no practical or cost-beneficial solution to several of the "lifeline" issues due to this remote location.

The City of Cedar Key participated in the 2015-2016 Local Mitigation Strategy rewrite process. City working group members recommended and placed four projects on the current project list.

Procure backup generator for electricity power at the community center, a critical facilities to provide for recovery and assistance to businesses and residents pre and post disaster situations.

Problem Statement: Cedar Key relies on its community center as a point of recovery as well as a safe haven during storms. Without back up power, the structures ability to serve as a base of recovery is greatly diminished.

Mitigation: Providing back up power generation is a cost effective way to insure the viability of the community shelter structure and its ability to support efforts in mitigation and storm recovery.

Funding Source(s): HMGP or EMPA

Estimated Cost: $25,000 to 50,000 depending on size of unit.

Comments: This project can be implemented and administered by the municipal building and zoning department in 6 to 12 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing building and any new services which would be provided by this location.

Jurisdiction Mitigated: City of Cedar Key and those who seek refuge or services during a emergency.

Hardening of the Cedar Key Community Center **(Rank 23, Score 50)**
Strengthen the roof, windows and doors of the Center to ensure structural integrity and survivability.

Problem Statement: Hurricane shutters are a cost effective way to strengthen the envelope of every structure. Hardening of the windows and doors will further ensure limited damage as well as a hardened roof structure. Mitigation will come in the form of protecting the structure and its critical ability to serve as a point of recovery.

Mitigation: The project will include hardening of the roof, shuttering of windows and strengthening of all doors. These steps are critical to the survivability of the Cedar Key community center.

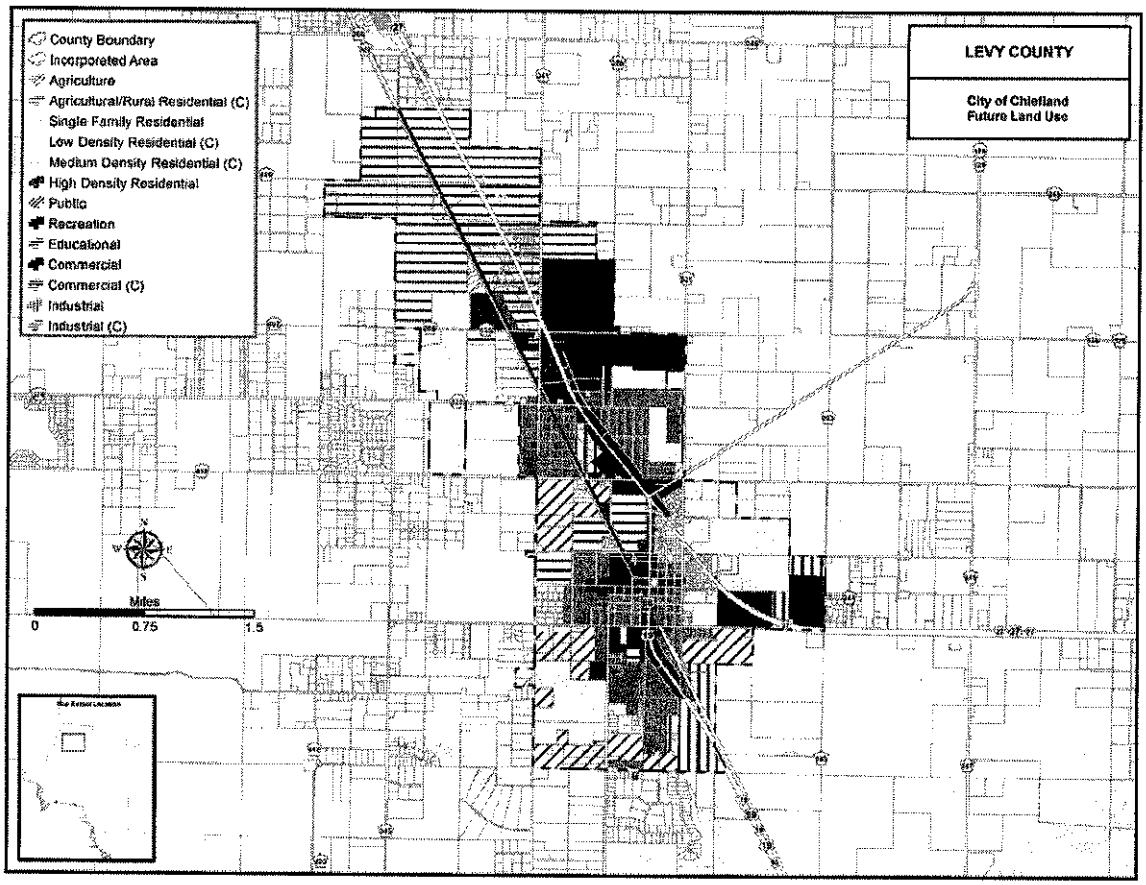
Funding Source: EMPA has funded many of these generators for local governments. Either of the two EMPA competitive grants are appropriate. However, the one for cities only is assumed to be less competitive. HMGP, CDBG, Stafford 406 or Stafford Public Assistance funding are also appropriate sources of funding.

Estimated Cost: $50,000 to 75,000

Comments: This project can be implemented and administered by the municipal building and zoning department in 12 to 24 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing building and any new services which would be provided by this location.

Figure IV-4. City of Chiefland Generalized Future Land Use



Critical Facilities

The Critical Facilities Inventory for the City of Chiefland is located in the Critical Facilities Inventory.

Essential Public Buildings

- City Hall - 214 East Park Avenue, Chiefland, FL 32626
- Police Department - 14 East Park Avenue, Chiefland, FL 32626
- Fire Department - 16 NE 1st Street, Chiefland, FL 32626
- Train Depot/ The Chamber of Commerce - 17 North Main Street, Chiefland, FL 32626
- Tommy Usher Community Center - 506 SW 4th Avenue, Chiefland, FL 32626
- Luther Callaway Library - 104 NE 3rd Street, Chiefland, FL 32626

City of Chiefland Hazard Mitigation Projects and Initiatives

Storm Shutters for Police and Building Departments (Rank 16/19, Score 57.6/ 54.2)

Purchase and installation of storm shutters for the Police and Building Department structures.

Problem Statement: The Police and Building Department structures serve as vital hubs of dispatch and coordination during a pre and post disaster situation. Currently the buildings do not have storm shutters

implemented and administered by the police department in 6 to 12 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing building and any new services which would be provided by this location.

Jurisdiction Mitigated: City of Chiefland and those who seek refuge or services during an emergency.

City of Fanning Springs Profile

Fanning Springs, originally called Fanning, was named after Colonel Alexander Wilder Campbell Fanning, the leader of a fort established in the area during the Seminole wars. Fanning Springs was incorporated in the mid-1960s and it is located in both Levy and Gilchrist counties. The population of the city (in Levy County) was 486 according to the 2010 census, with an estimated population of 455 in 2015. The U.S. 19 corridor between Chiefland and Fanning Springs is one of the growth areas of the County. The eventual hospital in Chiefland should also impact the U.S. 19 corridor. The City of Fanning Springs will also be included as part of the Gilchrist County LMS.

The Suwannee River makes portions of Fanning Springs vulnerable to flooding during periods of heavy rain and tropical type storms. Heavy rains in north Florida and Georgia greatly impact river levels too.

The City of Fanning Springs participated in the 2015-2016 Local Mitigation Strategy rewrite process. City working group members recommended and placed four projects on the current project list.

Critical Facilities

The Critical Facilities Inventory for the City of Fanning Springs is located in the Critical Facilities Inventory.

Essential Public Buildings

- City Hall
- Fire Department to include vehicles and equipment
- Water Treatment Facility
- Water Supply Wells (#1, and #2)
- Elevated Water Storage

Estimated Cost: Phase I- $4,000,000, Phase II- $35,000

Comments: Phase I and Phase II will cover the entire city in both counties it lies across and its entire service area. This project can be implemented and administered by the municipal building and zoning department in 24 to 48 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate new and existing infrastructure and any new services which would be provided by these improvements.

Jurisdiction Mitigated: City of Fanning Springs and surrounding service area.

Town of Inglis Profile

The Town of Inglis is located on the Withlacoochee River in the southwest area of Levy County. The population of the Town was 1,325 according to the 2010 census. The Town's 2015 population is estimated by BEBR to be around 1,301.

Inglis is affected by coastal conditions and by flooding on the lower Withlacoochee River. Its vulnerability is in the large amount of 100-year floodplain within the Town limits and the number of unimproved residential streets.

The residents of Inglis and surrounding Levy County rely on the Inglis Fire Station as a center point for information, emergency needs and help with their problems.

The Town of Inglis participated in the 2015-2016 Local Mitigation Strategy rewrite process. Town Working Group members recommended and placed four projects on the current project list.

Critical Facilities

The Critical Facilities Inventory for the Town of Inglis is located in the Critical Facilities Inventory.

Essential Public Buildings

- Vehicle and miscellaneous storage building - adjacent to the Police Station
- Building used by EMT and Police for meetings and storage - behind Police Station to the South
- Open Three Bay storage building - behind Police Station to the South
- Inglis Fire Station
- Inglis Community Center
- Bridge at Hudson Street over Harrison Branch
- Bridge at Palm Street over Harrison Branch
- Bridge at Mastadon Street over Harrison Branch

Comments: This is a low and relatively flat location so projects should be accurately engineered to perform as designed. This project can be implemented and administered by the municipal roads department in 12 to 24 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing homes and buildings and any new structures which would be built in this location.

Jurisdiction Mitigated: Town of Inglis

Paving Critical Evacuation Routes in Inglis (Rank 18, Score 54.25)
Pave the critical limerock roads that connect to existing major roads used as the main evacuation routes for the Town of Inglis. Gladys St. from Hammock Rd. to US 19.

Problem Statement: These roads are in constant need of grading and leveling, especially after a heavy rain or storm. Portions of these roads will hold standing water and impede travel.

Mitigation: Project will improve evacuation of residents during flood conditions and enhance emergency response capability. The project will also mitigate issues with standing water.

Funding Source(s): HMGP, CDBG and Stafford Public Assistance

Estimated Cost: $ 125,000

Comments: This section of road is flood prone and should be accurately engineered to perform as designed. This project can be implemented and administered by the municipal roads department in 12 to 24 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing roadways.

Jurisdiction Mitigated: Town of Inglis and those who seek refuge or services during a emergency.

Town of Inglis Sewer System Feasibility Study (Rank 3, Score 65.75)
The town of Inglis has a need for a community wide sewer system. This project would be to assess its feasibility.

Problem Statement: The city currently has no sewer system to serve the community. In the event of profound flooding, its septic systems would cause a serious health threat.

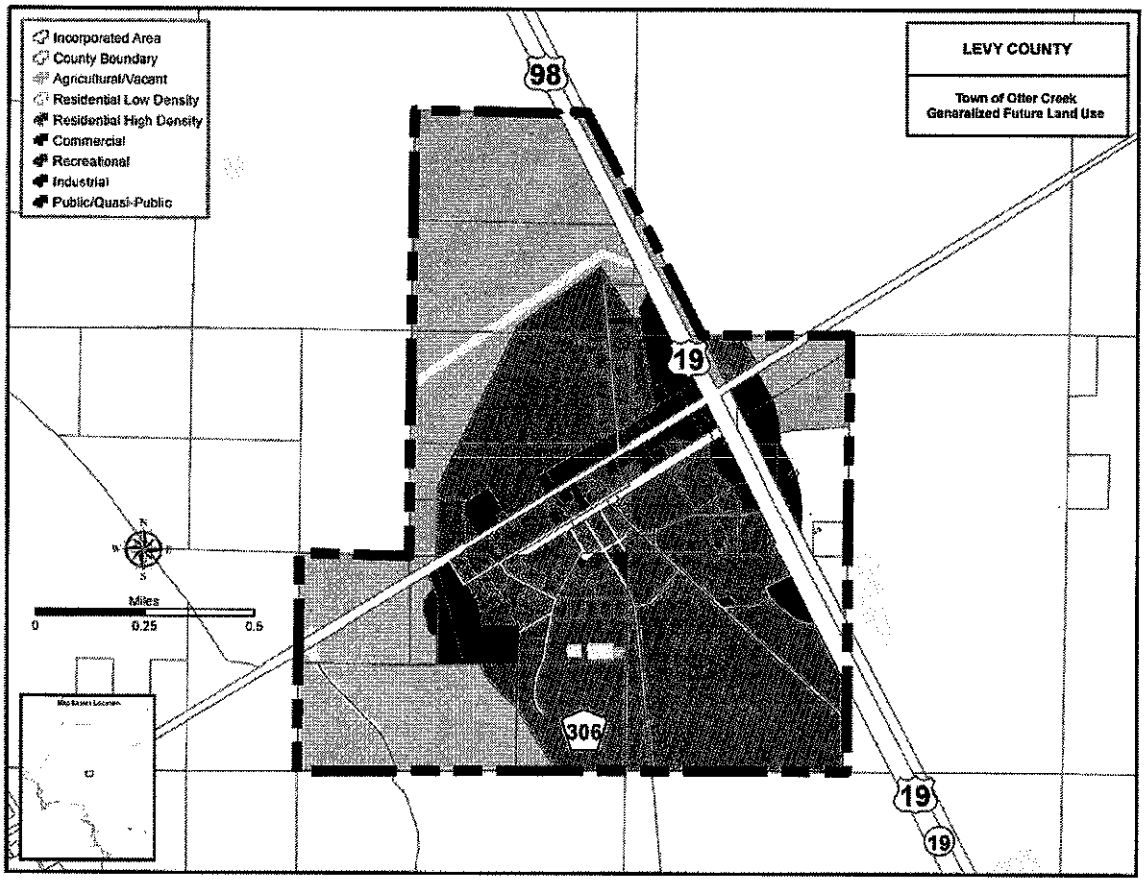
Mitigation: The project will mitigate potential health and safety issues should the septic systems currently fail. Potable water sources will also be at risk as well as the extensive surface water in Inglis.

Funding Source(s): HMGP, CDBG and Stafford Public Assistance

Estimated Cost: $ 25,000

The Town of Otter Creek participated in the 2015-2016 Local Mitigation Strategy rewrite process. No projects have been placed on the current project list on behalf of the town.

Figure IV-7. Town of Otter Creek Generalized Future Land Use



Critical Facilities

The Critical Facilities Inventory for the Town of Otter Creek f is located in the Critical Facilities Inventory.

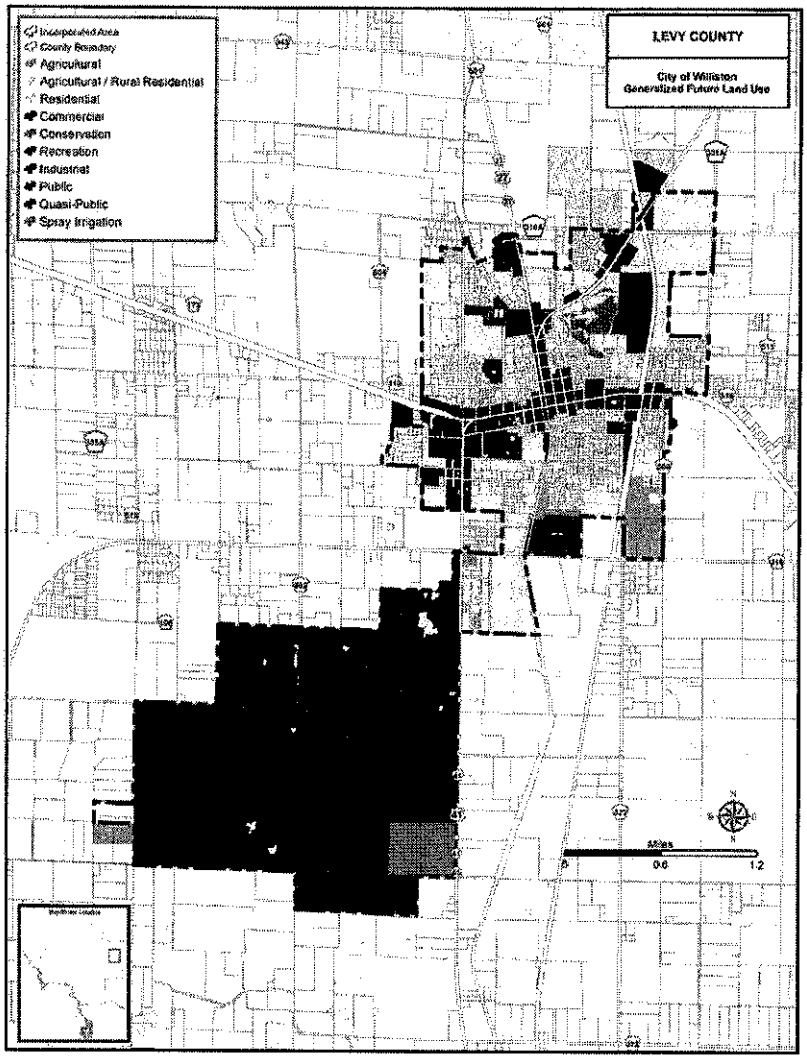
Essential Public Buildings

- School House- 351 SW SR 24, Otter Creek 32683 (houses Levy Assoc. of Retarded Citizens)
- Town Hall- 551 SW 2nd Avenue, Otter Creek 32683
- Post Office- 210 US Hwy. 19 Otter Creek 32683
- Water Plant- SR 24, Otter Creek 32683

City of Williston Profile

Set in the rolling hills of eastern Levy County, Williston is a center of fishing, hunting, and other outdoor activities. The population of The City of Williston recorded in 2010 by the U.S. Census Bureau was 2,768, and BEBR estimates the population grew to 2,848 in 2015. The major industries of the community

Figure IV-8. City of Williston Generalized Future Land Use



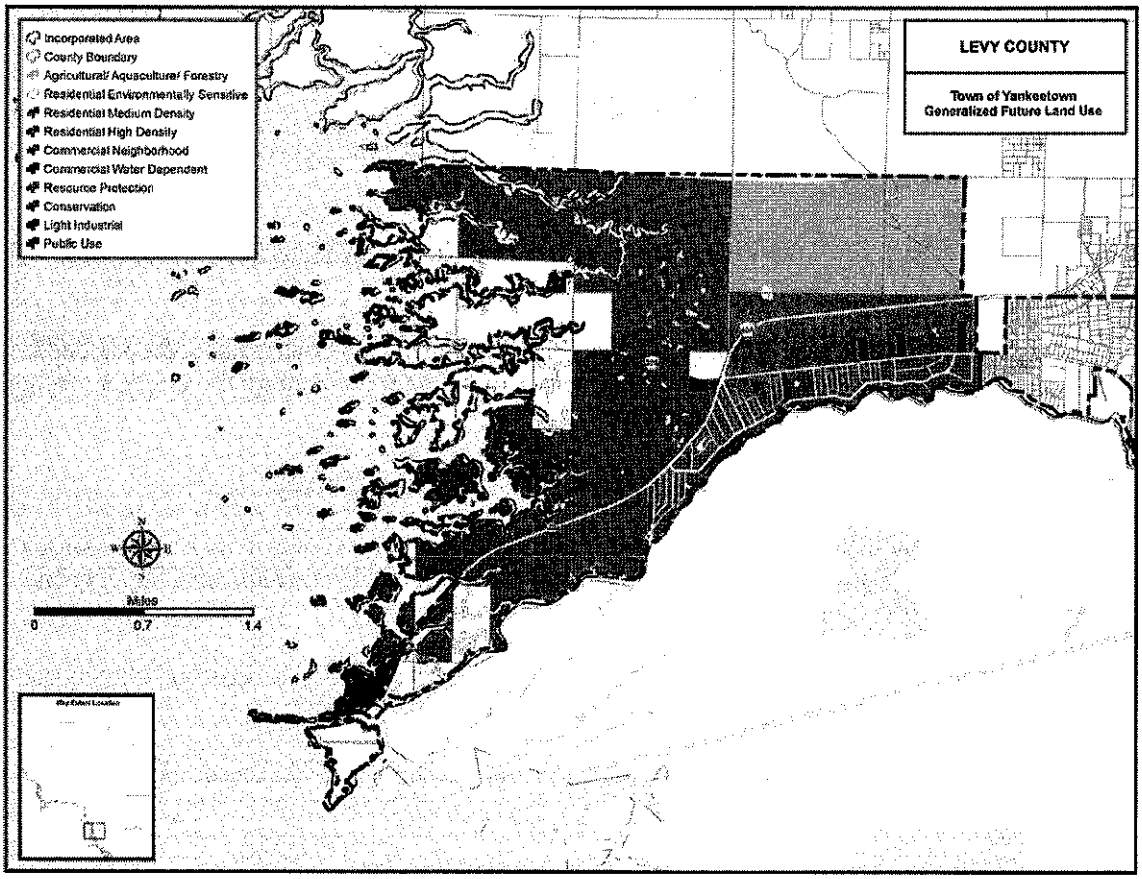
Critical Facilities

The Critical Facilities Inventory for the City of Williston is located in the Critical Facilities Inventory.

Essential Public Buildings

- City Hall - 50 N.W. Main Street, Williston, FL 32696
- Williston City Barn - 25 S.W. 1st Avenue, Williston, FL 32696
- City Electric Department- 15 S.W. 1st Avenue, Williston, FL 32696
- Williston Public Library - 49 E. Noble Avenue, Williston, FL 32696
- City of Williston Annex Building- 607 S.W. 1st Avenue, Williston, FL 32696
- Wastewater Treatment Plant - 540 N.W. 4th Street, Williston, FL 32696

Figure IV-9. Town of Yankeetown Generalized Future Land Use



Critical Facilities

The Critical Facilities Inventory for the Town of Yankeetown is located in the Critical Facilities Inventory.

Essential Public Buildings

- Yankeetown Women's Club- 5 56th Street, Yankeetown, FL 34498
- Inglis-Yankeetown Lions Club- 59th Street, Yankeetown, FL 34498
- Parsons Memorial Presbyterian Church- 5850 Riverside Drive, Yankeetown, FL 34498
- Church of God- 6006 Hwy. 40 W., Yankeetown, FL 34498
- Izaak Walton Lodge- Riverside Dr. and 63rd Street, Yankeetown, FL 34498
- U.S. Coast Guard Station- Riverside Drive, Yankeetown, FL 34498
- A.F. Knotts Public Library- 11 56th Street, Yankeetown, FL 34498

Comments: Any Drainage improvements in this low and relatively flat location must be thoroughly engineered to perform as designed. This project can be implemented and administered by the municipal building and zoning department in 24 to 36 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing building and any new construction which would be serviced by this project.

Jurisdiction Mitigated: Town of Yankeetown

Development of Yankeetown Stormwater Management Plan (Rank 10, Score 62.25)
Engineering and construction of individual sub-projects identified in the Stormwater Management Plan.

Problem Statement: The Town of Yankeetown lacks the financial resources to develop a storm water plan without funding assistance.

Mitigation: The project will improve evacuation and response functions by Draining inundated roadways. Drainage of residential areas will mitigate the potential health problems associated with inundated septic tanks and standing water. Acquisition of repetitive loss properties may be identified as an alternative.

Funding Source(s): HMGP will be the most appropriate funding source in the case of acquisition. CDBG can also be used as a match (the Town qualifies as low to moderate income). The Southwest Florida Water Management District may also participate.

Estimated Cost: $10,000 and up depending on extent of plan (Implementation will probably be accomplished incrementally).

Comments: Any Drainage improvements in this low and relatively flat location must be thoroughly engineered to perform as designed. This project can be implemented and administered by the municipal building and zoning department in 12 to 24 months or as money becomes available.

Hazards Mitigated: All hazards within the jurisdiction. This project will mitigate existing building and any new construction which would be serviced by this project.

Jurisdiction Mitigated: Town of Yankeetown

Name	Address	City	Zip
City of Williston - water tank 2	SW Noble Ave	Williston	32696
FDOT	1820 S Young Blvd	Chiefland	32626
Fugate Lift Station	NW 4th St	Williston	32696
Good Samaritan Ret. Home	507 SE 1st Ave	Williston	32696
Yankeetown Town Hall	Harmony Lane	Yankeetown	34498
Yankeetown Vol. Fire	63rd St	Yankeetown	34498
City of Fanning Springs - City Hall	17651 NW 90th Ct	Trenton	32693
City of Fanning Springs - Well 1	17651 NW 90th Ct	Trenton	32693
City of Fanning Springs - Well 2	16351 NW 80th Ct	Trenton	32693
Fire Department	17651 NW 90th Ct	Trenton	32693
Williston High School	427 West Noble Ave	Williston	32696
Williston Middle School	1345 NE 3rd Ave	Williston	32696
Williston Police	5 SW 1st Ave	Williston	32696
Williston Sewer	Behind Dixie Lilly	Williston	32696
Woodfield Lift Station	SE 7th Ave	Williston	32696
Yankeetown elevated water tower	5110 Riverside Drive	Yankeetown	34498
Yankeetown School	4500 Hwy 40 West	Yankeetown	34498
US Coast Guard Station	5800 Riverside Drive	Yankeetown	34498
Town of Yankeetown water plant	Main St	Yankeetown	34498
Town of Otter Creek City Sewer	Main St	Otter Creek	32683
Williston cell 62	5490 NE 180th Ave	Williston	32696
Williston arms Lift Station	316 Williston Arms Dr	Williston	32696
Williston Elementary	801 South Main	Williston	32696
Williston Fire Department	Main St	Williston	32696
Oakview	300 NW 1st Ave	Williston	32696
Pineridge Lift station	NW 9th Circle	Williston	32696
Russell Lift station	SE 5th Ave	Williston	32696
Main street Lift Station	Main St	Williston	32696
School Board Maintenance	540 Marshburn Drive	Bronson	32621
Town of Bronsons well C-32	360 Ishie Ave	Bronson	32621
Town of Inglis water treatment	171 Elm St	Inglis	34449
Cedar Key Sewer Plant	510 3rd St	Cedar Key	32625
Cedar Key Water Plant	County Rd 347	Cedar Key	32625
Cedar Key Well 3&4	State Road 24	Cedar Key	32625
Chiefland Cell 54	5820 NW 60th St	Chiefland	32626
Chiefland Elementary	1205 NW 4th	Chiefland	32626
Chiefland High	808 North Main Street	Chiefland	32626
Chiefland Middle	811 NW 4th Drive	Chiefland	32626
Acree Lift Station	NE 4th Ave	Williston	32696
Bronson Elementary	State Road 24	Bronson	32621
Bronson High	350 School Street	Bronson	32621
Cedar Key - cell 69	8850 SW CR 347	Cedar Key	32625
Cedar Key - Lift Station 1	1st Street	Cedar Key	32625
Cedar Key - Lift Station 10	Hawthorne Blvd	Cedar Key	32625
Cedar Key - Lift Station 11	Shellcrest Ave	Cedar Key	32625
Cedar Key - Lift Station 12	Paroda Ave	Cedar Key	32625
Cedar Key - Lift Station 13	Indiana Ave	Cedar Key	32625
Cedar Key - Lift Station 14	Point Rd	Cedar Key	32625

Table V-2. Levy County Fire Departments and Law Enforcement

LEVY COUNTY FIRE DEPARTMENTS			
Name	**Address**	**City**	**Zip**
Bronson Volunteer Fire Department	PO Box 266	Bronson	32621
Cedar Key Volunteer Fire Department	2nd Street	Cedar Key	32625
Chiefland Fire Dept	214 E Park Ave	Chiefland	32626
Fanning Springs Volunteer Fire Department	17651 NW 90th Court	Trenton	32693
Fowlers Bluff Fire Rescue	4591 NW County Road 347	Chiefland	32626
Gulf Hammock Volunteer Fire Department	2850 SE CR 326	Gulf Hammock	32639
Inglis Fire Department	141 Highway 40 W	Inglis	34449
Morriston Montbrook Fire Department Business Office	19750 SE 32nd Pl	Morriston	32668
Otter Creek Volunteer Fire Department	PO Box 65	Otter Creek	32683
Rosewood Volunteer Fire Department	9990 SW 63rd Lane	Cedar Key	32625
Williston Volunteer Fire Department	5 SW 1 Ave	Williston	32696
Yankeetown Volunteer Fire Department	6241 Harmony Ln	Yankeetown	34498
LEVY COUNTY LAW ENFORCEMENT			
Name	**Address**	**City**	**Zip**
Cedar Key Police Dept	PO Box 339	Cedar Key	32625
Chiefland Police Dept	15 N Main Street	Chiefland	32626
Williston Police Dept	5 SW First Avenue	Williston	32696
Levy County Sheriff's Office	9150 NE 80th Ave	Bronson	32621

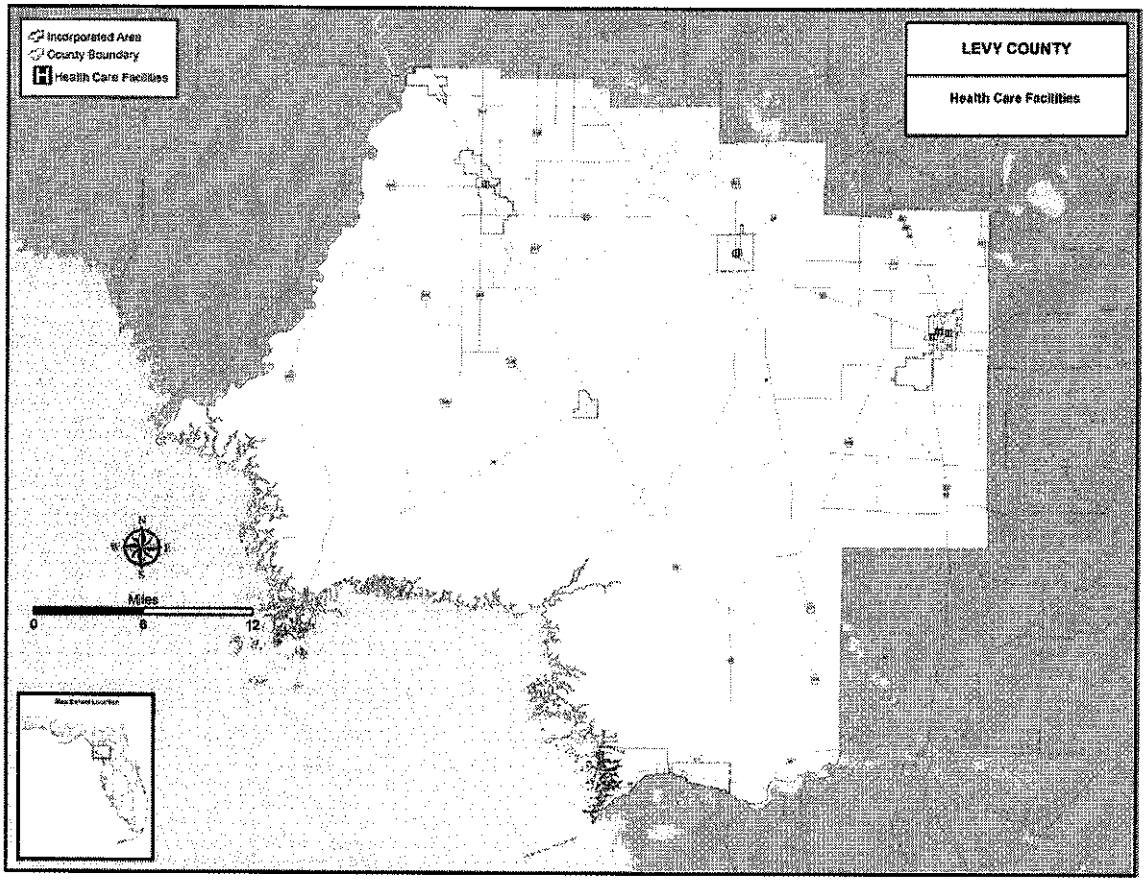
Medical

Presumably persons who reside in hospitals are not capable of evacuating without assistance. The assistance may range anywhere from wheelchairs to oxygen and IVs. Therefore, all medical facilities need to have their own protocols in case they are called upon to evacuate. There is only one hospital facility in Levy County - Nature Coast Regional Hospital. The medical facility is located in Williston and would experience a situation related to other inland county hospitals. The facility would be under duress from the overload of patients coming from the areas closer to the coast and from patients needing immediate care from traveling accidents. All of the medical facilities in the County may be used in a host capacity if a hurricane threatens the Tampa Bay region, so having a plan is imperative. The medical facilities in Levy County are shown on Figure V-1 and reported in Table V-3.

Reviewing the Comprehensive Emergency Management Plan provides a listing of protocols that will provide the appropriate level of preparedness for critical facilities. Each medical facility should have a list of protocols in case of an emergency including but not limited to:

- Procedures available beyond standard first aid
- Preventing communicable diseases
- Maximize staff in a 24-hour capacity
- Obtaining medical equipment not currently at the facility
- Ensure the safety of the emergency responders
- Provide health information to the public
- Ensure potable water and wastewater treatment

Figure V-1. Health Care Facilities



Schools

Most of the time there will be sufficient notice of an oncoming storm, and schools will be closed. Therefore, the location of the schools becomes important primarily for sheltering persons who choose to not go to hotels or family and friends. Schools are used because of their size and functions, including kitchens. The schools that are set up as shelters will have sufficient supplies for a person, or persons, to endure a short stay. Those schools that are not opened as shelters may be required to open if the storm or disaster number of individuals seeking shelter is greater than first expected. In those cases they are strictly emergency shelters. Due to the strength and timing of the disaster there may not be enough time to supply these additional schools with more than basic necessities. These additional facilities can include private schools and churches. Figure V-2 and Table V-4 give a listing of schools including their specific location. This information was obtained from the Levy County School Board.

Figure V-2. Levy County Schools

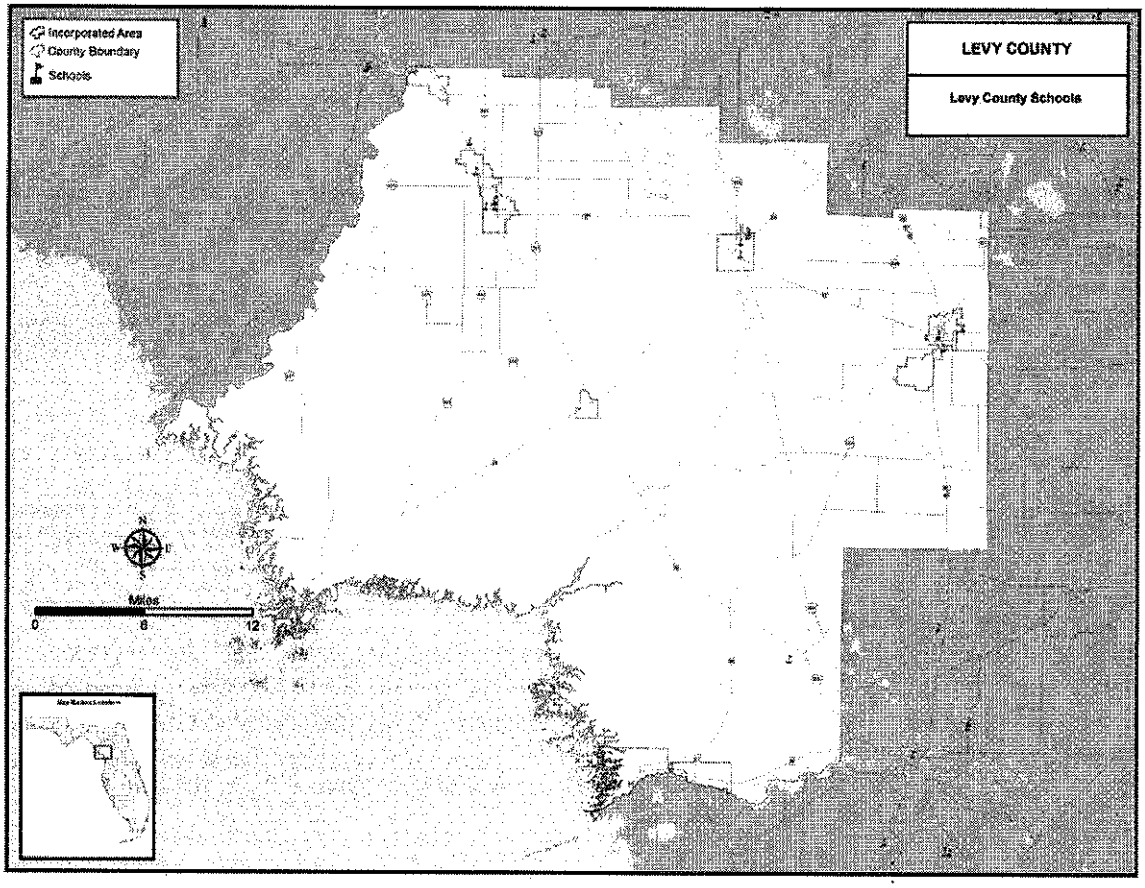
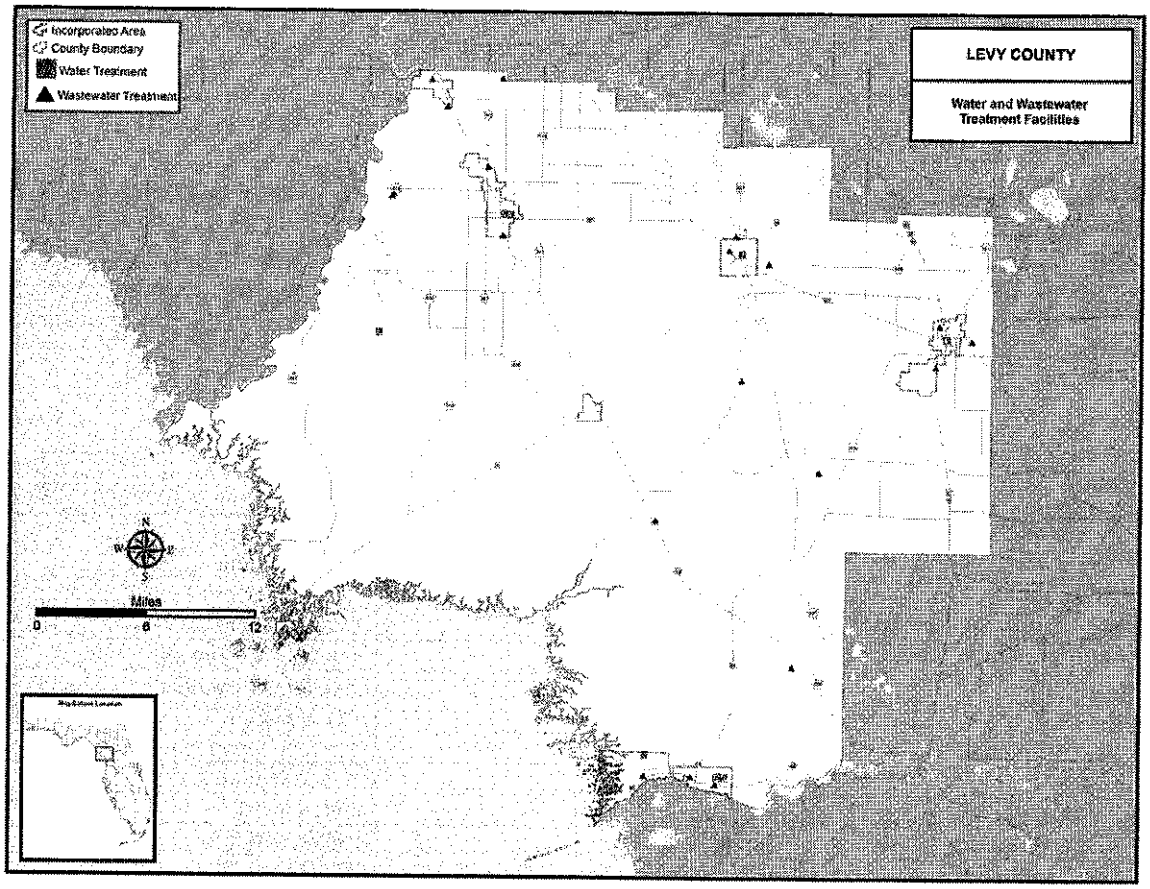


Table V-5. Levy County Water and Wastewater Treatment Plants

Name	Address	City	Zip
City of Chiefland Wastewater treatment	2216 SW 4th Place	Chiefland	32626
City of Chiefland Well 1	14 NE 1st St	Chiefland	32626
City of Chiefland Well 2	100 NE 8th street	Chiefland	32626
City of Chiefland Well 3	926 NW 4th Drive	Chiefland	32626
City of Chiefland Well 4	920 NW 4 Drive	Chiefland	32626
City of Williston - water tank 1	15 SW 1st Ave	Williston	32696
City of Williston - water tank 2	SW Noble Ave	Williston	32696
City of Fanning Springs - Well 1	17651 NW 90th Ct	Trenton	32693
City of Fanning Springs - Well 2	16351 NW 80th Ct	Trenton	32693
Williston Sewer	behind Dixie Lilly	Williston	32696
Town of Yankeetown water plant	Main Street	Yankeetown	34498
Town of Otter Creek City Sewer	Main Street	Otter Creek	32683
Town of Bronson well C-32	360 Ishe Ave	Bronson	32621
Town of Inglis water treatment	171 Elm St	Inglis	34449
Cedar Key Sewer Plant	510 3rd St	Cedar Key	32625
Cedar Key Water Plant	County Rd 347	Cedar Key	32625
Cedar Key Well 3&4	State Road 24	Cedar Key	32625
Industrial Water Treatment Plants			
Name	**Address**	**City**	**Ownership Type**
Alliance Dairies	4951 NW 170th Street	Trenton	Privately Owned
Anderson Materials, Inc - Chiefland	NW 160th Street Of Us 19	Chiefland	Privately Owned
Bell Concrete	341 NW 127th Place	Chiefland	Privately Owned
Cedar Key Plantation "Ro" Treatment Plant	S.R. 24, 1 Mi. North Of City Of Cedar Key	Cedar Key	Privately Owned
FDOT Chiefland Maintenance Unit	1820 South Young Blvd	Chiefland	State Owned
Florida Rock Industries-Gulf Hammock	Approximately 5 Miles South Of Us-19 And	Gulf Hammock	Privately Owned
Florida Rock-Williston Ready Mix Batch Plant	1603 SW 7th Street	Williston	Privately Owned
Levy County Road Department Equipment Wash Facility	Northwest Of Hwy. 27 & SR 24	Bronson	County Owned
Mid State Concrete Inc	20931 Ne Highway 27	Williston	Privately Owned
Town Of Inglis - Ro Concentrate	135 Highway 40, P.O. Box 429	Inglis	Privately Owned
Domestic Water Treatment Plants			
Name	**Address**	**City**	**Ownership Type**
Bronson WWTF	P.O. Box 266	Bronson	Privately Owned
Caber Corp RAF	West Of Cr 347 & North Of Cr 326	Cedar Key	Privately Owned
Cedar Key District WWTF	510 Third Street	Cedar Key	Public Ownership

Figure V-3. Water and Wastewater Treatment Facilities



Facility Location	City	Tank Type
3250 SE Hwy 41	Morriston	Retail Station
9531 NE 110th Ave	Bronson	Fuel user/Non-retail
12550 NW 50th Ave	Chiefland	Agricultural
4951 NW 170th St	Trenton	Fuel user/Non-retail
2201 N Young Blvd	Chiefland	Fuel user/Non-retail
Us 27	Williston	Fuel user/Non-retail
1820 S Young Blvd	Chiefland	State Government
Us Hwy 27a	Bronson	Fuel user/Non-retail
808 N Main St	Chiefland	County Government
9931 NE Hwy 24	Archer	Retail Station
7951 SE 5th Ave	Gulf Hammock	Retail Station
13574 NW Hwy 19	Chiefland	Retail Station
11050 SE 30th St	Morriston	Retail Station
11050 SE 30th St	Morriston	Retail Station
30 Hwy 19 N	Inglis	Retail Station
6611 Hwy 40 W	Yankeetown	Retail Station
3250 SE Hwy 41	Morriston	Retail Station
415 E Noble Ave	Williston	Retail Station
920 SE 4th St	Chiefland	Local Government
5250 N E 140 Ct	Williston	Retail Station
121 W Fox Run	Williston	Retail Station
6950 NW 60th St	Chiefland	Retail Station
8051 N W 115 St	Chiefland	Retail Station
8051 N W 115 St	Chiefland	Retail Station
4500 Hwy 40 W	Yankeetown	County Government
951 Whiddon Ave	Cedar Key	County Government
12751 NW Hwy 19	Chiefland	Fuel user/Non-retail
105 S Main St	Chiefland	Retail Station
Us Hwy Alt 27	Chiefland	Agricultural
125 SW 7th St	Williston	Fuel user/Non-retail
102 E Noble Ave	Williston	Retail Station
1199 SE 7th St	Williston	Retail Station
7517 NE Hwy 41	Williston	Retail Station
5290 SE Us 19	Gulf Hammock	Retail Station
20931 NW Hwy 27	Williston	Fuel user/Non-retail
4828 Hwy 40 W	Yankeetown	Local Government
8731 N W 174th St	Fanning Springs	Retail Station
415 E Noble Ave	Williston	Retail Station
12351 NW Hwy 19	Chiefland	Retail Station
6351 SE Hwy 19	Gulf Hammock	Fuel user/Non-retail
Hwy 19	Chiefland	Retail Station
7690 SW Hwy 24	Cedar Key	Retail Station
240 E Noble Ave	Williston	Retail Station
2201 N Young Blvd	Chiefland	Collection Station
1605 N Young Blvd	Chiefland	Retail Station
9150 NE 80th Ave	Bronson	County Government
20551 NE Hwy 27	Williston	Retail Station
8191 NW 160th St	Chiefland	Fuel user/Non-retail

HAZARD	HAZARD TYPE	HOW IDENTIFIED	WHY IDENTIFIED
		-Review of National Climatic Data Center (NCDC) Severe Storms Database. -National Weather Service input and data. -Research including media and Internet resources.	-Tornadoes have caused extensive damage and loss of life to county residents.
Severe Winter Storms / Freeze	Natural	-Review of past disaster declarations. -Review of National Climatic Data Center Severe Storms Database. -National Weather Service input and data. -Public input including newspapers and media.	-Levy County is affected by winter storms cyclically -There have been significant freezes, particularly during the 1980s, that affected the citrus industry -The population is unprepared for cold weather, with many having inadequate heating capabilities
Dam Failure	Natural	-Review of past disaster declarations. -Review of Federal Flood Insurance Rate Maps (FIRMs).	-There are dams that could impact the nearby population.
Tsunamis	Natural	-Input from the National Oceanic and Atmospheric Association Center for Tsunami Research. -Coordination with the Florida Division of Emergency Management. -Input from the United States Geological Survey.	-Tsunamis commonly occur in large bodies of water. -Recent tsunamis from around the world have caused widespread destruction. -Residential and commercial development along coastlines are at risk to the effects of tsunamis.
Hazardous Materials Releases	Technological/ Manmade	-Coordination with the State Emergency Response Commission. -Interaction with the Local Emergency Planning Committees (LEPC). -Communications with the FL Department of Environmental Protection.	-Numerous accidental hazardous material releases occur every year. -Potential for human and environmental impacts.
Nuclear Power Plant Incidents	Technological/ Manmade	-Coordination with the State Emergency Response Commission. -Interaction with the Local Emergency Planning Committees (LEPC). -Coordination with the Nuclear Regulatory Commission (NRC). -Communications with the FL Department of Environmental Protection.	-Threat of radiation from a nuclear related incident. -Potential for human and environmental impacts.
Coastal Oil Spill	Technological/ Manmade	-Coordination with the State Emergency Response Commission. -Communications with the FL Department of Environmental Protection.	-Potential for human, economic, and environmental impacts.
Civil Disturbance	Societal	-Coordination with FEMA and Department of Homeland Security -Coordination with the Florida Department of Law Enforcement (FDLE). -Interaction with local law enforcement agencies.	-National priority with federal government requirements. -Potential for devastating impacts to life and infrastructure. -Protection for the citizens of Florida and the USA.
Mass Immigration	Societal	-Coordination with the US Citizens and Immigration Service (USCIS). -Data from local law enforcement.	-Historic precedence for migration to Florida by boat. -Large amounts of unpatrolled coastlines.

which occur around the full and new moons can add an additional 12 inches to the normal high tide, and hence add an additional 12 inches to the storm surge. The surge will generally be higher for more intense tropical cyclone. The surge will also be higher if the path of the tropical cyclone to the coast is more perpendicular than at other angles. Generally, shallow water off the coast where the tropical cyclone comes ashore increases the surge height. Bays and other coastal inlets produce a funneling effect that results in a higher surge than along relatively smooth sections of coastline. The radius of maximum winds has minimal effect on surge height, but does increase the length of coastline subject to surge as the radius increases. The speed of the storm essentially governs how long a particular area will be subject to surge, although faster moving storms produce a slightly higher surge. The maximum height of the surge will occur approximately when the eye of the storm strikes or makes its closes point of approach to the coast.

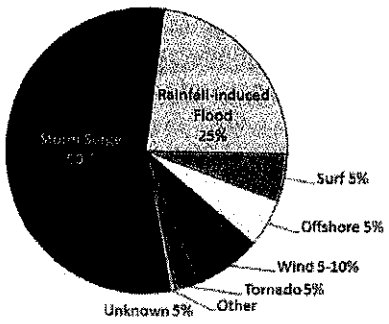
2. Floods

Flooding refers to the general or temporary conditions of partial or complete inundation of normally dry land areas by surface water runoff from any source (Statewide Hazard Mitigation Plan, 2009). Flooding can be divided into two major categories: coastal and riverine. Interrelated hazards can result in both types of flooding, sometimes in difference locations.

Coastal flooding is usually the result of a severe weather system such as a tropical cyclone. The damaging effects of coastal floods are caused by a combination of higher water levels of the storm surge, the winds, rains, erosion and battering by debris. Loss of life and property damage are often more severe since it involves velocity wave action and accompanying winds.

Riverine flooding is associated with a river's watershed, which is the natural drainage basin that conveys water runoff from rain. Riverine flooding occurs when the flow of runoff is greater than the carrying capacities of the natural drainage systems. Rainwater that is not absorbed by soil or vegetation seeks surface drainage lines following natural topography lines. These lines merge to form a hierarchical system of rills, creeks, streams and rivers. Generally, floods can be slow or fast rising depending on the size of the river or stream.

Figure VI-1. US Atlantic Tropical Cyclone Deaths, 1963-2012



Florida is affected by a large number of tropical weather systems. Although inland flooding has great potential for loss of life, recent research indicates that storm surge was responsible for the greatest number of fatalities over the last 50 years. Studies show that 50 percent of the tropical cyclone deaths in the United States resulted from storm surge (see Figure VI-1, National Weather Service).

Rainfall from tropical cyclones can be as devastating as the wind. This flooding is entirely separate from the coastal surge. Even if the storm is relatively minor, Levy County will experience freshwater flooding in vulnerable areas. The soils in the 100-year floodplain and its wetland systems create a pre-saturated landscape, made worse with extensive rain.

A tropical cyclone or heavy rainfall event can be expected to bring 6 to 12 inches of rainfall as it takes about 24 hours to pass an area on average, but the amount does not vary according to storm Category. According to the National Hurricane Center, the amount of rainfall associated with a tropical cyclone is not a function of the size or intensity of the storm. Tropical cyclone rains generally vary with the speed of

When the water-table drops too far, the cavity is unsupported and the ceiling becomes too weak to hold the overburden above. Eventually, the ceiling collapses causing the ground surface and development supported on the ground surface to rapidly subside, sometimes with disastrous but localized effects.

In contrast, a solution sinkhole is characterized by thin or absent overburden. This leaves exposed limestone which is broken down by the forces of wind, rain and surface water combined with acidic soils. The eroded area gradually forms a bowl shaped depression as chemical and physical erosion continues to break down the rock.

Subsidence sinkholes occur in areas with a thin layer of overburden. This type of sinkhole differs in that rather than limestone being carried away by wind and rain, the erosion happens internally. Dissolving limestone is replaced by overburden soils that recede into the depression and fill the holes. Subsidence sinkholes appear as a concave depression in the ground. Subsidence sinkholes are often only a few feet in depth because the chemical erosion of limestone is stunted when cavities are filled with clay and sand. As the sediments fill the depression, they restrict the percolation of water through the bottom. Where water accumulates, a lake or pond is formed.

5. Coastal Erosion

Coastal erosion is the wearing away of land or the removal of beach or dune sediments by wave action, tidal currents, wave currents, or drainage; the wearing away of land by the action of natural forces; on a beach, the carrying away of beach material by wave action, tidal currents, littoral currents or by deflation. Waves generated by storms cause coastal erosion, which may take the form of long-term losses of sediment and rocks, or merely in the temporary redistribution of coastal sediments. Erosion changes are usually gradual, however, can happen instantly during a storm. Even without storms, sediment may be lost to longshore drift (the currents that parallel coastlines), or sediment may be pulled to deeper water and lost to the coastal system.

6. Drought/Extreme Heat

Extreme heat occurs when temperatures hover 10 degrees or more above the average high temperature for a region and lasts for several weeks. Generally extreme heat will occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation. Drought and extreme heat are weather events and, like other weather-related hazards, are unpredictable. However, it is expected that droughts and extreme heat are a normal part of the long-term weather pattern that is typical of Central Florida's climate. These climatic conditions can be deadly to people and animals that are unable to escape the heat or hydrate their bodies properly. When temperatures reach 100+ degrees, special needs populations and households without air conditioning are vulnerable.

7. Tornadoes

Tornadoes are often spawned by tropical cyclone conditions. They are intense storms of short duration formed by winds rotating at a very high speed in a counter-clockwise rotation. Tornado paths are usually no more than a quarter mile wide and seldom more than 16 miles long. The wind threats from tornadoes are similar to that of tropical cyclones, but tornadoes form quickly and sporadically, so fast in fact, there is virtually no time to evacuate in advance of a tornado. Tornadoes can also come as independent threats separate from a tropical cyclone. Severe thunder storms often spawn tornadoes.

Snowfall and ice storms are very uncommon in Levy County, but freeze occurs much more frequently. A freeze is marked by low temperatures, especially those remaining below the freezing point (32°F) over a widespread area for an extended time period. Florida's agricultural production is seriously affected when temperatures remain below the freezing point. Each winter, Levy County faces the threat of a freeze. This presents a problem for Florida as a whole because of the large amount of agricultural activity conducted throughout the state. For Levy County this activity is centered on the vegetable and livestock industries. Personal injury or death due to severe winter storms is considered a hazard indirectly through fire caused by incorrect or careless use of heating apparatus.

9. Dam Failure

A flood event may trigger a dam failure. The dam impounds water in the reservoir or upstream area. The amount of water impounded is measured in acre-feet. Dam failures are not routine but the results can be significant. Two factors influence the potential severity of a dam failure: (1) the amount of water impounded and (2) the density, type and value of the development downstream (Statewide Hazard Mitigation Plan, 2010).

Failure can occur as a result of natural events, human-induced events, or both. A number of outside forces can cause dam failure, including prolonged periods of rain or flooding, landslides into reservoirs, failure of dams upstream, high winds, and earthquakes. Other factors that may cause failure include improper design and maintenance, inadequate spillway capacity, and internal erosion, or piping, within a dam. According to some national statistics, overtopping of dams due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for 34%; foundation defects, including settlement and slope instability, account for 30%; piping and seepage cause 20% (including internal erosion caused by seepage, seepage and erosion along hydraulic structures, leakage through animal burrows, and cracks in the dam); and other means, including conduits and valves, cause the remaining 16% of all dam failures (Statewide Hazard Mitigation Plan, 2010).

10. Tsunamis

A tsunami is a series of waves created when a body of water, such as in an ocean, is rapidly displaced. A tsunami has a much smaller amplitude (wave height) offshore, and a very long wavelength (often hundreds of kilometers long), which is why they generally pass unnoticed at sea, forming only a passing "hump" in the ocean. A tsunami can be caused by several incidents, but they are most commonly from earthquakes. There are no historical occurrences of tsunamis in Levy County, therefore this is a Natural Hazard that will not be discussed further.

11. Hazardous Materials Releases

A hazardous material is any substance that, if released into the environment, would have a harmful and sometimes fatal effect on persons and animals coming into contact with it. Hazardous materials include highly flammable fuels, herbicides and pesticides, petroleum and related products, natural gas and chemicals. Radioactive substances, although they are frequently included within the category of hazardous materials, were not considered a hazard within this analysis. However, there are relatively few facilities within Levy County that use these substances. In any case, there are over 3,000 hazardous chemicals licensed for transport by the US Department of Transportation, many of which have a disastrous effect if released in an accident. These substances are most often released as a result of transportation accidents or because of chemical accidents in plants.

In case of a radiological accident, residents, livestock and crops will be exposed to radiological impacts. Additionally, if an accident at the nuclear power plant occurs and evacuation in Citrus County is required, the road system in Levy County will be impacted. This situation, combined with the evacuation of Levy County residents within the Plume Exposure Zone, would cause traffic congestion within the County. This is a Technological/Manmade Hazard that will not be discussed further.

13. Coastal Oil Spill

Although the probability is low, an oil release could occur in the Gulf of Mexico and discharge pollutants on Levy County's coastal area and possibly into the river systems. Tourism in the Cedar Key area, fishing, boating and local coastal residents could be adversely impacted. Both the State of Florida and the US Coast Guard have contingency plans to respond to such a situation. This is a Technological/Manmade Hazard that will not be discussed further.

14. Civil Disturbance & Terrorism

Civil disturbances are public crises that occur with or without warning and that may adversely impact significant portions of the population. These disturbances may be the actions of any number of persons causing disruption of the populace. Terrorism is defined in the Code of Federal Regulations as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives." It is the use of force or violence against persons or property in violation of the criminal laws of the United States for purposes of intimidation, coercion, or ransom.

Although the federal government recognizes that the United States has entered the post-Cold War era, federal planning guidelines on military threats are in transition. For hazard analysis purposes, it is prudent to scale back on the magnitude of nuclear events for other more likely scenarios.

For instance, emergency management attention to other threats of armed violence, such as terrorism, is growing. Terrorism is a serious issue in Florida; the state is particularly vulnerable due to its proximity to Latin America and Cuba. Although potential targets are unpredictable, high-density population centers and military installations are the most likely. Terrorism increases the likelihood of mass casualty and mass evacuation from a target area.

For threats of armed violence, it is very likely that joint jurisdictional management of the operation will take effect, coordinated at the County level between the Sheriff and FDLE. For any of these scenarios, some degree of state and federal involvement may occur. The lead federal agency may be FEMA or the Department of Justice.

There is no history of civil disturbance or terrorism in Levy County, and the probability of occurrence of a civil disturbance or terrorism is low. The County has a moderately diverse population with the accompanying variety of perceptions on polarizing issues. Other than the corrections facility operated by the Levy County Sheriff's Office, there are no large inmate populations.
This is a Societal Hazard that will not be discussed further.

B. HAZARD PROFILES

Hazard profiling includes the following: the location and boundaries of hazard-prone areas; the extent, or potential magnitude of an event of each type; historical occurrences; and the probability, or likelihood of each event to occur in the future. Probability is a function of frequency of occurrence, or return period (period of time in years/number of occurrences), and for the purposes of this Plan, is defined as follows:

Very High Probability	=	0 to 3 year return rate
High Probability	=	4 to 7 year return rate
Moderate Probability	=	8 to 10 year return rate
Low Probability	=	11 to 14 year return rate
Very Low Probability	=	15+ year return rate.

1. Tropical Cyclones

a. Location

Because of its subtropical location and long coastline, Florida is particularly susceptible to tropical cyclones. Florida's flat topography also makes it susceptible to the full force of high winds and powerful storm surge. All of Levy County (including all municipalities) is vulnerable to tropical cyclones (see Figure VI-2). However, different areas of the County vary in degree of vulnerability, especially to high winds and storm surge from tropical cyclones.

Figure VI-2. Historical Paths of Tropical Cyclones

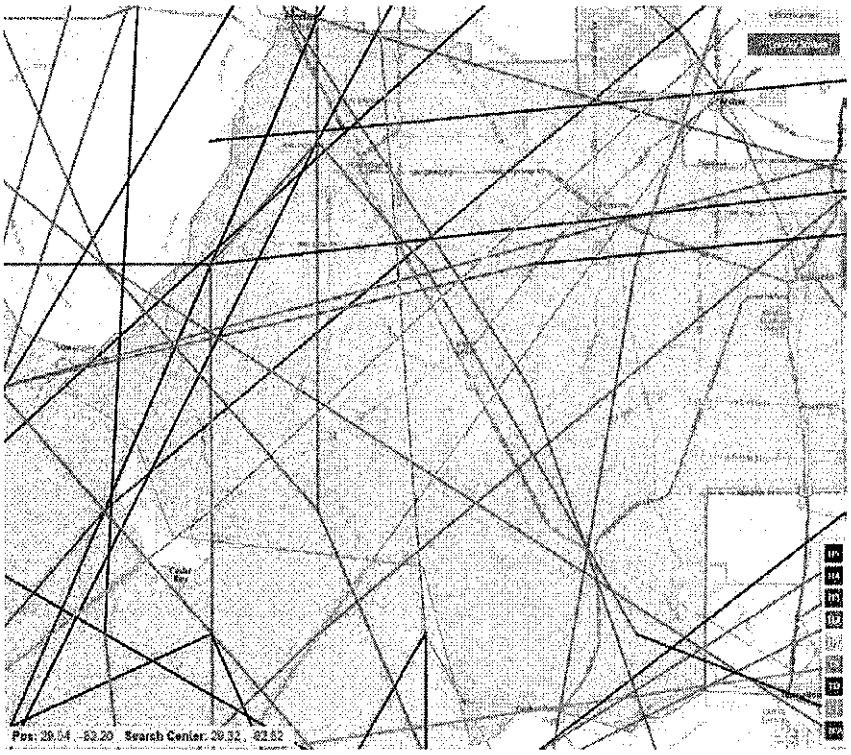
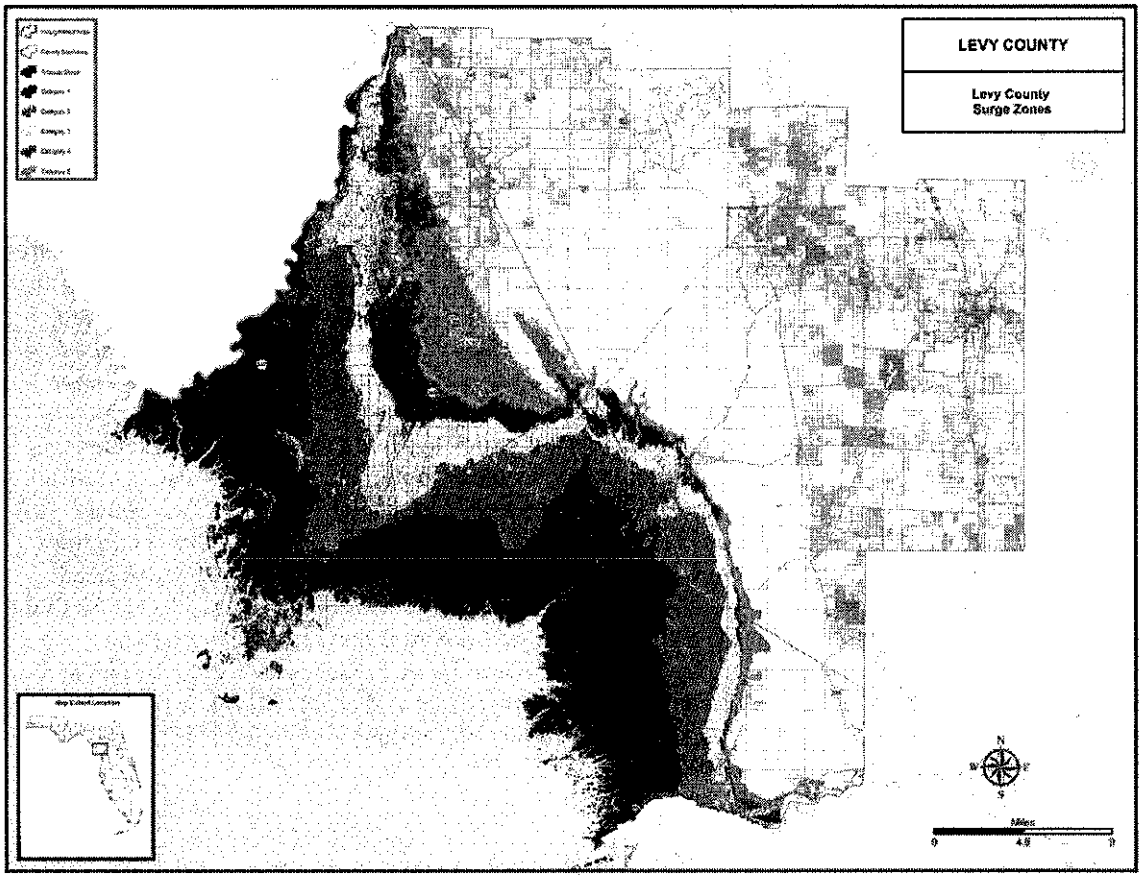


Figure VI-4. Levy County Surge Zones



b. Extent

Levy County has not experienced a tropical cyclone greater than a Category 3 hurricane, therefore the extent of tropical cyclones in Levy County is Category 3.

The Saffir-Simpson Scale was developed in the early 1970s by Herbert Saffir, a consulting engineer in Coral Gables, Florida, and Dr. Robert Simpson, then Director of the National Hurricane Center. The scale was based primarily on wind speeds and included estimates of barometric pressure and storm surge associated with each of the five hurricane categories. However, the scale was revised in 2009 to only include Sustained Winds per Hurricane Category (see Table and descriptions from NOAA of damage below for the extent of a potential hurricane event). The extent of tropical storm winds is 39-73 miles per hour. Some effects include scattered trees, scattered power outages, and some roads blocked due to downed trees and power lines.

severe damage with potential for complete roof failure and wall collapse. Poorly constructed frame homes can be destroyed by the removal of the roof and exterior walls. Unprotected windows will be broken by flying debris. Well-built frame homes can experience major damage involving the removal of roof decking and gable ends. There will be a high percentage of roof covering and siding damage to apartment buildings and industrial buildings. Isolated structural damage to wood or steel framing can occur. Complete failure of older metal buildings is possible, and older unreinforced masonry buildings can collapse. Numerous windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Most commercial signage, fences, and canopies will be destroyed. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to a few weeks after the storm passes. Hurricane Ivan (2004) is an example of a hurricane that brought Category 3 winds and impacts to coastal portions of Gulf Shores, Alabama with Category 2 conditions experienced elsewhere in this city.

- Category 4 damage

There is a very high risk of injury or death to people, livestock, and pets due to flying and falling debris. Nearly all older (pre-1994) mobile homes will be destroyed. A high percentage of newer mobile homes also will be destroyed. Poorly constructed homes can sustain complete collapse of all walls as well as the loss of the roof structure. Well-built homes also can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Extensive damage to roof coverings, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will break most unprotected windows and penetrate some protected windows. There will be a high percentage of structural damage to the top floors of apartment buildings. Steel frames in older industrial buildings can collapse. There will be a high percentage of collapse to older unreinforced masonry buildings. Most windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months. Hurricane Charley (2004) is an example of a hurricane that brought Category 4 winds and impacts to coastal portions of Punta Gorda, Florida with Category 3 conditions experienced elsewhere in the city.

- Category 5 damage

People, livestock, and pets are at very high risk of injury or death from flying or falling debris, even if indoors in mobile homes or framed homes. Almost complete destruction of all mobile homes will occur, regardless of age or construction. A high percentage of frame homes will be destroyed, with total roof failure and wall collapse. Extensive damage to roof covers, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will occur to nearly all unprotected windows and many protected windows. Significant damage to wood roof commercial buildings will occur due to loss of roof sheathing. Complete collapse of many older metal buildings can occur. Most unreinforced masonry walls will fail which can lead to the collapse of the buildings. A high percentage of industrial buildings and low-rise apartment buildings will be destroyed. Nearly all windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Nearly all trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months. Hurricane Andrew

Location or County	Date	Time	Type	Deaths	Injuries	Property Damage	Crop Damage
FLZ039 - 042>043 - 048>051 - 055 - 060	6/13/2006	12:30 AM	Tropical Storm Alberto	0	0	$40K	0
FLZ039 - 043	8/21/2008	14:00 PM	Tropical Storm Fay	0	0	$ 15K	0
FLZ039 - 042 - 048>050 - 050>052 - 055>057 - 060>062 - 065	6/25/2012	10:00 AM	Tropical Storm Debby	0	0	$175K	0
FLZ039 - 042 - 048>050 - 050>052 - 055>057 - 060>062 - 065	6/6/2013	0:00	Tropical Storm Andrea	0	0	0	0
TOTALS:				0	2	$ 8.32M	0

Source: NOAA National Climatic Data Center

In Levy County, those with first- hand knowledge refer to Hurricane Easy in 1950 as the most severe storm to affect the County. A spiraling path took Easy along the Gulf Coast from the Everglades to just west of Tampa where it made a loop, then made landfall in Citrus County, returned to the Gulf in Waccasassa Bay and greatly impacting Cedar Key, then made landfall again in Hernando County before dissipating in Georgia. A statewide history of other tropical cyclones is also included as examples of the type of damage that is possible from Florida's greatest hazard threat.

June 6, 2013 Tropical Storm Andrea: Tropical Storm Andrea developed in the Gulf of Mexico on the morning of the 5th and moved northeast, making landfall 10 miles south of Steinhatchee early on the evening of the 6th. At its peak, Tropical Storm Andrea had a minimum surface pressure of 992 MB. Tropical storm force winds were felt along the coast of Levy county and just inland. The highest gust recorded was 44 knots at both the CKYF1 and CDRF1 weather stations in Cedar Key, with both sites also recording periods of sustained winds of 35 knots. Storm total precipitation ranged from 2 inches to just over 6 inches across the county, with the CoCoRaHS site FL-LV-9 located 8.5 miles east northeast of Chiefland measuring the highest total of 6.17 inches. Peak storm tide at the Cedar Key tide gauge reached 6.26 feet MLLW. Subtracting the predicted astronomical tide, the calculated highest storm surge was 4.08 feet MLLW.

June 24, 2012 Tropical Storm Debby: Tropical Storm Debby lingered for several days over the northeastern Gulf of Mexico and caused high winds and heavy rain before making landfall near Steinhatchee, FL on the 26th. A tropical storm warning was in effect for Levy, Citrus, Hernando, Pasco, Pinellas, Hillsborough, Manatee, and Sarastota counties from 10 AM EDT on June 25th through 8 PM EDT on June 26th.

In Levy County, tropical storm force winds were felt along the coast as Tropical Storm Debby moved onshore on the afternoon of the 26th. Heavy rainfall of over 8 inches fell across the county from the 24th through the 26th, with the highest storm total rainfall reported at the CoCoRaHS site near Chiefland of 13.42 inches. The tide gauge at Cedar Key measured a peak tide of 6.78 feet MLLW on the evening of the 25th. Subtracting the predicted astronomical tide, the calculated highest storm surge was 4.49 feet MLLW late in the evening of the 25th. The surge flooded a few buildings at Cedar Key and Yankeetown. In total, around $175K in damage to public property was recorded.

Cedar Key due to the above normal tides. Yankeetown streets were covered with 10 inches of water and County Road 40A west of the city was closed due to water on the road. Moderate beach erosion was reported on Cedar Key. Water damage at Cedar Key was limited to 20 business and $500 thousand. Seas were 5 to 7 feet with some waves up to 10 feet. In Levy County, Cedar Key recorded sustained winds of 40 MPH with gusts to 46 MPH. A spotter in Chiefland recorded wind gusts to 56 MPH using his handheld anemometer.

September 26, 2004 Hurricane Jeanne: Hurricane Jeanne followed much the same route as Frances of three weeks prior. The center of Jeanne curved north of Tampa Bay during the afternoon and traveled north along the coastal counties before exiting north through Levy County. With its rapid deterioration form 120 mile wide speeds to tropical depression over a two day period, Jeanne produced heavy rainfall over previously saturated and battered land in central Florida. In Levy County the observation from Cedar Key recorded a gust to 40 knots (46 MPH) from the northeast.

September 5-6, 2004 Hurricane Frances: Hurricane Frances formed into a tropical depression in the Atlantic on August *25* prior to its eventual landfall in Stuart as a Category 2 hurricane. Following a general west to north track, Frances traveled through the peninsula of Florida on its way through Georgia and north. Frances produced memorable storm surge, rainfall and tornado activity. In Levy County the observation at Cedar Key recorded a gust to 51 knots (59 MPH) from the south.

August 13, 2004 Hurricane Charley: Hurricane Charley developed from a tropical wave, developing into a tropical depression in the waters south-southeast of Barbados. Charley eventually would qualify as a category 4 Hurricane after crossing over the western third of Cuba. From there, Charley charted a northerly track crossing over central Florida in approximately the Orlando Area departing Florida through the Daytona beach area towards South Carolina as a weak category 1 storm.
September 13-14, 2001 Tropical Storm Gabrielle: Tropical Storm Gabrielle formed in the eastern Gulf of Mexico, moved east-northeast, with the center crossing Florida's west coast near Venice. Gabrielle caused over $20 million in property damage due to wind damage, storm surge, minor beach erosion and flooding.

September 16-17, 2000 Tropical Storm Gordon: Tropical Storm Gordon formed in the Gulf of Mexico and moved northeast, briefly intensified to hurricane strength, then moved ashore in the Big Bend area of Florida as a tropical storm. The outer fringes of Gordon moved across South Florida, producing flooding as well as numerous funnel clouds and waterspouts. Official, maximum sustained winds of 53 mph, with gusts as high as 68 mph, were observed at the C-MAN automated weather sensor at Cedar Key in Levy county prior to landfall near the mouth of the Suwannee River. Levy County's storm tide value was estimated to be 2 to 4 feet MSL. Damage in Levy County was confined to roofs and toppled trees, mainly in the Cedar Key area, where a total of $100,000 dollars was estimated.

September 20, 1999 Tropical Storm Harvey: Remnants of Tropical Storm Harvey moved parallel along the West Central coast of Florida and produced near tropical storm force wind gusts. Tropical Storm Harvey produced storm surges of one to two feet from Levy south to Sarasota County and two to three feet along the coast of Charlotte and Lee counties.

September 15-29, 1998 Hurricane Georges: Hurricane Georges hit the Florida Keys with 105 mph winds, destroying mobile homes in the area before moving into the Panhandle, creating storm surge and

Though originally classified as a Category 4 storm, extensive post-impact research led to the reclassification of Andrew as a Category 5 storm in 2002.

September 9-12, 1964 Hurricane Dora: Hurricane Dora crossed Florida from east to west during September 9-12 before turning to southern Georgia. On September 13-16, Dora produced over 20 inches of rainfall and caused flooding throughout one-third of the state of Florida, extensively affecting the St. Mary's, Santa Fe and Steinhatchee River basins. An estimated $150 million in losses were reported, affecting residential, commercial and agricultural operations.

August 31-September 8, 1935 Labor Day Hurricane: This hurricane is considered to be one of the most severe hurricanes ever recorded in Florida. With winds in excess of 200 miles per hour, the storm passed over the Florida Keys on September 2 with a minimum barometric pressure of 26.35 inches. Three relief-work camps, inhabited by veterans of World War I, were destroyed. The Red Cross estimated that 408 lives were lost.

September 6-20, 1928 Hurricane: The hurricane's eye passed directly over West Palm Beach with a minimum barometric pressure of 27.43 inches. As the storm passed over Lake Okeechobee, a 1.7 mile section of levee gave way, sending a 5 to 10 foot high wall of water into the towns of Pahokee, South Bay, and Belle Glade, killing an estimated 1,836 persons.

September 6-22, 1926 Hurricane: The eye of the hurricane moved directly over Miami on the morning of September 18, leaving approximately 100 dead. The storm continued northwestward across south Florida and entered the Gulf of Mexico at Fort Myers. Northeast winds from the storm raised Lake Okeechobee water levels above the low dike on the south end of the lake near Moore Haven. Approximately three miles of dike failed, sending 10 to 12 foot floodwaters into Moore Haven and at least five foot deep floodwaters into Clewiston, 16 miles to the southeast.

d. Probability

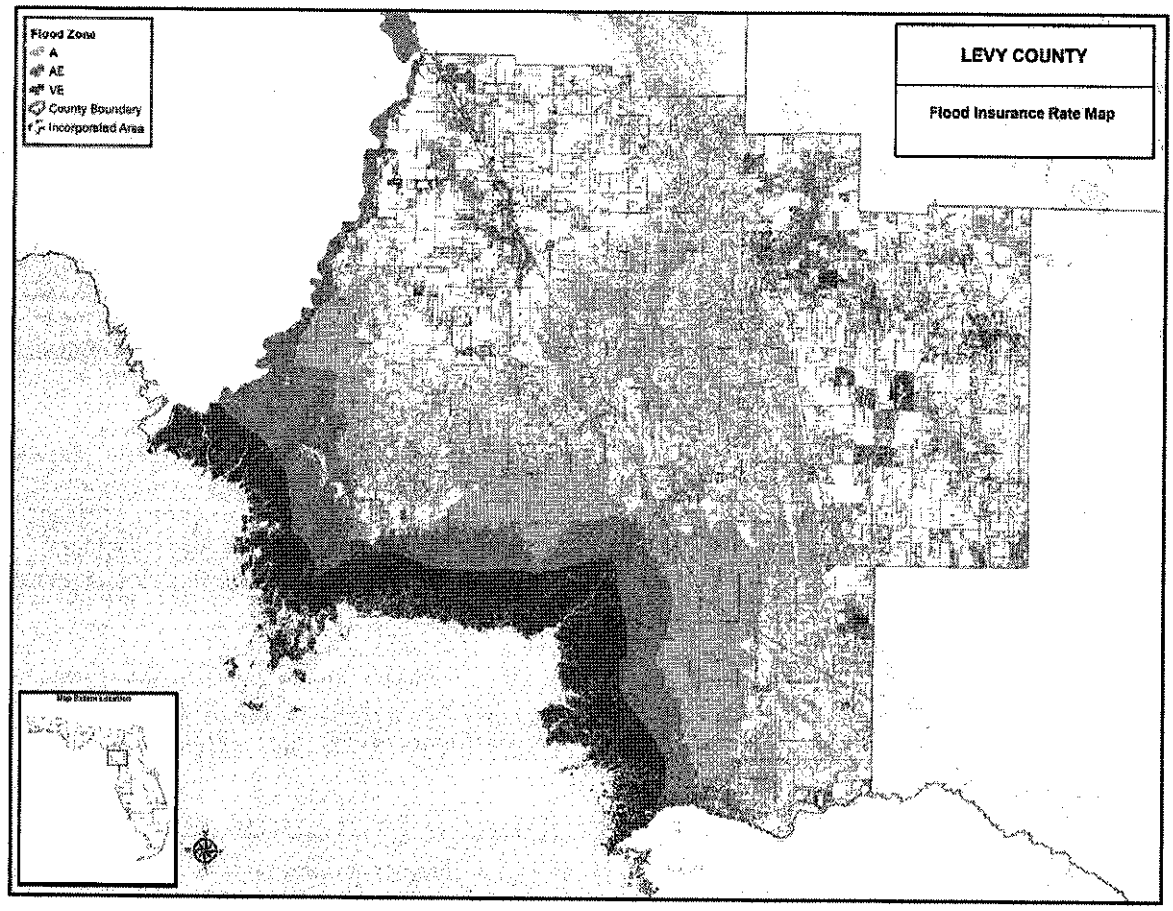
Using a historical analysis, return intervals were developed for all the tropical storms and hurricanes that have passed through Levy County. From 1842 to 2015 (174 years), 33 tropical depressions, storms, and hurricanes had passed within 25 nautical miles of the center of Levy County. Based on this data from NOAA, the overall return period for all tropical cyclones is 5.3 years. Therefore, the probability of a tropical cyclone occurrence is High. The overriding assumption for hazard mitigation is that tropical cyclones do strike Florida each year and will affect Levy County at some point in the future. Return periods for each category of tropical cyclone are shown below (Table VI-5).

Table VI-5. Tropical Cyclone Return Periods for Levy County

Overall	TD	TS	CAT 1	CAT 2	CAT 3	CAT 4	CAT 5
5.3	14.5	10.24	58	174	87	NDE	NDE

Note: This data represents the mean recurrence interval, not the amount of years since the last storm of any specific category. Some of the higher intensity storms have not hit Levy County in the 174 years of recorded tropical cyclone. These incidents are described as No Direct Effect or NDE.

Figure VI-5. Levy County Flood Insurance Rate Map



Historical flood data and information are important to determine where vulnerable populations and areas of impact are located. Local knowledge regarding past events can be more valuable than other more general sources of information such as the Flood Insurance Rate Maps (FIRM) from the National Flood Insurance Program (NFIP). The FIRM maps are mainly used as part of the building permit process in that special standards for construction are required for structures built in the flood plain. Structures and roads are normally built above the 100-year flood plain elevation. However, due to changes in drainage patterns, new and more specific information is always beneficial. In the LMS, areas and roads that are known to historically flood have been identified. This is an important issue because some of those roads are evacuation routes and access to homes for residents and responders becomes an issue. The following information and the corresponding map data were gathered from the participants of the Levy County LMS.

Levy County, as with all coastal counties, has the potential for coastal flooding due to storm surge. However, Levy County is different in that a majority of its coastline is in state ownership. Additionally, many acres of the land within the category 1-5 surge zones has a future land use designation of either "Natural Reservation" or "Recreation and Open Space." This land use designation will help to insure that future development will be limited and this relatively undeveloped coastal area will not be subject to

Town of Bronson
The Town of Bronson has two small developed areas that flood, causing access problems for the few residents in the specific areas. The Public Works Director thinks flooding in these areas could be reduced but probably not alleviated by drainage improvements. The NFIP map designates larger areas on the south and west side of Bronson as being within the 100-year floodplain. These areas have minimal local population and are currently unimproved. Policy and /or planning initiatives could be adopted to mitigate future growth in the 100-year floodplain.

City of Cedar Key
In December 1998, the City of Cedar Key had 434 flood policies of which 208 policies were claimed amounting to $2,406,232. Of the total number of flood policies, 414 were in the velocity zone. The total coverage of policies amounts to $27,945,100 and the total premiums amount to $250,078. These figures represent a single point in time where flood insurance policies were paid out. With the continued growth and increase in property values, potential insurance losses would most likely exceed the 1998 numbers should a similar event take place again.

Cedar Key is group of islands that are subject to flooding influenced by conditions in the Gulf of Mexico. The map of historic flood problems centers on flooded roadway segments. The LMS Working Group agreed that road access is a problem that needs addressing. Most of the roads shown on the map are inundated at a five or six foot tide. Most importantly, access to and from Cedar Key is blocked at five foot (5') tide at Bridge #4. Rebuilding several bridges and raising several miles of SR 24 could alleviate the access issues, but that is not seen as realistic. Additionally, there are only a few areas in Cedar Key that are outside the 100-year floodplain. Therefore, preparedness for evacuation and early warning are fundamental to life safety issues with regard to all hurricane and tropical storm events.

City of Chiefland
The City of Chiefland reports two main problem areas that have had repeated flooding as listed below. Flooding typically occurs with rainfall events when more than an inch of rain falls within several hours time. Traffic must be directed around these areas and the waters do enter some nearby structures. These two areas could be addressed by a stormwater management study and drainage projects.

Block 19, parcel 2 on North Main Street
Intersecting area of Northeast 1st Avenue and Northeast 1st Street by the City Hall

City of Fanning Springs
The City of Fanning Springs is located on the banks of the Suwannee River and is subject to flooding events associated with the river. U.S. Hwy 19 is a major regional evacuation route that crosses the Suwannee River at Fanning Springs. Fanning Springs has identified areas along the Suwannee River as prone to seasonal flooding. The Suwannee River floodplain can be affected by weather events locally and as far away as southern Georgia.

Town of Inglis
The Inglis Stormwater Runoff Investigation conducted in 1992, identified flooding in yards, driveways and/or in the roads near residences. Several of the respondents who participated in the study reported that flooding resulted any time after heavy rainfall occurred. The duration of the flooding varied depending on the storm event, but residents indicated that when flooding occurred it lasted for several days or more than a week. This is indicative of low-lying and depressional areas filling with water and

Declaration No. 1831 regarding flooding on the Suwannee River on April 21, 2009. Total Public assistance paid to all counties included in this disaster is 36,071,338, however Levy County accounts for a very small amount of this figure.

b. Extent

Areas designated as 100-year flood zones have a 1% chance of being inundated in any given year (see Table VI-6 for descriptions of FIRM zones). A tropical cyclone is likely to bring rainfall amounts that are above the 100-year flood level. As described earlier, floodplain maps are derived from the Flood Insurance Rate Maps (FIRM) as developed by the National Flood Insurance Program. These floodplain maps include flood zones and base flood elevations (for Zones AE and VE only). Base flood elevations are computed elevations to which floodwater is anticipated to rise during the base flood. Estimated base flood elevations in Levy County range from 8 to 28 feet. This means that 28 feet is the very highest that floodwater is anticipated to rise.

Table VI-6. Definitions of NFIP Flood Zones

AE	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. In most instances base flood elevations (BFEs) derived from detailed analyses are shown at selected intervals within these zones.
X500	An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from the 100-year flooding.
X	Areas outside the 1-% annual chance floodplain, areas of 1% annual chance sheet flow flooding where average depths are less than 1 foot, areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones.
A	Flood zone area with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas, no depths of base flood elevations are shown within these zones.
ANI	An area that is located within a community or county that is not mapped on any published FIRM.
VE	Coastal areas with a 1% or greater chance of flooding and an additional hazard associated with storm waves. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
UNDES	A body of open water, such as a pond, lake, ocean, etc., located within a community's jurisdictional limits that has no defined flood hazard.
AO	River or stream flood hazard areas and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.

June 10 1996, Up to five inches of rain in less than two hours produced localized flooding of low lying areas along the U.S. Highway 19 corridor.

October 1994, The remnants of tropical depression number 10 moved from the northeast Gulf of Mexico on October 1 across the Florida Panhandle and into Georgia on October 2. High winds produced rough seas along the west central and northwest Florida coasts causing minor tidal flooding and beach erosion. A total of 18 persons had to be rescued from sinking boats in the northeast Gulf of Mexico. Heavy rains in the Florida Big Bend and Panhandle accompanied the system causing extensive flooding to roadways, creeks and low lying areas and minor flooding of rivers.

September 1994, Two synoptic-scale systems, one tropical and one non-tropical brought heavy rain to most of peninsular Florida the last half of September. Rivers and streams, particularly in the west central counties of Citrus, Polk, Hillsborough, Sarasota, Hardee, Desoto and Manatee Counties, overflowed, flooding roadways and inundating or isolating residential areas.

d. Probability

Like other weather events discussed in this section, the rainfall amounts that cause flood conditions are considered a normal part of the County's climate. Often heavy rainfall is isolated in a small area of a few square miles with severe consequences to the point where shelter activation is needed. Based on the historical data from NOAA's NCDC, the return period for a flood event is approximately 5 years. However, because most of Levy County lies within a flood zone, and because heavy rainfall events occur at least once per year, the probability of a flood event occurring is Very High.

3. Wildfires

a. Location

Approximately 2/3 of Levy County is forest land. Additionally, vast portions of the County consist of woods, timber land and agriculture areas. These areas are intermingled with sparsely populated areas as well as eight small municipalities. The rural population of Levy County is very vulnerable to wildfire. Only areas with few trees such as urban areas, pastures and prairies have a low vulnerability to wildfire.

Figure VI-6 combines the WUI Risk Index and reported wildfire incidents (2010, 2011, and 2012). The Wildland Urban Interface (WUI) Risk Index layer is a rating of the potential impact of a wildfire on people and their homes. The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the Wildland Urban Interface and rural areas is key information for defining potential wildfire impacts to people and homes. The range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9 while areas with low housing density and low flame lengths are rated -1.

LEVY COMMUNITY	2012 Rank
Inglis	Medium
Manattee Road	Low
Otter Creek	Low
Williston	Medium
Williston Highlands	High
Yankeetown	Low
Montbrook	Medium
Morriston	High
Gulf Hammock	Low
Merediths	High
Raleigh	Medium
Rosewood	Medium
Sumner	Medium

b. Extent

The worst wildfire recorded in recent history (June 28, 2011) consumed 3,175 acres in Goethe State Forest. Therefore the extent of wildfire is 3,175 acres.

Wildfires will negatively affect Levy County with a variety of impacts:

- Forested lands and any surrounding urban areas (WUI - wildland-urban interface) are most at risk to wildfires. Potential risks include destruction of land, property, and structures, as well as injuries and loss of life.
- Although rare, deaths and injuries usually occur at the beginning stages of wildfires when sudden flare-ups occur from high wind conditions. In most situations, however, people have the opportunity to evacuate the area and avoid bodily harm.
- Responders are most at risk during the process of fire suppression. Responders put themselves in the way of harm to contain the fire and save lives and property. Firefighters are often trapped by fires that either grow or suddenly change directions.
- Major fires have the ability to disrupt transportation in large areas.

Fire experts often disagree about the short- and long-term effects of large-scale fires on the overall environment. The case of the Yellowstone Park wildfire is the most notable event where experts initially thought long-term damage would result from the massive fires. After some years, however, the environment regenerated itself and experts now believe that the fire was actually beneficial to the long-term health of the area.

Financial losses related to wildfires include destroyed or damaged houses, barns, private facilities and equipment, loss of commercial timber supplies, and local and State costs for response and recovery.

c. Historical Occurrences

Below is a Table of occurrences of wildfire in Levy County in 2011 and 2012, by cause of fire and acreage burned. These 2 years are the only ones described, as they have the most complete and recent data. During both of these years, the majority of fires were caused by lightning and non-authorized

Table VI-9. Historical Occurrences of Wildfire in Levy County, 2011-2012

	2011		2012	
Cause	# incidents	Total Acres Burned	# incidents	Total Acres Burned
Campfire	3	21.0	3	11.4
Children	1	11.0	2	3.0
Debris Burn--Auth-- Broadcast/ Acreage	3	215.0	2	3.0
Debris Burn--Auth-- Piles	4	122.2	4	8.6
Debris Burn--Auth-- Yard Trash	0	NA	7	16.2
Debris Burn--Nonauth--Broadcast/ Acreage	0	NA	0	NA
Debris Burn--Nonauth--Piles	5	45.4	3	44.5
Debris Burn--Nonauth--Yard Trash	20	149.7	6	24.5
Equipment-- Agriculture	0	NA	1	4.0
Equipment-- Logging	2	10.1	3	47.0
Equipment-- Recreation	0	NA	2	4.5
Equipment-- Transportation	3	2.6	3	44.5
Incendiary	1	0.3	3	26.0
Lightning	74	5,941.7	28	378.7
Miscellaneous --Power Lines	3	2.2	4	16.1
Miscellaneous --Breakout	3	52.0	0	NA
Miscellaneous--Other	6	122.1	1	0.2
Miscellaneous--Structure	0	NA	6	13.8
Unknown	11	68.9	8	188.1
TOTAL	139	6,764.2	83	789.6

d. Probability

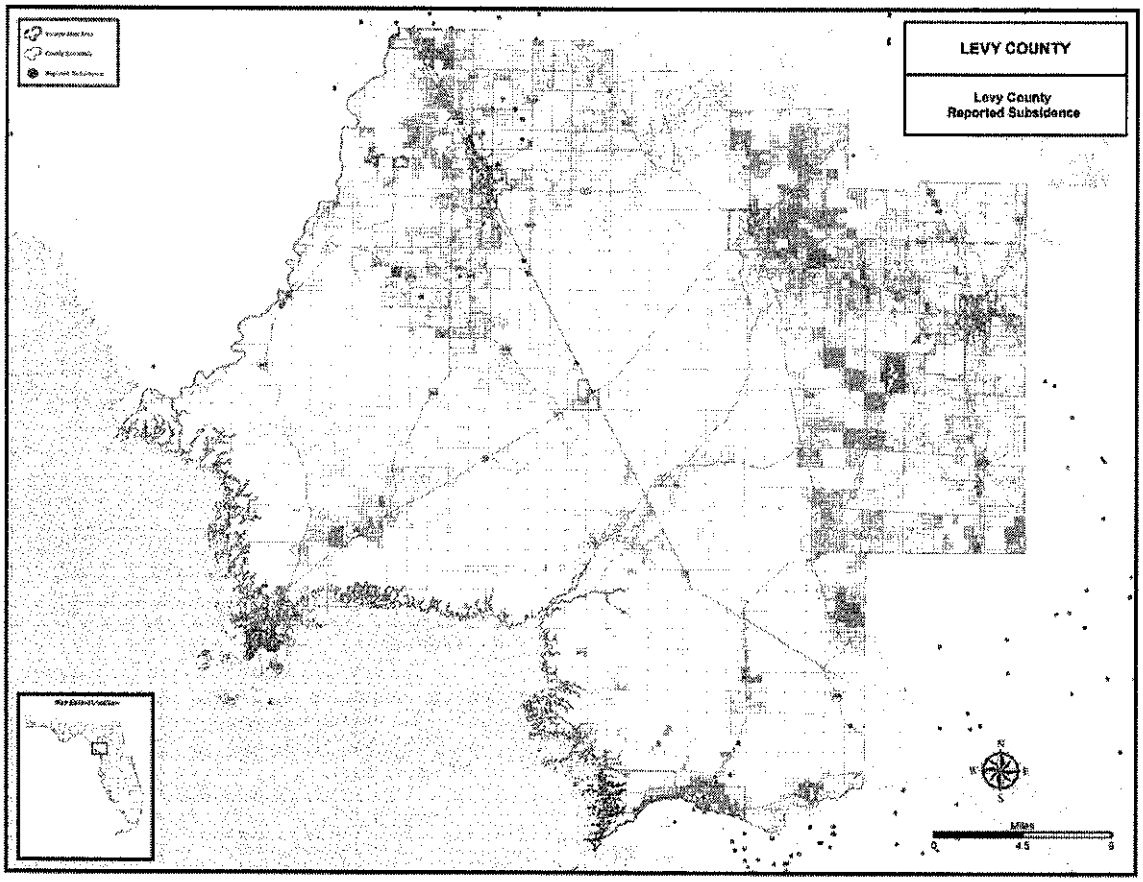
Using the data from the Division of Forestry, it is estimated that Levy County experiences approximately 111 wildfires a year, and the return period is about 0.01 years, or 3.3 days. Therefore, the probability of a wildfire occurrence in Levy County is Very High.

permeable sand. Typically, sinkholes develop gradually and are small, shallow and few. Cover collapse sinkholes are most prevalent in high recharge areas. The Chiefland area seems to have the most incidents of sinkhole activity. Figure VI-9 shows historical occurrences of sinkholes as well as areas that may be susceptible to sinkholes. Table VI-10 describes sinkholes in Levy County.

b. Extent

The average sinkhole size in Levy County is approximately 5 feet long, 4 feet wide, and 9 feet deep. The largest sinkhole in Levy County is approximately 20 feet in length and width, and 12 feet deep. It is assumed that this is the greatest extent of a sinkhole in Levy County.

Figure VI-9. Levy County Reported Sinkholes, 1948-2015



c. Historical Occurrences

Every year, sinkholes commonly form in roadways. Below is a table with recorded sinkholes in Levy County. The last recorded sinkhole was in 2012 in Chiefland. Following the table are descriptions of historically significant sinkholes in Florida. It is important to note that the data presented in the table reflect reported sinkholes. This is probably not a complete list of sinkholes in the county, as there are probably unreported sinkholes in unpopulated, undeveloped areas. Also, despite no new sinkholes since 2012, there has been shifting and land subsidence recently in Williston. In 2014, the Williston Police

MONTH	DAY	YEAR	QUAD	NAME	LENGTH	WIDTH	DEPTH
11	2	1972	Otter Creek	Department Of Transportation	4	4	2
3	3	1970	Trenton	Department Of Transportation	0	0	0
1	0	1970	Trenton	Department Of Transportation	0	0	0
1	0	1970	Trenton	Department Of Transportation	0	0	0
3	0	1970	Suwannee River	Department Of Transportation	0	0	0
5	0	1970	Chiefland	Unknown	0	0	0
6	4	1970	Manatee	Department Of Transportation	24	24	5
9	0	1970	Suwannee River	Department Of Transportation	0	0	0
3	0	1970	Suwannee River	Department Of Transportation	0	0	0
10	20	1970	Chiefland	Department Of Transportation	0	0	0
3	0	1969	Chiefland	Department Of Transportation	4	4	3
1	0	1969	Chiefland	Department Of Transportation	5	5	6
10	0	1969	Yankeetown Sc	Department Of Transportation	15	15	5
10	99	1969	Yankeetown	Department Of Transportation	2	2	3
10	0	1969	Yankeetown	Department Of Transportation	2	2	3
0	0	0	Manatee	Department Of Transportation	0	0	0
0	0	0	Chiefland	Department Of Transportation	0	0	0

Source: Florida Department of Environmental Protection

In 2004, numerous small and medium sized sinkholes opened up primarily in the area of The City of Chiefland in the aftermath of Hurricanes Charlie, Frances and Jeanne. The sinkhole activity was caused by sustained rains were caused by saturated grounds form a unusually active storm season.

Perhaps the most famous sinkhole in recent US history is the one formed in May 1981 at Winter Park, Florida near Orlando. The sinkhole is roughly circular but elongated, (approximately 300 feet by 300 feet in size) and swallowed one house and shed, half of the municipal swimming pool, a Porsche sports car, several large oak trees, a section of the crossing street and adjoining street, and an estimated 4 million cubic feet of soil. The sinkhole also damaged three other Porsche sports cars and a pick-up camper that slid into the crater, caused the rear of an auto shop to crack open, and exposed or damaged various utility lines in the vicinity.

Lake Jackson in Tallahassee, a nationally known bass fishing lake, experienced a sinkhole on September 16, 1999 that suddenly drained more than half the lake of every last gallon of water, not to mention every last fish and alligator.

On July 12, 2001, emergency officials for Hernando County investigated 18 confirmed sinkholes that hit in one day across the area, affecting a 15 to 16 block residential area and causing extensive damage to one house. One of the largest holes measured between 50 and 100 feet deep.

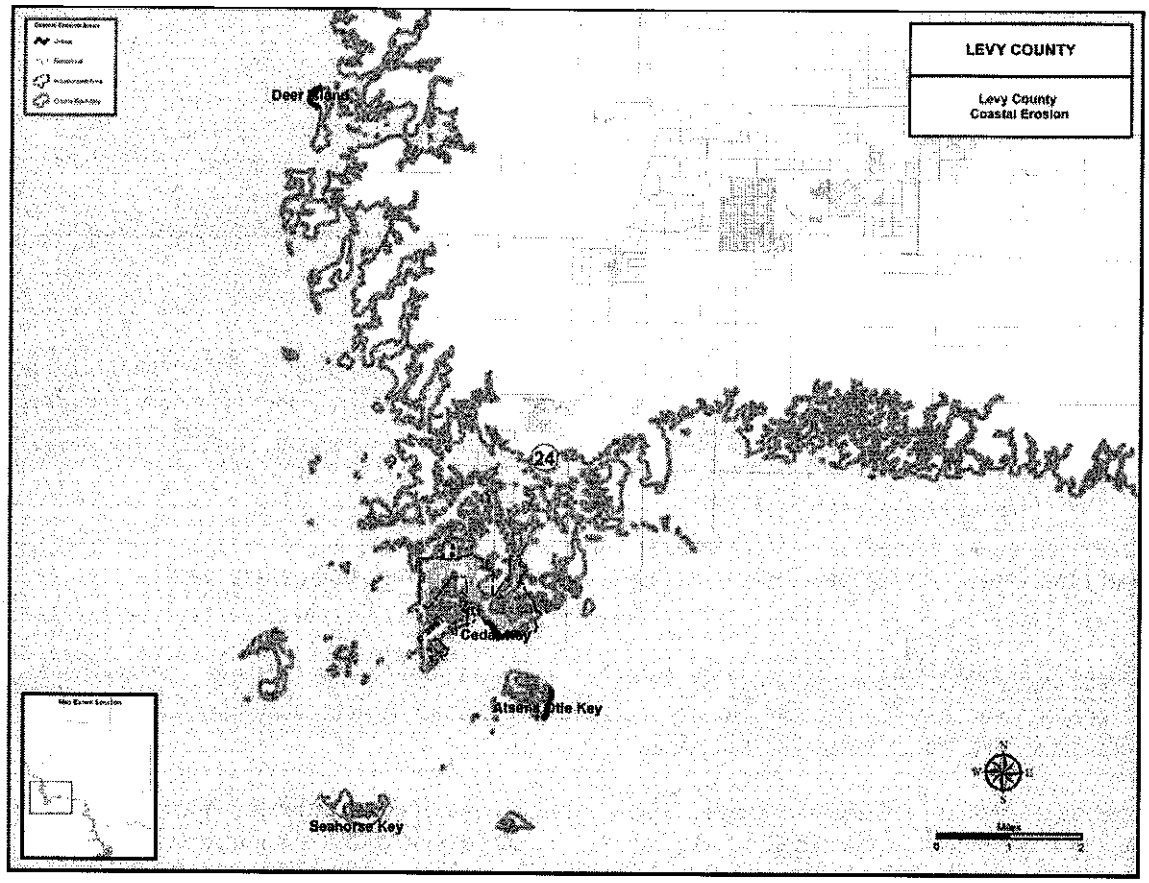
In June 2002, a 150-foot-wide sinkhole forced the evacuation of part of a 450-unit apartment building in Orlando, and a Spring Hill woman saw a 40-foot wide hole open in a retention area behind her uninsured home.

d. Probability

The probability of future sinkhole events within the County is considered to be Very High due to review of past historical events and the continuation of ongoing reports of sinkhole activity. Approximately 1.04 sinkholes occur per year, and the estimated return period is 0.94 years. Levy County is ranked 14th in Florida in number of sinkholes.

b. Extent

Figure VI-10. Levy County Coastal Erosion



According to the *Critically Eroded Beaches Report*, Levy County had approximately 2.4 miles of eroded coastline in 2010. By 2014, the County's eroded coastline increased by 0.5 miles to 2.9 miles, to include critical erosion at Deer Island. The extent of coastal erosion is 0.1 miles per year.

Table VI-11. Levy County Erosion Data

	Recorded length, 2010	Recorded length, 2014	Change from 2010-2014	Rate of change
Deer Island	0	0.5	0.5	0.1 mi/year
Cedar Key	0.6 miles	0.6 miles	0 miles	0 mi/year
Atsena Otie Key	0.5 miles	0.5 miles	0 miles	0 mi/year
Seahorse Key	1.3 miles	1.3 miles	0 miles	0 mi/year
TOTAL	2.4 miles	2.9	0.5 miles	0.1 mi/year

Table VI-12. Drought Severity Classification

		RANGES					
Category	Description	Possible Impacts	Palmer Drought Index	CPC Soil Moisture Model (Percentiles)	USGS Weekly Streamflow (Percentiles)	Standardized Precipitation Index (SPI)	Objective Short and Long-term Drought Indicator Blends (Percentiles)
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered	-1.0 to -1.9	21-30	21-30	-0.5 to -0.7	21-30
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested	-2.0 to -2.9	11-20	11-20	-0.8 to -1.2	11-20
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed	-3.0 to -3.9	6-10	6-10	-1.3 to -1.5	6-10
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions	-4.0 to -4.9	3-5	3-5	-1.6 to -1.9	3-5
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies	-5.0 or less	0-2	0-2	-2.0 or less	0-2

Source: Drought Monitor

from these 2 stations indicate that the highest temperature recorded was 105°F on June 3rd, 1989. From January to November 2015, Levy County experienced the greatest number of days (113 days) than any year since 1956 in which the recorded daily maximum temperature was above 90°F. Also, July 2015 had the greatest number of days (30 in which the daily maximum temperature was above 90°F.

Below is a Table listing historical occurrences of the greatest severity of drought in each month from 2011 to 2015 in Levy County based on monthly data from the Drought Monitor. Refer to Table VI-12 for Classification definitions.

Levy County experienced some of the worst drought conditions from 2010 to 2015 weekly, in February 2012 to June 2012. During this period, most or all of the county experienced Extreme Drought conditions every week.

Table VI-13. Historical Occurrences of Drought

	Januar y	Februar y	Marc h	April	May	June	July	Augu st	Septemb er	Octob er	Novemb er	Decemb er
201 0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D0	D0-D1	D2-D3
201 1	D2-D3	D2	D2	D1	D1	D1	D0-D1	D0	D0	D0	D0	D0
201 2	D1-D3	D2-D3	D2-D3	D2-D3	D2-D3	D2-D3	N/A	N/A	N/A	N/A	N/A	N/A
201 3	D0	D0-D1	D1	D1-D2	D1-D2	D0-D1	N/A	N/A	N/A	N/A	N/A	N/A
201 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
201 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	D0

Source: Drought Monitor Monthly Animations by Year

d. Probability

Every year, Levy County experiences multiple days of extreme heat, in which temperatures exceed 90°F, therefore the probability of extreme heat affecting Levy County is Very High.

The data from Table VI-13 shows that from 2010 to 2015 there were only 2 years in which Levy County did not experience drought conditions (Drought Monitor Classification D1 through D4) during any month. The return period for drought conditions (using the Drought Monitor Index and data) in Levy County is 1.5 years, therefore the probability of drought conditions occurring in the County is Very High.

7. Tornadoes

a. Location

All of Levy County (including all municipalities) is vulnerable to tornadoes. Because of the unpredictable pattern of tornadoes, and because the entire state, including Levy County, has a relatively high reoccurrence frequency, the entire County is vulnerable to tornados (see Figure VI-11). The northern portion of the state's Gulf Coast (between Tampa and Tallahassee) along with the Panhandle region have generally experienced more tornadoes than other areas of the state, primarily due to the high frequency of thunderstorms making their way east through the Gulf of Mexico.

Figure VI-12. Historical Occurrences of Tornadoes in Levy County

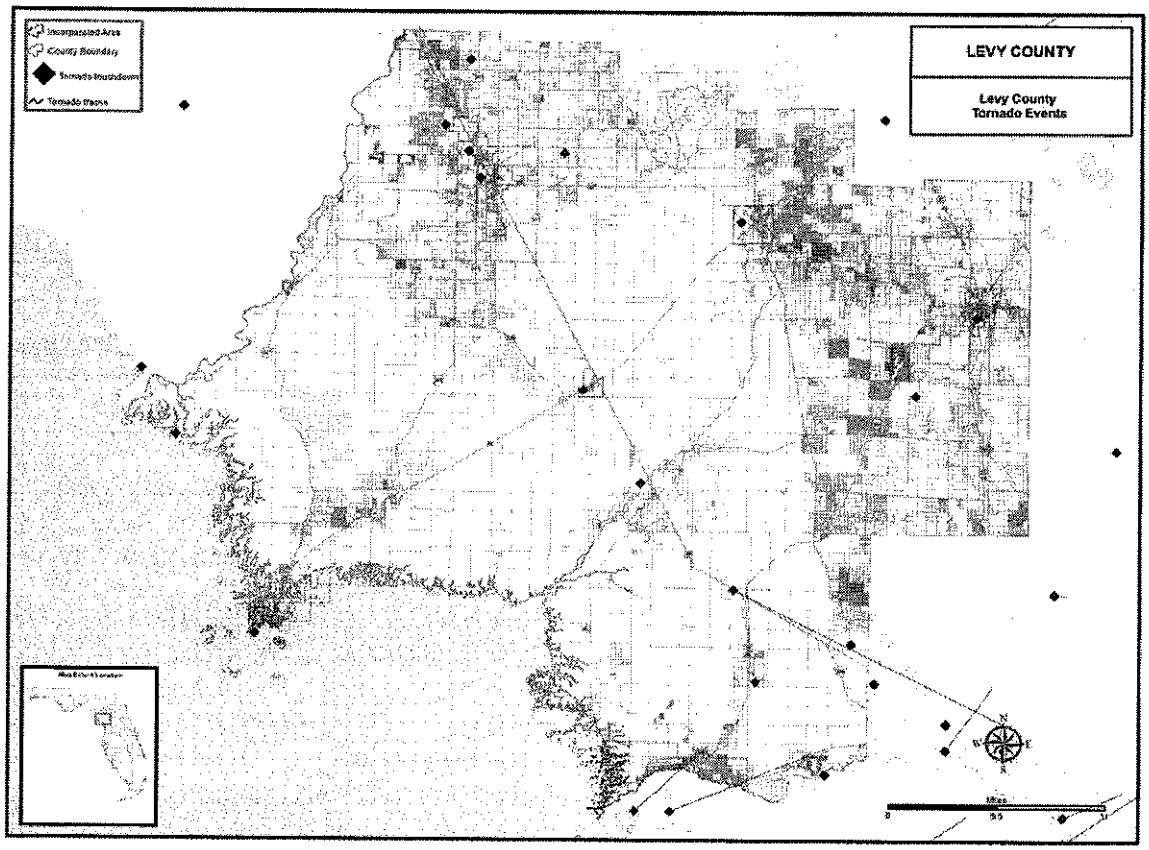


Table VI-14. Historical Occurrences of Tornadoes in Levy County

Date	Event #	Time	Dead	Injured	EF scale	Property Damage	Path Width feet	Path Length miles
March 12, 1968	006	1130	0	0	EF1	0K	10	0
May 12, 1974	018	0630	0	0	EF1	25K	50	8
May 14, 1976	023	1415	0	0	EF0	25K	10	0
April 08,1982	012	1800	0	0	EF1	25K	20	1
June 11, 1982	026	1530	0	0	EF2	250K	60	13
August 25, 1986	040	1347	0	0	EF0	0K	30	1
June 16, 1989	046	0920	0	0	EF1	25K	50	1
October 03, 1992	053	1640	0	0	EF0	25K	10	0
March 12, 1993	010	2238	3	10	EF2	50.0M	80	1
October 30, 1993	072	0251	0	1	EF1	500K	60	1
October 30, 1993	074	0920	0	0	EF0	1K	10	0
October 30, 1993	077	0955	0	0	EF1	5.0M	60	1
October 30, 1993	078	1016	0	0	EF0	0	10	0
October 30, 1994	069	1135	0	0	EF0	5K	10	0

Table VI-15. Historical Occurrences of Freeze in Levy County

Date	Time	Type	Property Damage	Crop Damage
1/1/2001	12:00 AM	Freeze	0	5.1M
1/2/2001	4:00 AM	Freeze	0	0
1/3/2001	12:00 AM	Freeze	0	0
1/4/2001	1:00 AM	Freeze	0	0
1/5/2001	12:00 AM	Freeze	0	6.9M
1/7/2001	12:00 AM	Freeze	0	0
1/10/2001	12:00 AM	Freeze	0	4.0M
1/11/2001	1:00 AM	Freeze	0	0
1/21/2001	1:00 AM	Freeze	0	0
1/24/2001	5:30 AM	Freeze	0	0
1/26/2001	12:00 AM	Freeze	0	0
12/27/2001	4:00 AM	Freeze	0	0
3/1/2002	1:00 AM	Freeze	0	0
3/5/2002	3:00 AM	Freeze	0	0
11/24/2002	1:00 AM	Extreme Cold	0	0
11/29/2002	1:00 AM	Extreme Cold	0	0
11/30/2002	2:00 AM	Extreme Cold	0	0
12/1/2002	10:00 PM	Extreme Cold	0	0
12/16/2002	3:00 AM	Extreme Cold	0	0
12/29/2002	3:00 AM	Extreme Cold	0	0
1/19/2003	2:00 AM	Extreme Cold	0	0
1/23/2003	10:00 PM	Extreme Windchill	0	8.5M
1/24/2003	9:00 PM	Extreme Cold	0	0
1/6/2006	3:00 AM	Extreme Cold/wind Chill	0	0
12/9/2006	1:00 AM	Extreme Cold/wind Chill	0K	0K
1/29/2007	3:00 AM	Cold/wind Chill	0K	0K
2/17/2007	1:00 AM	Extreme Cold/wind Chill	0K	0K
2/19/2007	4:00 AM	Extreme Cold/wind Chill	0K	0K
10/29/2008	4:00 AM	Cold/wind Chill	0K	0K
11/19/2008	3:00	Freeze	0K	0K
30.4211/20/2008	1:00	Freeze	0K	0K
12/3/2008	3:00	Freeze	0K	0K
1/20/2009	21:00	Freeze	0K	0K
1/21/2009	20:45	Freeze	0K	0K
1/23/2009	0:00	Freeze	0K	0K
2/4/2009	21:30	Freeze	0K	0K
2/5/2009	21:00	Freeze	0K	0K
2/21/2009	1:00	Freeze	0K	0K
1/10/2010	20:00	Freeze	0K	5.30M
2/26/2010	0:00	Freeze	0K	710.0K
12/14/2010	22:00	Freeze	0K	3.29M
1/3/2012	21:00	Freeze	0K	0K
1/4/2012	23:00	Freeze	0K	0K
1/14/2012	7:00	Freeze	0K	0K
1/14/2012	22:00	Freeze	0K	0K

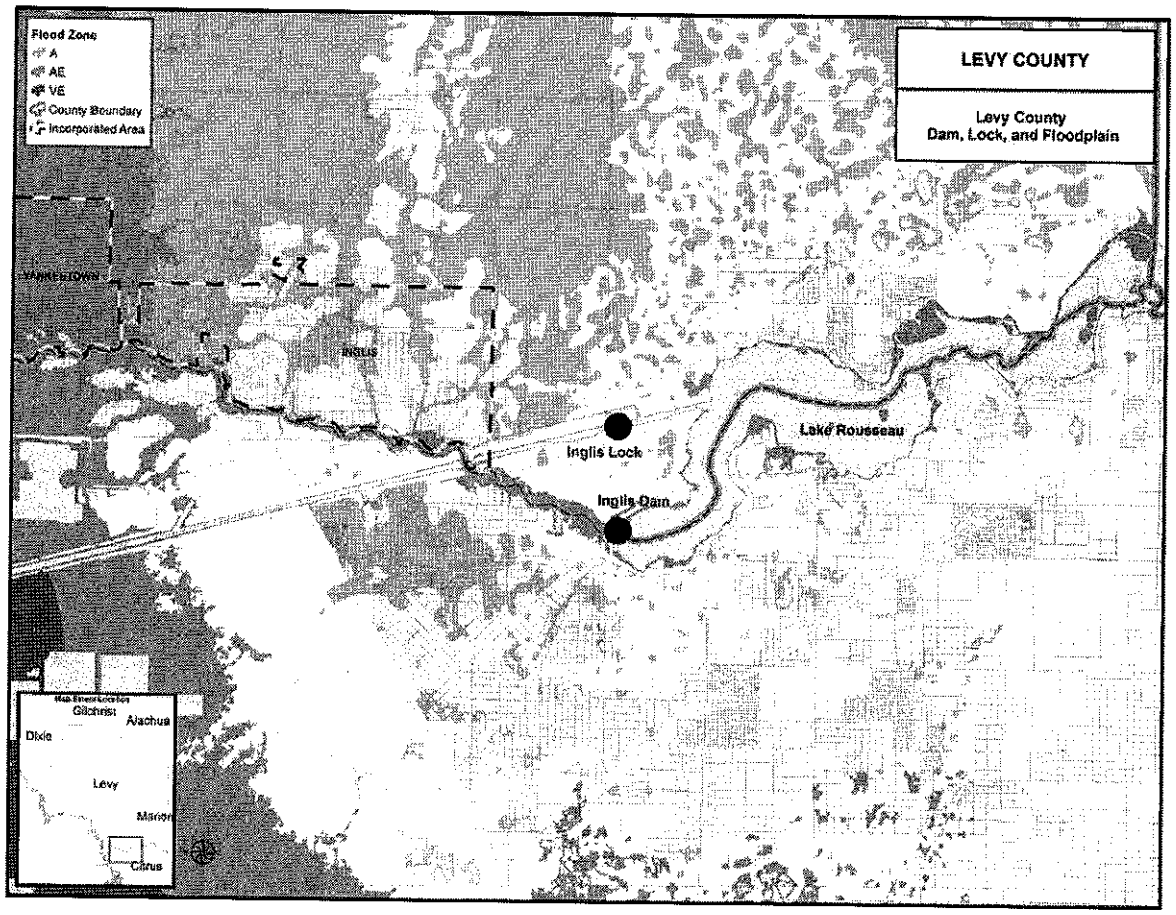
January 5, 2001: A freeze occurred throughout the interior sections of south Florida, causing an estimated $78 million in damage to certain crops. Hardest hit were certain vegetable crops with 75% losses in Hendry and east Collier counties and 30% losses in the farming areas of south Miami-Dade County. Other crops that were damaged included newly planted sugar cane, ornamentals, and tropical fruits. A heavy frost occurred in the western suburbs of Miami-Dade, Broward and Palm Beach metropolitan areas. Several daily minimum temperature records were broken. Selected minimum temperatures included 27 degrees at Belle Glade, 29 degrees in the Homestead agricultural area, 31 degrees in Naples, 39 degrees at Miami International Airport and 43 degrees in Miami Beach. Widespread freezing temperatures were also observed across most of west central and southwest Florida during the pre-dawn and mid-morning hours, causing $6.9 million in crop damage.

In Levy, Sumter, Citrus, Hernando and Pasco counties, low temperatures dropped into the upper teens and lower 20s with durations below freezing for up to nine hours. In Hillsborough, Polk, Hardee, DeSoto, and Highlands counties, low temperatures ranged from the low to middle 20s with durations below freezing for up to eight hours. The freeze caused nearly four million dollars' worth of damage to the tropical fish crop in Hillsborough County. In Pinellas, Manatee, Sarasota, Charlotte and Lee counties, low temperatures ranged from the middle 20s inland to the lower 30s along the immediate coast with durations below freezing for up to six hours. In Lee County, the freeze caused nearly 2.6 million dollars' worth of damage to the squash and cucumber crops. In Charlotte County, the freeze caused nearly 250 thousand dollars in damage to the pepper crop.

January 10, 2001: Freezing temperatures were observed over most of west central and parts of southwest Florida during the pre-dawn through mid-morning hours. In Levy, Sumter and Citrus counties, low temperatures dropped into the middle teens to the lower 20s with durations below freezing for up to nine hours. In mainly inland Hernando, Pasco, Hillsborough, Manatee and western Polk counties, low temperatures dropped into lower to middle 20s with durations below freezing for up to seven hours. In Hillsborough County, the freeze caused nearly four million dollars' worth of damage to the tropical fish crop. In western Hardee, western DeSoto, eastern Sarasota, and northern Charlotte counties, low temperatures dropped into the upper 20s to lower 30s for durations below freezing of up to three hours.

January 23-25, 2003: A strong cold front ushered in cold temperatures and gusty northwest winds into the Florida peninsula, which created some of the coldest weather in several years. Wind chill temperatures ranged from 10 to 15 in Bronson, around 20 in Tampa and Lakeland, to 20 to 25 degrees in Fort Myers. Overnight low temperatures ranged from near 20 in the inland counties north to the upper 20s in the inland counties south, to the lower 30s along the coast near Fort Myers. A hard freeze (temperatures of 27 degrees or less for three or more hours) reached south into northeast Hillsborough and northern Polk counties. Citrus crops fared well because the freeze did not last long enough but strawberries took a $4.5 million loss and tropical fish a $4 million loss. Early morning low temperatures on January 24th dropped well below freezing across east central Florida. Temperatures ranged from 24 degrees in Leesburg and 25 in Daytona Beach to 29 in Melbourne and 27 in Orlando. To the south, Ft. Pierce and Vero Beach reported lows near 30. Later that morning, winds shifted off the ocean producing a few snowflakes in the coastal communities from Daytona Beach to Ft. Pierce. On January 25, arctic high pressure settled over the southeastern United States which maintained the clear and cold weather across the Florida peninsula. Overnight lows of 19 to 24 occurred from Bronson to Brooksville with temperatures in the 30s farther south. Northeast winds of 10 to 15 mph produced wind chills down to 25

Figure VI-13. Levy County Dam, Lock, and Floodplain



The dam hazard is a term indicating the potential hazard to the downstream area resulting from failure or mis-operation of the dam or facilities. According to the USGS National Inventory of Dams, there are 149 major dams in the state of Florida which have been identified by a hazard risk of low, significant and high.

Low hazard: A dam where failure or mis-operation results in no probable loss of human life and low economic and/or environmental loss. Losses are principally limited to the owner's property.

Significant hazard: A dam where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities or impact other concerns. These dams are often located in predominantly rural or agricultural area but could be located in areas with population and significant infrastructure.

High: A dam where failure or mis-operation will probably cause loss of human life. (Statewide Hazard Mitigation Plan, 2009)

VII. VULNERABILITY ASSESSMENT

A. DEFINING VULNERABILITY ASSESSMENT

A vulnerability assessment is the process of estimating disaster potential in terms of what is susceptible to damage. Typical measures include, the number of people living or working in a hazard-prone area; the amount and value of property; and the amount, value and emergency necessity of public buildings and facilities.

The objectives of the vulnerability assessment are to show how a population, facility, system or environmental feature is actually vulnerable to a hazard or even a combination of hazards. The assessment also allows one to gain an understanding of the types of impacts caused by specific hazards which actually result in physical damage or operational failure.

This Section evaluates the following: the number of people at risk; the value of property at risk; the number and function of exposed critical facilities; the danger of secondary hazards (hazards caused by the onset of the first event), including the danger from hazardous facilities located in the risk area; the danger of exposure to hazardous materials in the wake of the disaster; the potential demand for shelter; evacuation needs and capabilities; and potential environmental impacts. Vulnerability assessments need to consider growth trends and any existing development management policies that will affect growth. As density in an area increases, so does vulnerability.

This vulnerability assessment is divided into the following sub-sections:
B. Vulnerable Population Assessment
Total Population and Projections
Population Densities
Population by Age Group
Institutional Population
Transient Population
Special Needs Population
C. Vulnerability Assessment by Hazard
Overview
Identifying Structures
Loss (in the "Flood" Sub-section only)
Estimating Potential Loss
Analyzing Development Trends
Multijurisdictional Risk Assessment

B. VULNERABLE POPULATION ASSESSMENT

The major objective of the Local Mitigation Strategy is to protect people from the health and safety impacts of various disasters and to make communities safer. This objective is emphasized in the Strategy's community guiding principal, protection of health, welfare and safety of the people. This part of the Vulnerability Assessment attempts to identify the vulnerable population in vulnerable areas. Analysis will include consideration of the special populations such as those living in nursing homes, other assisted living facilities and in correctional institutions.
The identification of these characteristics of the population will be influential in future decision making. The objective of the vulnerability assessment is to show how a population, facilities and systems or environmental features are actually vulnerable to hazards. Levy County continues to maintain an

2. Population Density

Levy County, whose land area is 1,118 square miles, is predominantly a rural county with a climate of moderate winter temperatures. The mild temperature of the County contributes to in-migration of retirement age people. The County experiences moderate rates of growth. With a population density of 36 persons/square mile, the County retains a rural nature. According to population density, Levy County is ranked 55 among the 67 counties in the state of Florida. The socio-economic characteristics of a region influence its residents significantly in the accessibility to health care needs.

3. Population by Age Group

Providing data on the health and age characteristics of Levy County will allow a clear picture of the emergency management issues related to the sick or elderly population. Counties with high populations of elderly person need to put specific protocols in place in the event of a disaster. These people will many times not have the income or the ability to safely evacuate before a disaster. Having a system for notification and evacuation is important to health dependent individuals.

Table VII-4 indicates that of the total Levy County 2014 population of 40,474, approximately22.4 percent belong to the 0-19 years age Category. The 50-64 years age group consists of 23.7 percent of the total population; the 35-49 group consists of 17.0 percent; the 20-34 group consists of 15.9 percent; and the 65-74 group consists of 12.5 percent of the total population. Finally the 75 and older age group consists of 8.6 percent. We can assume that people over the age of 80 years, due to physical limitations, will need special care and arrangements during disasters.

Table VII-5 depicts the elderly population, those who are 65 years or older, of the cities and towns of Levy County. An analysis of the table indicates that the elderly population of the Levy County cities and towns will grow steadily, and Town of Otter Creek will have the smallest number of elderly which is indicative of its small resident population.

4. Institutional Population

Table VII-3 indicates the number of persons living in various group quarters, 2010. It is also safe to assume that the population in group quarters will not increase significantly as the facilities such as nursing homes, hospitals and prisons have fixed number of beds and cell space. Table VII-3 indicates that of the total Levy County population, 1.6 percent lived in various institutions or group quarters.

Table VII-3. Institutionalized Population - Levy County

Type of Institution	Number of Persons
Correctional Institutions	424
Nursing Homes	116
Other Institutions	16
Total - Institutional Population	635
Total - Levy County Population	40,801
Percentage in Group Quarters (of the total County population)	1.6%

Source: US Census, 2010

If a disaster were to impact a prison population, a considerable amount of manpower and resources would be needed to respond. This would also reduce the County's ability to respond in other areas. Levy County needs to make sure that contingency plans and mutual aid agreements are in place to provide the manpower and facilities

Table VII-4. Population by Age Group, 2014

Area	Total Population	Age 0-19	Age 0-19 Percent	Age 20-34	Age 20-34 Percent	Age 35-49	Age 35-49 Percent	Age 50-64	Age 50-64 Percent	Age 65-74	Age 65-74 Percent	Age 75+	Age 75+ Percent
Bronson	1,143	336	29.4%	193	16.9%	210	18.4%	232	20.3%	103	9.0%	69	6.0%
Cedar Key	691	83	12.0%	51	7.4%	93	13.5%	208	30.1%	138	20.0%	118	17.1%
Chiefland	2,154	672	31.2%	422	19.6%	382	17.7%	345	16.0%	176	8.2%	157	7.3%
Fanning Springs	456	89	19.5%	76	16.7%	55	12.1%	107	23.5%	79	17.3%	50	11.0%
Inglis	1,291	201	15.6%	151	11.7%	190	14.7%	388	30.1%	237	18.4%	124	9.6%
Otter Creek	129	27	20.9%	23	17.8%	23	17.8%	31	24.0%	14	10.9%	11	8.5%
Williston	2,815	739	26.3%	585	20.8%	446	15.8%	495	17.6%	269	9.6%	281	10.0%
Yankeetown	494	72	14.6%	55	11.1%	52	10.5%	135	27.3%	111	22.5%	69	14.0%
Levy Un-Incorporated	31,301	6,829	21.8%	4,875	15.6%	5,421	17.3%	7,635	24.4%	3,935	12.6%	2,606	8.3%
TOTAL	40,474	9,048	22.4%	6,431	15.9%	6,872	17.0%	9,576	23.7%	5,062	12.5%	3,485	8.6%

Source: Shimberg Affordable Housing Center University of Florida (http://www.flhousingdata.shimberg.ufl)

Table VII-5. Elderly Population Projections, 2014-2040

City/ Town	2014	2015	2020	2025	2030	2035	2040
Bronson	172	182	238	273	319	339	363
Cedar Key	256	263	293	307	312	294	271
Chiefland	333	341	387	407	435	433	445
Fanning Springs	129	133	165	185	207	200	196
Inglis	361	367	397	438	489	489	484
Otter Creek	25	27	26	24	21	18	14
Williston	550	565	662	730	815	814	825
Yankeetown	180	181	190	170	151	122	95
Levy Un- Incorporated	6,541	6,733	8,012	9,242	10,775	11,184	11,725
TOTAL	8,547	8,792	10,370	11,776	13,524	13,893	14,418

Source: Shimberg Affordable Housing Center University of Florida (http://www.flhousingdata.shimberg.ufl

Health Care Agencies
The following health care agencies will provide medical care in an emergency situation:

As the primary agency, the Levy County Health Department will give coordination and direction to ESF 8 activities from the EOC. The Levy County Environmental Health Unit will coordinate and direct environmental health activities.
Levy County EMS will continue to provide services to the general public and disaster relief workers.
Meridian Behavioral Health Care, Inc. will perform crisis counseling activities, to include Critical Incident Stress Debriefing (CISD) of emergency response workers.
The American Red Cross - Coast to Coast Chapter will assist in the coordination of the nursing and mental health staff providing assistance to disaster victims as a support agency for mass care (ESF 6).
The Nature Coast Regional Hospital, located in Williston, will receive and treat victims of disaster within its abilities. This is the only full-scale hospital in Levy County.

Medical facilities will be one of the most difficult of all the facilities to evacuate. Presumably persons who reside in hospitals are not capable of evacuating without assistance. The assistance may range anywhere from wheelchairs to oxygen and IVs. Therefore, all medical facilities need to have their own protocols in case they are called upon to evacuate. There is only one hospital facility in Levy County - Nature Coast Regional Hospital. The medical facility is located in Williston and would experience a situation related to other inland county hospitals. The facility would be under duress from the overload of patients coming from the areas closer to the coast and from patients needing immediate care from traveling accidents. All of the medical facilities in the County may be used in a host capacity if a hurricane threatens the Tampa Bay Region, so having a plan is imperative.

C. VULNERABILITY ASSESSMENT BY HAZARD

In the overviews of each hazard below, the types of structures and infrastructure affected by each respective hazard and their potential impacts are generally described. In the Identifying Structures sections, Critical Facilities and major roads located in vulnerable areas are listed. In order to identify all other vulnerable structures and populations, and estimate potential losses, data from the Levy County Property Appraiser for 2015 was obtained and analyzed. In estimating potential losses, factors that should be considered include replacement values of structures and contents, percent damage, and structure use and function loss.

In this Plan, current (2015) data from the Levy County Property Appraiser's Office was used to estimate potential losses. Also, current population data from the US Census Bureau American Community Survey was analyzed (5-year estimates for 2013 by Block Group).

From the 2015 Levy County Property Appraiser dataset, features, such as the year structures were built, number of buildings or residential units, use category (corresponding with the Department of Revenue categories and more broadly aggregated), building values, and just values were studied. The Table below lists the number of buildings, parcels, and just values per use category. The "Vacant" category includes Vacant Residential, Vacant Commercial, and Vacant Industrial. Using this current parcel data and the location of vulnerable areas presented in the Hazards Profiles from the previous section, vulnerable structures are identified and potential losses are calculated.

Table VII-8. Structures and Values by Use Category in Incorporated Areas

	Bronson		Cedar Key		Chiefland		Fanning Springs		Inglis		Otter Creek		Williston		Yankeetown	
Use Category	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**	**Bldgs or Units**	**Value $1000s**
Agriculture	14	3,672	14	2,796	13	9,860	2	2,671	1	1,320	8	2,091	15	3,085	0	1,494
Residential-Single-Family	238	14,278	423	73,119	500	27,153	61	4,841	382	37,304	39	1,392	774	48,602	427	51,747
Residential-Multi-Family	28	936	232	26,883	273	6,188	27	555	79	1,741	0	0	155	4,106	0	0
Residential-Mobile Homes	173	4,517	40	3,138	156	3,299	194	6,993	350	8,649	28	591	127	2,355	47	998
Commercial	64	8,728	95	15,048	240	79,666	54	4,359	81	10,747	8	589	151	27,351	26	4,860
Industrial	5	507	0	95	18	1,747	13	1,093	16	1,314	1	36	41	4,881	0	37
Institutional	21	2,482	13	3,666	50	12,197	4	1,011	13	2,195	16	2,817	47	16,675	6	1,243
Government	33	9,231	49	19,901	98	11,846	7	7,541	5	1,077	1	137	16	29,882	3	4,455
Misc. Infrastructure	1	235	2	532	9	1,522	0	7	2	253	0	25	1	577	0	0
Non-Ag Acreage	**0**	**0**	0	0	0	288	0	0	0	0	0	0	0	1,616	0	1,222
Vacant	7	3,908	0	16,202	3	9,283	0	7,013	1	9,695	0	539	9	5,705	0	7,561
TOTAL	565	48,494	862	161,380	1,173	163,049	341	36,084	874	74,295	101	8,217	1,222	144,835	509	73,617

Requirements for sheltering, as well as humanitarian supplies such as food, water, blankets, first aid, etc.
Termination of utility services, especially loss of electricity and contamination of the drinking water supplies
Extraordinary financial impact for the immediate response as well as for long-term recovery
Damage to critical infrastructure that requires long-term recovery.

The greatest damages from hurricanes come in the form of flooding and high winds, with flooding being responsible for far more damages to life and property. Roads in low-lying coastal areas have the potential to be submerged at various points (such as SR 24 and CR 347 in west Levy County). Flooding of US Hwy 19 from the surge of a major hurricane would seriously hinder evacuation efforts from counties to the south. Inundation of roadways not only reduces evacuation capabilities but also erodes emergency response capabilities.

Critical facilities in the County should be inspected and hardened to withstand high winds even if located in the center of the state. Other facilities such as mobile homes are of great concern and should also be mitigated where possible. High winds could occur throughout the County making mobile homes a general county-wide vulnerability. The design and materials used to construct mobile homes and other manufactured housing structures make these housing types particularly vulnerable to destruction by high winds. These buildings generally have flat sides and ends and anchoring systems that cannot withstand the strength of high winds. Mobile homes are also more susceptible from damage to flying debris. Due to these facts of vulnerability, the National Weather Service recommends that all mobile home residents evacuate in the event of a hurricane.

b. Identifying Structures

An analysis of the critical facilities located in the Coastal High Hazard Area (CHHA) as delineated by the Category 1 Hurricane Surge Zone reveals several critical facilities located in the CHHA, including:

Cedar Key
City Hall / Fire Department
Police Department
Cedar Key School
Wastewater Treatment Plant and Lift Stations
Water Treatment Plant
Water Supply Well

Yankeetown
Town Hall / Fire Department
Water Plant and Wells
Yankeetown School

These facilities should be considered, when possible, for hazard mitigation improvements based on their level of importance to the community. Generally, any facility in identified vulnerability areas should be considered for mitigation improvements.

Small portions of Highways 19 and 121 are located in the Category 1 Surge Zone. There are also several hazardous materials facilities:

Table VII-11. Tropical Cyclone Surge Vulnerability in Unincorporated Levy County

	Tropical Storm Surge		Category 1 Surge		Category 2 Surge		Category 3 Surge		Category 4 Surge		Category 5 Surge	
Use Category	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s
Agriculture	64	86,076	36	39,112	82	96,952	78	68,509	99	61,890	130	50,014
Residential-Single-Family	266	49,467	112	8,458	202	17,236	98	7,808	186	19,402	189	16,685
Residential-Multi-Family	57	3,066	9	310	10	242	3	81	0	20	2	109
Residential-Mobile Homes	68	3,664	103	3,753	356	11,995	310	10,241	290	9,710	288	10,481
Commercial	9	1,823	6	1,046	6	1,369	8	589	21	2,285	19	1,614
Industrial	0	0	2	166	9	1,269	0	20	0		0	445
Institutional	0	0	1	165	3	1,029	5	785	1	218	6	1,540
Government	4	88,024	0	1,644	1	5,342	0	2,604	1	3,147	2	4,266
Misc. Infrastructure	3	5,145	0	0	0	96	0	57	0	163	0	442
Non-Ag Acreage	0	834	1	232	0	1,617	0	188	0	471	0	475
Vacant	0	11,775	0	3,092	0	10,325	1	5,134	1	6,231	3	4,853
TOTAL	471	249,874	270	57,978	669	147,472	503	96,016	599	103,537	639	90,924

Table VII-13. Tropical Cyclone Surge Vulnerability in Cedar Key

	Tropical Storm Surge		Category 1 Surge		Category 2 Surge		Category 3 Surge		Category 4 Surge		Category 5 Surge	
Use Category	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s
Agriculture	14	2,796	0	0	0	0	0	0	0	0	0	0
Residential-Single-Family	283	53,128	39	5,029	65	8,574	32	5,535	4	852	0	0
Residential-Multi-Family	118	13,611	89	10,775	13	1,419	6	1,078	0	0	0	0
Residential-Mobile Homes	32	2,560	6	296	1	174	1	108	0	0	0	0
Commercial	94	14,701	1	347	0	0	0	0	0	0	0	0
Industrial	0	95	0	0	0	0	0	0	0	0	0	0
Institutional	3	1,580	1	288	4	827	4	767	1	204	0	0
Government	41	17,051	0	812	0	0	7	1,389	1	649	0	0
Misc. Infrastructure	1	405	0	0	0	0	1	127	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	0
Vacant	0	12,795	0	1,087	0	1,133	0	1,007	0	140	0	40

Table VII-14. Tropical Cyclone Surge Vulnerability in Fanning Springs

	Tropical Storm Surge		Category 1 Surge		Category 2 Surge		Category 3 Surge		Category 4 Surge		Category 5 Surge	
Use Category	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s
Agriculture	0	0	0	0	0	365	0	0	0	604	1	354
Residential-Single-Family	0	0	0	0	1	172	2	399	1	75	3	161
Residential-Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Residential-Mobile Homes	0	0	0	0	0	0	0	0	0	0	15	202
Commercial	0	0	0	0	0	0	0	0	0	0	1	67
Industrial	0	0	0	0	0	0	0	0	0	0	0	12
Institutional	0	0	0	0	0	0	0	0	0	0	0	0
Government	2	1,179	0	0	1	973	0	120	0	115	0	920
Misc. Infrastructure	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	0
Vacant	0	150	0	119	0	151	0	20	0	35	0	25

Table VII-17. Tropical Cyclone Surge Vulnerability in Yankeetown

	Tropical Storm Surge		Category 1 Surge		Category 2 Surge		Category 3 Surge		Category 4 Surge		Category 5 Surge	
Use Category	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s	Bldgs	Value $1000s
Agriculture	0	1,119	0	375	0	0	0	0	0	0	0	0
Residential-Single-Family	288	39,789	128	11,348	11	609	0	0	0	0	0	0
Residential-Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0
Residential-Mobile Homes	47	998	0	0	0	0	0	0	0	0	0	0
Commercial	23	4,515	2	269	1	76	0	0	0	0	0	0
Industrial	0	37	0	0	0	0	0	0	0	0	0	0
Institutional	3	754	3	489	0	0	0	0	0	0	0	0
Government	3	4,269	0	186	0	0	0	0	0	0	0	0
Misc. Infrastructure	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ag Acreage	0	1,222	0	0	0	0	0	0	0	0	0	0
Vacant	0	5,941	0	1,530	0	90	0	0	0	0	0	0

2. Floods

a. Overview

Types of structures and infrastructure affected by floods include: All structures, mobile homes, poorly constructed homes, non-elevated homes, telecommunications, electrical utilities, sewage systems, potable water, roadways, waterways, airports, agriculture, livestock, fisheries, economic disruptions, environmental damage.

Floods will negatively affect Levy County with a variety of impacts:
People, facilities, and infrastructure located within the floodplains are susceptible to flood impacts.
The County is in the high-risk area for hurricanes and could expect to face a flooding event resulting in long-term, significant flooding. The impacts included severe property damage, severe damage to cars and other equipment, water system contamination, wastewater treatment disruptions, civil unrest, and evacuation issues.
Flooding has caused traffic accidents and congestion that has resulted in short-term impacts on the transportation infrastructure.
High dollar impact to uninsured property from floods. Most homeowner insurance policies do not cover floods and citizens don't always opt to purchase National Flood Insurance policies.
Property damaged by a flooding event often results in a mold infestation that can require lengthy remediation. The mold can also create health issues for people in contact with it.
Responders are often put at risk during flood events as they respond to calls for assistance. Their risks can range from performing dangerous rescue missions for stranded citizens to sickness due to exposure to

The Community Development Block Grant (CDBG) has also made acquisition of substantially damaged structures and flooded homes in general a top funding priority. This is a significant breakthrough for small local governments such as those in Levy County because CDBG grant applications do not require matching funds when associated with recovery from a Federally Declared Disaster. And, after a Federally Declared Disaster those CDBG funds can be used for matching funds for other grant sources. The end result is that small local governments with limited financial resources can leverage larger funding amounts to recover from disasters and mitigate future disasters.

Both the Hazard Mitigation Grant Program (HMGP) and the Community Development Block Grant (CDBG) have recognized the importance of the LMS process and are awarding additional points to those grant applications for projects that are included in the LMS document. Despite this fact there are no acquisition projects currently listed on the Levy County LMS.

Grants to acquire repeatedly flooded or damaged properties are mitigation projects that need the support of the local government leaders. They take a long time, even up to two years to complete the final closing. They take up staff resources, often with low grant administration funds. They reduce the tax base and increase land maintenance costs. And finally can be a highly emotional process for property owners who are displaced while waiting for grant approval.

Table VII-18. Repetitive Loss Properties

Jurisdiction	Number of Structure	Structure Type
Bronson	0	
Cedar Key	28	6 Commercial, 22 Residential
Chiefland	0	
Fanning Springs	0	
Inglis	2	2 Residential
Otter Creek	0	
Williston	0	
Yankeetown	35	2 Commercial, 33 Residential
Unincorporated	13	13 Residential
Total		8 Commercial, 70 Residential, 0 Industrial

Source: Levy County Zoning Administration, Development Department, Floodplain Manager and CRS coordinator

c. Identifying Structures

Vulnerable critical facilities located within the FEMA 100-year floodplain are listed in the table below by type and jurisdiction.

Table VII-19. Critical Facilities Vulnerable to Flood

Jurisdiction	Type	Zone
Inglis	Volunteer Fire	A
Inglis	Shelter	A
Unincorporated Levy County	Fire	A
Unincorporated Levy County	Law Enforcement	A
Unincorporated Levy County	Correctional Facility	A
Unincorporated Levy County	EOC	A
Unincorporated Levy County	Shelter	A
Unincorporated Levy County	Volunteer Fire	A
Unincorporated Levy County	Fire Station	AE
Unincorporated Levy County	School/Shelter	AE
Yankeetown	Volunteer Fire	AE
Cedar Key	Law Enforcement	VE
Cedar Key	Fire Station	VE
Cedar Key	Schools/Shelter	VE

Levy County's coastal lowlands provide for a large number of roads that could be affected by surge flooding. The County's outcropping of coastal keys creates a large area for surge inundation. The central portion of the County will experience the greatest amount of freshwater flooding within the floodplain of the Waccasassa River. Each of the roads in Table VII-20 will be inundated from freshwater flooding. (Based on FEMA Flood Insurance Rate Maps).

Table VII-22. Population Vulnerable to Flood in Unincorporated Levy County

Housing Type	Zone A	Zone AE	Zone VE
Mobile Home Residential	1,541	573	35
Multifamily Residential	30	60	43
Single Family Residential	1,248	560	153

e. Analyzing Development Trends

Areas vulnerable to flood, including Fanning Springs, Yankeetown, Inglis, and Cedar Key, have had the largest proportionate population growth since the 2000 census. These municipalities, as well as the County's other municipalities will continue to grow in population and density. Generalized future land uses located within surge areas include Agriculture, Conservation, Recreation, Public, Commercial, Industrial, and Residential. However, the greatest amount of land area vulnerable to flood has Conservation (County), Agriculture/Low Density Residential (County) and Forestry/Rural Residential (County) future land use designations (see Map VII-1 through VII-9).

f. Multi-Jurisdictional Risk Assessment

The tables below describe the structures and values, by municipality, that are vulnerable to flood. Jurisdictions most vulnerable to flood include Yankeetown, Inglis, and Cedar Key.

Table VII-23. Flood Vulnerability in Bronson

	A		AE		VE	
Use Category	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	3	662	5	1,806	0	0
Residential-Single-Family	8	380	27	2,109	0	0
Residential-Multi-Family	0	0	0	0	0	0
Residential-Mobile Homes	4	149	3	117	0	0
Commercial	4	1,070	5	643	0	0
Industrial	0	0	0	0	0	0
Institutional	0	0	0	0	0	0
Government	8	403	0	479	0	0
Misc. Infrastructure	0	109	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0
Vacant	0	221	0	409	0	0
TOTAL	27	2,994	40	5,563	0	0

Table VII-26. Flood Vulnerability in Fanning Springs

	A		AE		VE	
Use Category	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	365	0	0
Residential-Single-Family	0	0	3	571	0	0
Residential-Multi-Family	0	0	0	0	0	0
Residential-Mobile Homes	0	0	0	0	0	0
Commercial	0	0	0	0	0	0
Industrial	0	0	0	0	0	0
Institutional	0	0	0	0	0	0
Government	0	0	3	2,253	0	0
Misc. Infrastructure	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0
Vacant	0	0	0	439	0	0
TOTAL	0	0	6	3,628	0	0

Table VII-27. Flood Vulnerability in Inglis

	A		AE		VE	
Use Category	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	1	632	0	0	0	0
Residential-Single-Family	81	5,455	179	23,426	0	0
Residential-Multi-Family	38	874	5	177	0	0
Residential-Mobile Homes	182	4,462	18	526	0	0
Commercial	26	3,237	2	382	0	0
Industrial	8	490	0	0	0	0
Institutional	9	1,486	1	68	0	0
Government	3	938	1	51	0	0
Misc. Infrastructure	2	253	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0
Vacant	1	3,413	0	3,273	0	0
TOTAL	351	21,240	206	27,903	0	0

Table VII-30. Flood Vulnerability in Yankeetown

	A		AE		VE	
Use Category	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	801	0	694
Residential-Single-Family	0	0	347	35,768	80	15,979
Residential-Multi-Family	0	0	0	0	0	0
Residential-Mobile Homes	0	0	45	961	2	37
Commercial	0	0	26	4,860	0	0
Industrial	0	0	0	37	0	0
Institutional	0	0	6	1,223	0	20
Government	0	0	1	1,194	2	3,261
Misc. Infrastructure	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	1,222
Vacant	0	0	0	5,059	0	2,490
TOTAL	0	0	425	49,903	84	23,703

Table VII-31. Population Vulnerable to Flood in Incorporated Areas

Municipality	Housing Type	Zone A	Zone AE	Zone VE
Bronson	Mobile Home Residential	13	10	0
	Multifamily Residential	0	0	0
	Single Family Residential	25	100	0
Cedar Key	Mobile Home Residential	0	0	36
	Multifamily Residential	0	0	209
	Single Family Residential	0	0	347
Chiefland	Mobile Home Residential	0	2	0
	Multifamily Residential	0	0	0
	Single Family Residential	0	3	0
Fanning Springs	Mobile Home Residential	0	0	0
	Multifamily Residential	0	0	0
	Single Family Residential	0	7	0
Inglis	Mobile Home Residential	323	33	0
	Multifamily Residential	77	10	0
	Single Family Residential	154	320	0
Otter Creek	Mobile Home Residential	10	0	0
	Multifamily Residential	0	0	0
	Single Family Residential	12	0	0

defensible spaces around all structures. Fire responders should continually seek to improve their response capabilities.

Critical facilities located within high risk and very high risk areas include:
Bronson
Clinical Lab, Fire Station, Library, Public Schools, Public Water Supply, and Wastewater Facility

Chiefland
Public Schools, Public Water Supply, Radio Communication Tower, Wastewater Facility

Fanning Springs
Fire Station, Public Water Supply

Inglis
Fire Station, Public Water Supply, Law Enforcement

Otter Creek
Fire Station, Public Water Supply

Williston
Wastewater Facility

Yankeetown
Fire Station, Library, Public Water Supply, Radio Communication Tower

Electrical Substation

c. Estimating Potential Loss

In addition to the facilities identified above, there are many structures and property within areas vulnerable to wildfire. Below is a table with the number of buildings and total values. The data is from the Levy County Property Appraiser's Office (2015).

According to FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* (August 2001), there are no loss estimation tables to calculate extent of damage for wildfire. Therefore, the total values of vulnerable areas categorized by land use were calculated to estimate potential loss.

Table VII-32. Population Vulnerable to Wildfire (Burn Probability) in Unincorporated Levy County

Housing Type	1	2	3	4	5	6	7	8
Mobile Home Residential	16	113	336	684	10,622	4,664	130	0
Multifamily Residential	0	2	0	0	91	133	29	4
Single Family Residential	19	79	141	327	5,695	3,585	263	0

d. Analyzing Development Trends

Areas most vulnerable to wildfire, include Bronson, Chiefland, Yankeetown, and Inglis. These municipalities, as well as the County's other municipalities will continue to grow in population and density. Generalized future land uses located within areas vulnerable to wildfire include Agriculture, Conservation, Recreation, Public, Commercial, Industrial, and Residential (see Map VII-1 through VII-9). However, the greatest amount of land area vulnerable to wildfire has Agriculture/Low Density Residential (County).

e. Multi-Jurisdictional Risk Assessment

The tables below describe the structures and values, by municipality, that are vulnerable to wildfire. Jurisdictions most vulnerable to wildfire include Bronson, Chiefland, Yankeetown, and Inglis.

Table VII-34. Population Vulnerable to Wildfire (Burn Probability) in Incorporated Areas

Municipality	Housing Type	1	2	3	4	5	6	7
Bronson	Mobile Home Residential	0	0	0	0	416	0	0
	Multifamily Residential	0	0	0	0	67	0	0
	Single Family Residential	0	0	0	0	620	0	0
Cedar Key	Mobile Home Residential	16	2	0	0	0	0	0
	Multifamily Residential	0	56	0	0	0	0	0
	Single Family Residential	55	94	0	0	0	0	0
Chiefland	Mobile Home Residential	0	0	0	0	177	0	0
	Multifamily Residential	0	0	0	0	469	0	0
	Single Family Residential	0	0	0	0	763	0	0
Fanning Springs	Mobile Home Residential	0	0	0	0	523	0	0
	Multifamily Residential	0	0	0	0	77	0	0
	Single Family Residential	0	0	0	0	165	0	0
Inglis	Mobile Home Residential	0	0	0	92	441	0	0
	Multifamily Residential	0	0	0	0	130	0	0
	Single Family Residential	0	0	15	148	461	0	0
Otter Creek	Mobile Home Residential	0	0	0	0	54	0	0
	Multifamily Residential	0	0	0	0	0	0	0
	Single Family Residential	0	0	0	0	64	0	0
Williston	Mobile Home Residential	0	0	0	0	32	73	0
	Multifamily Residential	0	0	0	0	0	210	0
	Single Family Residential	0	26	0	0	229	747	21
Yankeetown	Mobile Home Residential	9	0	0	0	0	42	0
	Multifamily Residential	0	0	0	0	0	0	0
	Single Family Residential	15	7	0	0	262	151	30

Residential-Mobile Homes	18	1,292	2	91	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	24	1,968	3	349	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Institutional	0	0	1	288	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	12	0	616	0	0	0	0	0	0	0	0	0	0	0	0
Misc. Infrastructure	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vacant	0	2,306	0	4,945	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	110	15,369	175	38,350	0	0	0	0	0	0	0	0	0	0	0	0

Table VII-37. Fire Vulnerability, Burn Probability in Chiefland

	1- Lowest Probability		**2**		**3**		**4**		**5- Medium Probability**		**6**		**7**		**8- High Probability**	
Use Category	**Bldgs or Unit**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**
Agriculture	0	0	0	0	0	0	0	0	12	8,664	0	0	0	0	0	0
Residential-Single-Family	0	0	0	0	0	0	0	0	333	19,138	0	0	0	0	0	0
Residential-Multi-Family	0	0	0	0	0	0	0	0	243	4,857	0	0	0	0	0	0
Residential-Mobile Homes	0	0	0	0	0	0	0	0	87	1,948	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	113	46,351	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	14	1,517	0	0	0	0	0	0
Institutional	0	0	0	0	0	0	0	0	38	11,064	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	80	9,279	0	0	0	0	0	0
Misc. Infrastructure	0	0	0	0	0	0	0	0	7	1,336	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	288	0	0	0	0	0	0
Vacant	0	0	0	0	0	0	0	0	3	6,429	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	930	110,872	0	0	0	0	0	0

Commercial	0	0	0	0	2	250	24	3,701	37	4,387	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	14	1,039	0	0	0	0	0	0
Institutional	0	0	0	0	0	0	3	317	7	1,368	0	0	0	0	0	0
Government	0	0	0	0	0	0	1	156	4	920	0	0	0	0	0	0
Misc. Infrastructure	0	0	0	0	0	0	1	174	0	35	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vacant	0	0	0	0	0	303	0	1,643	1	5,753	0	0	0	0	0	0
TOTAL	0	0	0	0	11	1,455	168	14,799	640	48,203	0	0	0	0	0	0

Table VII-40. Fire Vulnerability, Burn Probability in Otter Creek

	1- Lowest Probability		2		3		4		5- Medium Probability		6		7		8- High Probability	
Use Category	**Bldgs or Unit**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**	**Bldgs**	**Value $1000s**
Agriculture	0	0	0	0	0	0	0	0	8	2,091	0	0	0	0	0	0
Residential-Single-Family	0	0	0	0	0	0	0	0	37	1,369	0	0	0	0	0	0
Residential-Multi-Family	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential-Mobile Homes	0	0	0	0	0	0	0	0	27	579	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	5	380	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	1	36	0	0	0	0	0	0
Institutional	0	0	0	0	0	0	0	0	16	2,815	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	1	137	0	0	0	0	0	0
Misc. Infrastructure	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vacant	0	0	0	0	0	0	0	64	0	358	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	89	95	7,765	0	0	0	0	0	0

Commercial	1	850	0	0	0	0	0	0	2	232	12	2,519	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0
Institutional	0	0	0	0	0	0	0	0	6	1,223	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	1,041	1	116	2	3,260	0	0
Misc. Infrastructure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0	0	298	0	925	0	0
Vacant	0	283	0	42	0	429	0	0	0	2,362	0	2,310	0	1,029	0	0
TOTAL	19	2,057	6	854	0	429	0	0	190	28,221	155	17,231	31	12,813	0	0

This methodology was applied to Levy County using the newer County Property Appraiser data and more current sinkhole inventory from the FGDL. The Table below describes the number of buildings and total values within areas vulnerable to sinkholes by vulnerability category.

c. Estimating Potential Loss

In addition to the facilities identified above, there are many structures and property within areas vulnerable to sinkholes. Below is a table with the number of buildings and total values within areas vulnerable to sinkholes. The data is from the Levy County Property Appraiser's Office (2015).

According to FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* (August 2001), there are no loss estimation tables to calculate extent of damage from sinkholes. Therefore, the total values of vulnerable areas categorized by land use were calculated to estimate potential loss.

Table VII-43. Population Vulnerable to Sinkhole Potential in Unincorporated Levy County

Housing Type	0	1	2	3	4
Mobile Home Residential	34	679	6,093	7,139	5,116
Multifamily Residential	9	99	94	48	43
Single Family Residential	11	467	3,748	4,036	2,938

Table VII-44. Sinkhole Vulnerability in Unincorporated Levy County

	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
Use Category	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	1,183	104	58,776	868	465,604	932	383,665	563	233,288
Residential-Single-Family	4	262	330	51,741	1,541	136,149	1,737	160,153	1,259	120,579
Residential-Multi-Family	3	132	59	3,149	40	1,074	20	512	18	300
Residential-Mobile Homes	12	499	351	11,164	2,489	97,207	3,026	107,928	2,056	74,195
Commercial	0	0	7	1,475	43	6,803	74	6,195	119	11,945
Industrial	0	0	4	230	34	4,572	3	614	37	3,480
Institutional	0	0	2	341	35	9,234	42	8,423	40	11,177
Government	0	10,992	3	50,712	9	219,791	3	30,487	14	30,991
Misc. Infrastructure	0	5	0	862	1	1,416	2	490	3	5,190
Non-Ag Acreage	0	0	1	1,245	0	3,210	0	1,447	0	1,225
Vacant	0	54	2	19,221	32	71,774	30	47,762	13	29,826
TOTAL	19	13,127	863	198,916	5,092	1,016,834	5,869	747,676	4,122	522,196

Table VII-46. Sinkhole Vulnerability in Bronson

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	0	0	0	0	0	0	0
Residential-Single-Family	0	0	0	0	0	0	20	1,378	14	3,672
Residential-Multi-Family	0	0	0	0	0	0	2	59	218	12,900
Residential-Mobile Homes	0	0	0	0	0	0	8	199	26	877
Commercial	0	0	0	0	0	0	2	140	165	4,318
Industrial	0	0	0	0	0	0	0	0	62	8,588
Institutional	0	0	0	0	0	0	2	220	5	507
Government	0	0	0	0	0	0	8	3,579	19	2,261
Misc. Infrastructure	0	0	0	0	0	0	1	126	25	5,651
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0
Vacant	0	0	0	0	0	0	1	300	0	109
TOTAL	0	0	0	0	0	0	44	6,001	534	38,883

Table VII-47. Sinkhole Vulnerability in Cedar Key

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	14	2,796	0	0	0	0	0	0
Residential-Single-Family	0	0	423	73,119	0	0	0	0	0	0
Residential-Multi-Family	0	0	233	26,883	0	0	0	0	0	0

Table VII-49. Sinkhole Vulnerability in Fanning Springs

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	0	0	0	0	0	2	2,671
Residential-Single-Family	0	0	0	0	0	0	0	0	61	4,841
Residential-Multi-Family	0	0	0	0	0	0	0	0	27	555
Residential-Mobile Homes	0	0	0	0	0	0	0	0	194	6,993
Commercial	6	453	0	0	0	0	0	0	48	3,906
Industrial	0	0	0	0	0	0	0	0	13	1,093
Institutional	0	0	0	0	0	0	0	0	4	1,011
Government	0	146	0	0	0	0	0	0	7	7,395
Misc. Infrastructure	0	0	0	0	0	0	0	0	0	7
Non-Ag Acreage	0	0	0	0	0	0	0	0	0	0
Vacant	0	235	0	0	0	0	0	0	0	6,778
TOTAL	**6**	**835**	0	0	0	0	0	0	356	35,249

Table VII-50. Sinkhole Vulnerability in Inglis

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	0	0	0	0	12	1	1,309
Residential-Single-Family	0	0	0	0	2	67	29	1,661	351	35,577
Residential-Multi-Family	0	0	0	0	0	0	0	0	79	1,741

Table VII-52. Sinkhole Vulnerability in Williston

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	0	12	2,473	3	612	0	0
Residential-Single-Family	0	0	1	121	580	34,851	193	13,630	0	0
Residential-Multi-Family	0	0	0	0	98	2,102	105	2,004	0	0
Residential-Mobile Homes	0	0	1	47	126	2,307	0	0	0	0
Commercial	0	0	2	234	87	19,055	62	8,062	0	0
Industrial	0	0	0	0	22	2,037	19	2,845	0	0
Institutional	0	0	0	0	30	6,032	17	10,642	0	0
Government	0	0	0	0	13	11,259	3	18,623	0	0
Misc. Infrastructure	0	0	0	0	1	519	0	58	0	0
Non-Ag Acreage	0	0	0	0	0	1,616	0	0	0	0
Vacant	0	0	0	129	9	3,205	0	2,371	0	0
TOTAL	0	0	4	531	978	85,456	402	58,848	0	0

Table VII-53. Sinkhole Vulnerability in Yankeetown

Use Category	0- No Significant Risk		1- Low Risk		2- Moderate Risk		3- High Risk		4- Very High Risk	
	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s	Bldgs or Units	Value $1000s
Agriculture	0	0	0	0	0	0	0	1,494	0	0
Residential-Single-Family	0	0	13	5,353	54	7,958	303	28,031	57	10,404
Residential-Multi-Family	0	0	0	0	0	0	0	0	0	0
Residential-Mobile Homes	0	0	0	0	0	0	47	998	0	0

5. Coastal Erosion

a. Overview

Types of structures and infrastructure affected by coastal erosion include: mobile homes, poorly constructed homes, non-elevated homes, telecommunications, electrical utilities, roadways, waterways, airports, agriculture, fisheries, environmental damage.

Erosion will negatively affect Levy County with a variety of impacts:
Areas of the County's coast are eroded away at varying levels at all times and especially by strong storms and hurricanes.
Erosion can lead to property damage to houses and structures on or near the beach.
Beach erosion can impact transportation waterways such as inlets and can interfere with boat traffic.
Eroded beaches impact the level of tourism, and this lowers the overall economy of the coastal areas and the County.

b. Identifying Structures

Without the velocity to cause damage quickly, the potential erosion damage is by slow erosion over time. Vulnerable facilities are limited to structures that are in, or close to, the water at normal levels and flow rates, including bridges, dams, docks, and boat ramps. Certain residential structures that are built on pilings are also subject to erosion potential. Appropriate mitigation for erosion is periodic inspections of water-related structures. No significant erosion has been recorded outside of the tropical cyclones and periodic flooding events.

There are no critical facilities in the County that demonstrate an increased vulnerability to coastal erosion.

c. Estimating Potential Loss

There are some structures and property within areas vulnerable to coastal erosion. Below is a table with the number of buildings and total values within the areas vulnerable to coastal erosion. The only areas vulnerable to coastal erosion are in Cedar Key. The structures and values in the table below consist of areas within approximately 500 feet or about two city-blocks away from identified erosion. The data is from the Levy County Property Appraiser's Office (2015).

According to FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* (August 2001), there are no loss estimation tables to calculate extent of damage erosion. Therefore, the total values of vulnerable areas categorized by land use were calculated to estimate potential loss.

Table VII-54. Coastal Erosion Vulnerability

Use Category	Bldgs or Units	Value $1000s
Agriculture	NA	NA
Residential- Single-Family	72	15,153
Residential- Multi-Family	59	8,016
Residential- Mobile Homes	1	108
Commercial	19	3,576
Industrial	NA	NA
Institutional	4	790
Government	5	2,696
Misc. Infrastructure	NA	NA

respective land areas can be significantly harmed by drought/extreme heat.

c. Estimating Potential Loss

According to FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* (August 2001), there are no loss estimation tables to calculate extent of damage for drought or extreme heat. Therefore, the total values of vulnerable areas (all areas designated as Agriculture) were calculated to estimate potential loss. The data is from the Levy County Property Appraiser's Office (2015), and can be found in Tables VII-7 and VII-8.

d. Analyzing Development Trends

As the population grows in Levy County, land in Agriculture uses maybe lost to other uses (see Map VII-1 through VII-9). However, as Levy County is one of the least densely-populated counties in Florida, and rate of growth is steady, Agriculture will mostly likely remain one of the County's primary land uses and economic drivers.

e. Multi-Jurisdictional Risk Assessment

In Levy County the major crop is timber which is actively cultivated throughout the County. Traditional crops are grown in the Chiefland (watermelons) and Williston (peanuts) areas of the county. Drought or extreme heat conditions especially during planting time could cause hardship to these local economies. Cedar Key and Yankeetown are tied to the fisheries economy. Fisheries are vulnerable to a period of extended heat which could cause elevated gulf water temperatures contributing to a "red tide" fish kill. Red tide is less common this far north on the gulf coast, but occurs every 2 to 3 years from the Tampa Bay region south to the keys.

The jurisdictional economies of Bronson, Fanning Springs and Inglis are not as dependent on traditional agriculture or fisheries. The general vulnerabilities of human or animal impact are potentially felt by all who cannot escape the heat, especially the elderly and those who work outdoors.

7. Tornadoes

a. Overview

Types of structures and infrastructure affected by tornadoes include: all structures, mobile homes, poorly constructed homes, non-elevated homes, telecommunications, electrical utilities, sewage systems, potable water, roadways, waterways, airports, agriculture, livestock, fisheries, economic disruptions, environmental damage.

Tornadoes can negatively affect Levy County with a variety of impacts:
Tornadoes cause localized damage in the specific area of impact and are part of a larger storm system that affects communities with flooding, lightning, hail, and straight-line winds.
Humans and animals are often injured or killed by severe tornadic activity. Most cases involve a direct impact combined with minimal shelter or protection.
Properties and facilities are often damaged by tornadic activity. The severity of the damage depends on the type of construction, the age of the facility, and the strength of the storm, and results can vary from minor roof damage to the complete demolition of the structure.
Buildings, facilities, and infrastructure are often impacted by the debris caused by a tornado. Common consequences of tornadoes are power outages and power line damage caused by fallen limbs and trees. This often occurs with large trees that have not been trimmed and are located near structures or power

seasonal residents. The assumption is made that those residents who have mobility will, in fact, leave the area before the storm approaches. A listing of the mobile home parks for Levy County is shown on Table VII-56.

Vulnerable structures should also include older, sub-standard buildings. As stated earlier in the Hazard Identification and Profile section, the Florida Building Code changed significantly in 2002 and again in 2010. These changes included higher wind loads. It may be assumed that structures built before 2010 were based on the older building code, and therefore more vulnerable to high winds from tropical cyclones than newer structures. Table VII-55 and Table VII-57 summaryizethe occupied residential structures that were built before and after the revised 2010 Florida Building Code. This dataset does not include Vacant Residential, parcels with no structures, or recorded years built. Population living in these older structures may be considered more vulnerable.

Table VII-55. Structures in Unincorporated Levy County Built Before and After 2010 Florida Building Code

Use Category	2011 or After	2010 or Earlier
Agriculture	96	2,371
Residential- Single-Family	136	4,735
Residential- Multi-Family	2	138
Residential- Mobile Homes	134	7,800
Commercial	4	239
Industrial	2	76
Institutional	13	106
Government	0	29
Misc. Infrastructure	0	6
Non-Ag Acreage	1	0
Vacant	11	66
TOTAL	**399**	**15,566**

An excellent project that could be undertaken by the Levy County municipalities or other jurisdiction is the establishment of location shelters. Providing a shelter to the populations in these mobile homes that may not have predicted their danger and needs could save lives. A private-public partnership could use funds from mitigation projects and in-kind services from local contractors and community groups. The mitigation funding would provide the supplies while the community groups provide the labor. This type of project could be modeled after the Habitat for Humanity protocol. By including local groups such as the American Red Cross, the Boy Scouts of America and local churches that participate in disaster recovery, the in-kind services would surely outweigh the federal funds.

We can make the assumption that when a residential structure is damaged more than 50% of its value it will not be habitable. Making this assumption leads to other concerns regarding evacuation, sheltering and long-term temporary housing. Evacuation issues for residents of mobile homes consist mainly of communicating the message to evacuate early. The most important sheltering issues are shelter capacity and structural integrity. One of Levy County's listed projects is for a study of emergency shelters. Long-term temporary housing issues should be addressed in future issues of the LMS.

NAME	ADDRESS	CITY	ZIP CODE	MH SPACES
Shady Oaks at Otter Creek	442 SW 3rd St	Otter Creek	32683	1
Odyssey Campground	6510 SW 101 Terrace	Cedar Key	32625	13
Cedar Villas	6551 NW 135th Lane	Chiefland	32626	8
B's Cypres Marina & RV	6621 Riverside Drive	Yankeetown	34498	2
Twisted Oaks Estates	7050 NW 140th St	Chiefland	32626	13
Waccassassa Fishing Club Store LC	7951 SE 5th Ave	Gulf Hammock	32639	50
Village Pines Mobile Park	8150 SE 140th Lane	Inglis	34449	25
Bronson Heights Mobile Home	9770 NE Alt 27	Bronson	32621	8
Promise Acres Inc	United States Highway 27	Williston	32696	25
Driftwood Mobile Home Park	HWY 40 E	Inglis	34449	24
M.E. McDougal Inc. MHP	NW 90th Court	Fanning Springs	32693	19

d. Analyzing Development Trends

Because vulnerability to tornadoes cannot be determined geographically, development trends within a vulnerable area cannot be analyzed.

e. Multi-Jurisdictional Risk Assessment

All jurisdictions within Levy County are equally vulnerable to tornadoes.

8. Severe Winter Storms/Freeze

a. Overview

Types of structures and infrastructure affected by severe winter storms/freeze include: telecommunications, electrical utilities, potable water, roadways, waterways, agriculture, livestock, fisheries, economic disruptions, environmental damage.

Winter storms will negatively affect Levy County with a variety of impacts:
Severe winter events including snow and ice are considered hazards; however, the impacts resulting from these events are historically more severe in regards to human and economic losses as opposed to damages to buildings and infrastructure.
Roads and highways are most vulnerable to the effects of winter storms. Roads frequently become iced over, resulting in accidents, injuries, deaths, and traffic congestion. Roads can be heavily damaged due to winter weather events. Potholes and cracks can be found on roadways after a winter weather event, resulting in the need for repairs and causing further economic losses to the local area.
Electrical transmission lines are highly vulnerable to severe winter weather. Trees frequently fall due to the extra weight of ice accumulating on branches. Trees falling on nearby power lines causes disruption of power service, which results in additional costs for repairs and maintenance.
Other impacts resulting from winter storms include damage to plumbing, sewers, and waterlines, as well as minor roof damage and house fires resulting from portable heaters.
First responders are increasingly at risk as they respond to traffic incidents and calls for medical attention. They are vulnerable to the same transportation dangers as other citizens, but often have to go out in hazardous conditions when ordinary citizens would not.

Other than agricultural loss, hazards include icy roads and bridges, power outages, structural damage from fallen trees and limbs and exposure to extreme cold. The protection of economically important crops and livestock hinges on the availability and accuracy of weather information. Low income households can also become vulnerable to winter storm conditions if heating systems don't exist or are not operable. Unfortunately, public works departments in Florida generally do not have adequate resources to de-ice roads and bridges or remove snow from roadways, so even small amounts of snow and ice can be a concern.

b. Identifying Structures

Generally, structures are not vulnerable to severe winter storm/freeze in Levy County. However, the agricultural sector and respective land areas can be significantly harmed by severe winter storm/freeze. Table VII-7 and Table VII-8 describe structures and values by jurisdiction, categorized as Agriculture, as Agricultural land will be the most affected.

Also, Power supply facilities have proven to be the most vulnerable critical facilities because winter storms with an extended time frame cause peak use periods to also be extended. The result is that power suppliers cannot meet demand and must generate a pattern of "rolling brown-outs" that create temporary power outages in a geographic pattern.

c. Estimating Potential Loss

According to FEMA's *Understanding Your Risks: Identifying Hazards and Estimating Losses* (August 2001), there are no loss estimation tables to calculate extent of damage for severe winter storm/freeze.

Misc. Infrastructure	5	9,451,405
TOTAL	**283**	**83,316,241**

d. Analyzing Development Trends

Areas vulnerable to flood from dam failure, including Yankeetown and Inglis, have had the largest proportionate population growth since the 2000 census. Generalized future land uses located within these vulnerable areas include Conservation, Recreation, Commercial, Industrial, with the majority of the area in Residential (see Map VII-1 through VII-9).

e. Multi-Jurisdictional Risk Assessment

The tables below describe the structures and values, by municipality, that are vulnerable to flooding from dam failure.

Table VII-59. Dam Failure Vulnerability by Jurisdiction

Jurisdiction	# Bldgs	TOTAL Value
Inglis	178	41,258,720
Yankeetown	104	36,798,406
Levy Un-Incorporated	1	5,259,116

D. Economic Vulnerability

Agriculture is the largest economic generator in Levy County. Forestry products are a major export of the County. The forestry industry is more disaster resistant than other agricultural crops such as watermelons or peanuts which also make significant contributions to the local economy. Mitigation measures to reduce crop loss from hurricanes are not considered practical. However, mitigation of wildfire damages to the forestry industry could be implemented through policies, planning and best management practices. Chapter XI includes recommendations for initiatives to mitigate wildfires.

Another industry that brings money into the County is the tourism industry. Tourism is not fully reflected in the tables above because restaurants are included as commercial. The largest single generator of tourism income in Levy County is the Cedar Key business district. Not only is the downtown area near the Gulf and susceptible to wind and wave, but the largest and newest restaurants are built on a wharf. The foundations for these structures are actually pilings in the Gulf of Mexico. Obviously, this is a very vulnerable coastal location. The proposed hardening and storm resistance outfitting of the community center in Cedar Key will have a definite economic benefit if implemented all of Cedar Key's businesses. The initiative to harden, provide back-up power generation and secure a water filtration system for the community center will allow for a return to normalcy within the community. This will allow for businesses and citizens to resume their practice and recover in a quick and timely fashion. The actual cost savings generated by this initiative will depend on participation rates. However, the economic value the mitigation initiative brings to this small, remote island community is unarguably a very important step toward a more disaster-proof local economy. Economic losses resulting from a tropical storm or even a Category 1 hurricane can be effectively mitigated by these projects if implemented. Economic losses to the contents of Cedar Key structures will be significantly higher without their requested projects.

Another project for the city is to utilize a portable generator for lift station operation during power outages. Without this, the city will have an inoperable sewer system creating a health and environmental

VIII. HAZARD MITIGATION PROJECTS AND INITIATIVES

The mitigation initiatives that have been developed have their basis in the community guiding principles on hazard mitigation. The initiatives are intended to actively reduce a community's vulnerability to hazards. This has been justified through the vulnerability assessment section of the strategy. Finally, mitigation initiatives accurately reflect the community's needs. The Working Group assigned to develop the Strategy should continue to assure that local needs are incorporated in the mitigation initiatives. These steps help develop projects that have their basis in the community's overall vision of hazard mitigation, or directly address vulnerability to hazards.

Most governments conduct mitigation activities on an ongoing basis by implementing projects that simply make good sense. However, documenting and itemizing the amount of money a community spends each year on these activities will identify where mitigation funds are being spent. Some federal grant programs require local governments to secure matching funds. In the future, program funds spent on mitigation in the community may count as a local match. Therefore, it is recommended that local governments keep a record of ongoing mitigation activities. In addition, procedures developed to monitor and coordinate these expenditures will help towards expediting recovery from future natural disasters.

The Capital Improvements Element from the local government Comprehensive Plan includes a list of prioritized work projects. This list can serve as a model for prioritizing mitigation projects and programs for funding. Mitigation projects that are listed in the Capital Improvements Element of the local Comprehensive Plan will receive additional points toward approval in the competitive grant process.

Numerous funding programs are available to facilitate the process of identifying and implementing mitigation initiatives such as the Community Development Block Grants (CDBG), the Emergency Management Preparedness and Assistance Program (EMPA), the Hazard Mitigation Grant Program (HMGP), and the Flood Mitigation Assistance Program (FMAP). Additional information regarding grant funding sources for mitigation activities is included in Chapter IX (Funding Sources).

Listed below is the ranked and prioritized list of mitigation initiatives. The project list also appears a second time in unranked order. The initiatives have been nominated by the County and municipal representatives on the Working Group and prioritized by the Group using the adopted criteria. An average score was developed from the group scoring. Vulnerability analysis has been performed by the staff to the Working Group using the approved criteria.

During this scoring process, evaluators were asked to assign up to 6 points for the category of "documentation of project costs". This number combined with the population served and the 16 total categories helped to evaluate the benefits of each project in relation to its cost. This consideration of the "documentation of project costs" as well as the up to 6 points assigned for population figures establishes a simplified cost to benefit value as scored by members of the Working Group. The scores for all sections (as seen in Appendix C) from the evaluation process were averaged to come up with a final score. Scored projects were then grouped into priority order for implementation.

Levy County understands the value of cost to benefit analysis. The Working Group understands that FEMA employs a formal cost-benefit computer module to determine project funding. As Levy County LMS projects move forward to the application phase, a more detailed cost-benefit analysis will be

Below is the current Project List as designated by the 2015 Working Group. Table VIII-2 is all projects submitted. Table VIII-3 is the project list by rank with scores. All projects on both the ranked and unranked lists are intended to mitigate existing and known hazards to the jurisdiction who nominated the project. In many cases, each initiative (project) mitigates hazards beyond the jurisdictional boundary of the nominating party and in all cases, mitigated multiple hazards in one way or another.

Table VIII-3 ranks submitted mitigation strategy projects into mitigation actions to be taken in the order of greatest importance to the county and its municipalities. These are the specific mitigation action to be taken should funding become available unless re-prioritized during the course of an event.

Table VIII-2. Project List Submitted for 2016

Project Number	Jurisdiction	Year Submitted	Project Description	Responsible Parties	Completion Timeframe	Potential Funding Sources
FS02	City of Fanning Springs	2009	City of Fanning Springs Sewer Project	municipal Building Dept	24-48 mo	PDM, EMPA, CDBG
FS05	City of Fanning Springs	2012	Waste Water Project	municipal Building Dept	6-12 mo	HMGP, EMPA, CDBG, Stafford
FS08	City of Fanning Springs	2012	Water Well Improvements- replace arsenic wells	municipal Building Dept	6-12 mo	HMGP, EMPA, CDBG, Stafford
FS10	City of Fanning Springs	2014	Island Causeway Improvement Project	municipal Public Works	12-24 mo	HMGP, CDBG, FDOT, SRWMD
YT03	Town of Yankeetown	2009	Establish Back-Up Emergency Operations and Preparedness Center	municipal Building Dept	6-12 mo	PDM, EMPA, CDBG
YT04	Town of Yankeetown	2009	Yankeetown- Implement Stormwater Management Plan	municipal Building Dept	24-36	HMGP, CDBG, SWFWMD
YT05	Town of Yankeetown	2009	Yankeetown- Develop Stormwater Management Plan	municipal Building Dept	12-24 mo	HMGP, CDBG, SWFWMD
WL01	City of Williston	2009	Generator for Hospital Lift Station	municipal Building Dept	6-12 mo	HMGP, EMPA, CDBG, Stafford

Project Number	Jurisdiction	Year Submitted	Project Description	Responsible Parties	Completion Timeframe	Potential Funding Sources
CH10	City of Chiefland	2013	City Well Improvements	municipal Building Dept	6-12 mo	HMGP, EMPA, CDBG, Stafford
CH11	City of Chiefland	2014	SW 4 Street Paving	municipal Public Works	12-18 mo	PDM, EMPA, CDBG
IG02	Town of Inglis	2009	Palm Street Road Improvements- Enlarge Culverts, Widen Bridge and Provide Safety Bumpers at Palm Street	municipal Public Works	12-24 mo	HMGP, CDBG, Stafford
IG03	Town of Inglis	2009	Pave Critical Evacuation Route of Gladys Street from hammock Road to	municipal Building Dept	12-24 mo	HMGP, CDBG, Stafford
IG04	Town of Inglis	2009	Town of Inglis Sewer System Feasibility Study	municipal Public Works	12-24 mo	HMGP, CDBG, Stafford
IG05	Town of Inglis	2009	Construct Addition to Fire Station for Central Command Headquarters Levy	municipal Public Works	12-24 mo	HMGP, EMPA, CDBG, Stafford
LC01	Levy County	2009	County- 800 MHZ Cedar Key	County EM	6-12 mo	PDM, EMPA, CDBG
LC02	Levy County	2009	Levy County- 800 MHZ Williston	County EM	6-12 mo	PDM, EMPA, CDBG
LC04	Levy County	2009	Mitigation Public Outreach	County EM	6-12 mo	PDM, EMPA
LC05	Levy County	2012	Firewise Education and Outreach	County EM	6-12 mo	PDM, EMPA
LC06	Levy County	2016	Improving stormwater drainage in Inglis-Yankeetown area	County Public Works	12-18 mo	PDM, EMPA, CDBG
LC07	Levy County	2016	Hardening of facilities structures at the Levy County Public Safety Complex	County Public Safety	12-24 mo	HMGP, EMPA, CDBG, Stafford
LC08	Levy County	2016	Replace all the windows at the Levy County Public Safety Complex with high impact windows	County Public Safety	12-24 mo	HMGP, EMPA, CDBG, Stafford
LC09	Levy County	2016	Redundant radio communication dispatch capability at the Levy County Public Safety Complex	County Public Safety	6-12 mo	PDM, EMPA, CDBG

Project Number	Jurisdiction		Score	Rank	Description
WL01	City of Williston	2009	65.43	9	Generator for Hospital Lift Station
WL03	City of Williston	2009	65.25	10	Generator for Fire and Police Station with 24 Hour dispatch
CH09	City of Chiefland	2013	64.8	11	Pavement and Storm Water Improvements for SW 4th Street
LC06	Levy County	2016	64.29	12	Improving stormwater drainage in Inglis-Yankeetown area
WL02	City of Williston	2009	64.28	13	Generator for Williston Elementary School
YT04	Town of Yankeetown	2009	64	14	Yankeetown- Implement Stormwater Management Plan
LC02	Levy County	2009	63.25	15	Levy County- 800 MHZ Williston
YT05	Town of Yankeetown	2009	62.25	16	Yankeetown- Develop Stormwater Management Plan
IG05	Town of Inglis	2009	61.75	17	Construct Addition to Fire Station for Central Command Headquarters Levy
CH11	City of Chiefland	2014	61.6	18	SW 4 Street Paving
LC04	Levy County	2009	61.5	19	Mitigation Public Outreach
BR02	Town of Bronson	2009	60.57	20	Emergency Generator for Sewer Lift Stations
YT03	Town of Yankeetown	2009	59.71	21	Establish Back-Up Emergency Operations and Preparedness Center
CH08	City of Chiefland	2013	57.6	22	Storm Shutters for Police Department
WL05	City of Williston	2012	57	23	Drainage Improvements on South Main Street at US2 7
IG03	Town of Inglis	2009	54.25	24	Pave Critical Evacuation Route of Gladys Street from hammock Road to US 19
CH07	City of Chiefland	2013	54.2	25	Storm Shutters for Building Department
FS05	City of Fanning Springs	2012	52.9	26	Waste Water Project
CH10	City of Chiefland	2013	51.6	27	City Well Improvements
WL06	City of Williston	2012	50.2	28	Pressure Reducing Valve for Potable Water System
CK03	Cedar Key	2009	50	29	Hardening for Roof, Doors and Windows at Community Center
CH06	City of Chiefland	2012	48.125	30	City Emergency Operations Center Equipment
CK02	Cedar Key	2009	47.25	31	Portable Generator for Community Center
FS10	City of Fanning Springs	2014	47	32	Island Causeway Improvement Project
CK04	Cedar Key	2009	42.75	33	Water Well Filtration System for Community Center
FS02	City of Fanning Springs	2009	41.43	34	City of Fanning Springs Sewer Project
WL04	City of Williston	2009	38.25	35	Drainage Improvements to NW 4th Street
BR03	Town of Bronson	2009	37.43	36	Storm Drainage on Oak Street
CK05	Cedar Key	2016	36.57	37	Raise a section of G Street between 1st Street and 4th Street that continually floods
WL07	City of Williston	2016	34.57	38	New Emergency Warning Sirens plus materials to hook up sirens to poles.

Table VIII-4. Hazards Related to Each Project

Project Number	Jurisdiction	Project Description	Tropical Cyclone	Floods	Wild fire	Sink holes	Coastal Erosion	Drought/ Extreme Heat	Torna does	Severe Winter Storm/ Freeze	Dam Fail ure
FS02	City of Fanning Springs	Sewer Project	X	X		X					X
FS05	City of Fanning Springs	Waste Water Project	X	X		X					X
FS08	City of Fanning Springs	Water Well Improvements- replace arsenic wells	X	X		X					
FS10	City of Fanning Springs	Island Causeway Improvement Project	X	X	X				X		
YT03	Town of Yankeetown	Establish Back-Up Emergency Operations and Preparedness Center	X	X	X			X	X	X	X
YT04	Town of Yankeetown	Implement Stormwater Management Plan	X	X		X					X
YT05	Town of Yankeetown	Develop Stormwater Management Plan	X	X		X					X
WL01	City of Williston	Generator for Hospital Lift Station	X	X	X				X	X	X
WL02	City of Williston	Generator for Williston Elementary School	X	X	X				X	X	X
WL03	City of Williston	Generator for Fire and Police Station with 24 Hour dispatch	X	X	X				X	X	X
WL04	City of Williston	Drainage Improvements to NW 4th Street	X	X		X					
WL05	City of Williston	Drainage Improvements on South Main Street at US2 7	X	X		X					
WL06	City of Williston	Pressure Reducing Valve for Potable Water System	X	X		X					
WL07	City of Williston	New Emergency Warning Sirens plus materials to hook up sirens to poles.	X						X		
BR02	Town of Bronson	Emergency Generator for Sewer Lift Stations	X	X	X				X	X	X
BR03	Town of Bronson	Storm Drainage on Oak Street	X	X		X					X

Project Number	Jurisdiction	Project Description	Tropical Cyclone	Floods	Wild fire	Sink holes	Coastal Erosion	Drought/ Extreme Heat	Torna does	Severe Winter Storm/ Freeze	Dam Fail ure
LC11	Levy County	Station generators at Levy County Fire Rescue Station 4, 6, 9, 10, and 11	X	X	X				X	X	X
CK02	Cedar Key	Portable Generator for Community Center	X	X	X				X	X	X
CK03	Cedar Key	Hardening for Roof, Doors and Windows at Community Center	X						X		
CK04	Cedar Key	Water Well Filtration System for Community Center	X	X		X					X
CK05	Cedar Key	Raise a section of G Street between 1st Street and 4th Street that continually floods	X	X							

- Localized flood control project
- Protective measures for utilities
- Relocation
- Retrofitting
- Safe rooms
- Storm water management projects
- Vegetation management

Through PDM, Florida has provided protection to local government structures and critical facilities, as well as reduced flooding in neighborhoods. Although the PDM program is federally funded, the program is administered through a partnership arrangement with DEM. In this capacity, the key responsibilities of the state are to:

- Solicit and review proposals from applicants
- Prepare and submit proposals in accordance with PDM funding guidance
- Manage the PDM program and funds available under the program

Public Assistance Funding

Section 406 of the Stafford Act authorizes funding to local governments for cost-effective repairs, restoration, reconstruction, or replacement of a public facility damaged or destroyed by a major disaster. This funding is site specific and must be tied to a specific damaged facility.

The Federal Coordinating Officer may authorize hazard mitigation measures that are necessary for compliance with codes and standards if the measures are in the public interest and the following conditions are met:

- The mitigation measures will substantially reduce or eliminate the risk of recurring damage to the facility.
- The measures reflect sound engineering and construction practices.
- The measures are cost-effective.
- Applicable environmental and floodplain management requirements have been met.

It is important that the State Hazard Mitigation Officer work with the Hazard Mitigation Engineer when inspecting the damage to make site specific recommendations for incorporating hazard mitigation measures into necessary repairs and to include them in the Damage Survey Reports.

Emergency Management Performance Grant

FEMA is responsible for leading and supporting the nation in a comprehensive, risk-based, all hazards emergency management program. The primary means of ensuring the development and maintenance of such a program is FEMA funding to states through the Emergency Management Performance Grant (EMPG). The purpose of the EMPG is to support comprehensive emergency management at the state and local levels, and to encourage the improvement of mitigation, preparedness, response, and recovery capabilities for all hazards.

DEM uses EMPG funding for programs in all four phases of emergency management: preparedness, response, recovery and mitigation. Examples of the effective use of EMPG funding for mitigation

The funds are also used for programs that will assist the public in determining the appropriateness of particular upgrades to structures, financing such upgrades, or for protecting local infrastructure from potential damage from a hurricane. Section 215.559 F.S., establishes minimum funding levels for specific program areas and creates an Advisory Council to make recommendations on developing programs within the RCMP.

The specific areas funded by the $10 million appropriation include retrofits for existing public facilities, the Mobile Home Tie Down program administered by Tallahassee Community College, a hurricane research program conducted by Florida International University, wind mitigation retrofit projects, and public outreach programs.

The shelter retrofit program receives $3 million of the annual $10 million appropriation. Of the remaining $7 million, forty percent of the funds are designated for the Mobile Home Tie Down program and 10 percent is designated for the hurricane research program. The remaining funds are used to competitively award contracts for wind mitigation retrofits projects and conduct public outreach programs to Florida homeowners and local governments.

Florida Communities Trust

The Florida Communities Trust Program (FCT) provides approximately $300 million annually to local governments. Small local governments with a population of less than 10,000 are eligible for a 100% grant award. The amount of any award or combination of awards to an applicant cannot exceed ten percent of the advertised amount of available funding. Application cycles are announced in the Florida Administrative Weekly at least 75 days prior to each application deadline.

The FCT offers incentives to assist local governments in protecting resources identified in the comprehensive plan. FCT helps to implement conservation, recreation, open space, and coastal management elements. FCT provides financial and technical assistance to acquire lands that conserve natural resources, correct undesirable development patterns, restore degraded natural areas, enhance resource values, restore deteriorated urban waterfronts, reserve lands for later purchase, use innovative land acquisition methods, and provide public access to surface waters.

When Florida Forever funding is available, FCT's Parks and Open Space program receives 21 percent of the funds and FCT's Stan Mayfield Working Waterfronts program receives 2.5 percent of the funds. In 2008, the Florida legislature created the Stan Mayfield Working Waterfronts Florida Forever grant program. This program sets aside 7.5 million of the annual 300 million dollar budget for seafood harvesting and aquaculture industries in Florida.

Florida Small Cities Community Development Block Grant (CDBG)

In addition to the long-established CDBG entitlement programs the state allocates funding for a Neighborhood Revitalization program and an Economic Development program. Typical activities that are eligible for the Revitalization program are:

- Construction of water and sewer lines
- Construction of streets and neighborhood facilities.
- Sewer and water system hookups.
- Upgrades to systems in low to moderate income neighborhoods.
- Housing.

that are not covered by other governmental assistance programs, insurance, or other conventional forms of assistance. Financial aid can be provided under the following categories:

a. Medical expenses
b. Transportation costs
c. Home repairs
d. Replacement of essential property
e. Protective measures
f. Funeral expenses

Seventy-five percent of the costs are funded by FEMA and 25 percent funded by the state and/or local government.

Disaster Unemployment Assistance
Individuals unemployed as a result of a major disaster, and not covered by regular state or private unemployment insurance programs, will be eligible for unemployment benefits. The weekly compensation received will not exceed the maximum amount of payment under Florida's Unemployment Compensation Program, and may be provided until an individual is re-employed or up to 26 weeks after the major disaster is declared, whichever is the shorter period.

Farmers Home Administration (FmHA)
Low interest disaster loans are made available to farmers, ranchers and agricultural operators for physical or production losses. Loans of up to 50 percent are made available to farmers, ranchers and agricultural operators for physical or production losses. Loans of up to 50 percent of the loss or $500,000 (whichever is less) may be made to either the tenant or owner of the agricultural business.

Income Tax Service
The Internal Revenue Service helps victims identify ways in which the disaster affects their federal income tax. Casualty loss credits, early tax refunds and information on lost documentation are some services available to disaster victims.

Food Coupons
Emergency food coupons may be made available to disaster victims. This program is administered by the U.S. Department of Agriculture at the federal level and Department of Human Resources DHRS at the state level. Length and eligibility for receiving food coupons will be determined by the President.

Community Outreach
FEMA and state officials will conduct "outreach" activities in an effort to inform disaster victims concerning what programs are available. This outreach will be accomplished by utilizing all media resources and by assembling and deploying outreach teams to remote areas to inform residents of assistance efforts.

Disaster Related Stress Management
Professional services are provided to help relieve disaster- related stress and prevent the development of more serious physical and mental health problems.

Florida Department of Insurance

X. RECOMMENDATIONS

The following list of recommended policy and program actions for hazard mitigation is based on the Community Guiding Principles as adopted by the Local Mitigation Strategy Working Group. These principles are a set of common goals and objectives derived from an analysis of the goals and objectives adopted within policies of all local governments within Levy County. Most of these policy areas are addressed in some way by each local government. It is suggested that local elected officials review the adopted goals, objectives and policies in the below listed policy areas to ensure that their adopted policies fit the needs of their respective jurisdictions. Additional policy areas listed have been suggested in the *Local Mitigation Strategy Guidebook.*

Develop policies and programs for mitigation of wildfire.
Policies should include an agreement with the County Forestry Agent to notify the Board of County Commissioners when fire restrictions are put into effect so the County can immediately adopt an Emergency Ordinance supporting the restrictions. This will greatly increase enforcement capabilities and also help to publicize the fire ban through the local media.

Homeowner education programs would be useful to instruct citizens on ways to mitigate the risk of wildfire around their homes.

Develop policies and plans for long- term temporary housing.
Initial programmatic steps to coordinate long-term temporary housing will be to assign responsibilities to identify appropriate housing resources, explore the process to coordinate State and federal assistance, and develop a plan.

The policy initiative for long-term temporary housing will include adopting the Long-term Temporary Housing Plan (probably as an annex in the Long-term Recovery Plan) and assigning the responsibility to implement the plan when needed.

Local governments should integrate the findings of the adopted County Disaster Housing Plan into their local plans. Cities should ensure proper zoning and policies are in place to facilitate the use of emergency disaster housing.

Develop Public/Private agreements for post-disaster recovery of the local business community.
Issues for possible agreement could include public use of privately owned heavy equipment or approved early re-entry for business owners to their place of business after a mandatory evacuation.

Develop policies and programs to retrofit existing manufactured homes in flood prone areas and regulate the location of new manufactured homes in flood prone areas.
Homeowner education programs need to stress the importance of anchoring the mobile home.

Develop a study of the benefits and costs of mobile home anchoring and educate homeowners. Also urge mobile home dealers and finance companies to develop incentive programs for structural stabilization.

emergency management personnel to make timely and accurate decisions about evacuation procedures. The county planning departments will be able to make more accurate decisions about building permits and comprehensive plan updates. Levy County has a number of areas that flood. Based on the previous FEMA maps the flooding was so severe over 50% of the County lies within a floodplain. With the LIDAR data and potential manipulation of GIS data a clear picture of the problem areas will be created.

Disaster Resistant Planning Techniques and Strategies

This chapter also deals with future actions that could be taken to continue building a disaster resistant community. Needs assessments and future vulnerability assessments will reveal mitigation opportunities within the various fields of Emergency Management, Planning and Public Administration. As in most cases it is much easier to identify problems than it is to identify solutions. This chapter presents strategies for addressing the problems by providing a direction where solutions can be found.

The action items that are needed to ensure operability during a storm are primarily the same for all jurisdictions. To better understand which communities should focus on which action items a spreadsheet was created. In this spreadsheet the values of High (H), Medium (M) and Low (L) have been assigned to each municipality's need to focus their primary mitigation strategies on a particular action item. A definition of the values and their relationship to the action item is described below.

Actions that promote control of hazards

- Storm water controls – Stormwater management plans through grants and fees.
  - H – Extreme documented flooding in jurisdiction
  - M – Some flooding in specific areas
  - L – Little to no flooding
- Structures to lessen hazard impacts – Hurricane shutters are one of the most cost-effective mitigation measures. All critical public facilities should be "hurricane hardened." New facilities should be built to current structural standards for withstanding hurricane winds.
  - H – Many critical facilities without hurricane hardening
  - M – Few critical facilities without hurricane hardening
  - L – All critical facilities have hurricane hardening

Actions that protect public facilities and infrastructure

- Adjust infrastructure location, design – Avoid building new public infrastructure that will encourage growth in high hazard areas. Design new public infrastructure to withstand disasters.
  - H – High development rate
  - M – Some new development – very few public buildings
  - L – New development – primarily private
- Retrofit community facilities – Shutters, hurricane clips, roof retrofits, door braces
  - H – Many facilities without hurricane hardening
  - M – Few facilities without hurricane hardening
  - L – All facilities with hurricane hardening
- Hazard-proof new community facilities – Assure proper elevation, back-up generators, safe guard computers and communications systems.
  - H – All public facilities should comply due to potential hazards
  - M – Some potential for future hazards
  - L – Very little potential for hazards

Table X-1. Action Items by Jurisdiction

	Bronson	Cedar Key	Chiefland	Fanning Springs	Inglis	Otter Creek	Williston	Yankeetown	Levy Unincorp.
Actions that promote control of hazards									
Storm water controls – Stormwater management plans through grants and fees.	M	H	M	H	H	M	L	H	M
Structures to lessen hazard impacts – Hurricane shutters are one of the most cost-effective mitigation measures. All critical public facilities should be "hurricane hardened." New facilities should be built to current structural standards from withstanding hurricane winds.	L	H	M	M	H	M	L	H	M
Actions that protect public facilities and infrastructure									
Adjust infrastructure location, design – Avoid building new public infrastructure that will encourage growth in high hazard areas. Design new public infrastructure to withstand disasters.	M	M	M	M	M	L	L	M	L
Retrofit community facilities – Shutters, hurricane clips, roof retrofits, door braces	M	H	M	M	H	M	M	H	M
Hazard-proof new community facilities – Assure proper elevation, back-up generators, safeguard computers and communications systems.	M	H	M	M	H	L	M	H	M
Site community facilities to maintain services – Site community facilities near trunk lines for utilities and ensure that access roads don't flood.	L	L	L	L	L	L	L	L	M
Actions that promote emergency preparedness and response									
Preparedness plan/program – increase communications system and warning procedures for all disasters. Increase weather monitoring capabilities.	M	M	M	M	M	M	M	M	M
Emergency response plans – Continue ongoing efforts for planning, preparedness and training. Focus on issues identified in needs assessments.	M	M	M	M	M	M	M	M	L
Evacuation plan/program – Begin with population/ housing analysis possibly following the 2010 census. Perform transportation analysis using updated traffic counts and roadway capacities.	L	M	L	L	M	L	L	M	L
Sheltering plans – Perform structural analysis of shelters and incorporate population analysis.	L	M	L	M	M	L	L	M	M

Mitigation Strategy, including location and estimated value of vulnerable structures and critical facilities, is used by the communities in developing the project list.

The main focus of the LMS is for grant writing. By nominating projects, grants can be applied for, that reflect the needs of the community. Because emergency management affects the well-being of the all of the residents of the community, incorporating the projects identified in the LMS into other program areas is very important. Each of the programs or ordinances, as they come up for review will incorporate information from the LMS. The comprehensive plan goes through the Evaluation and Appraisal Report (EAR) process in a five year cycle. The updates should include, in the capital improvements element, references to the projects nominated in the LMS. By incorporating the LMS into these plans, not only will they have fulfilled their requirements to include mitigation into their plans such as the comprehensive plan, they will also reinforce the support of the LMS. This and all other above mentioned plans are written with the goal of threat and vulnerability reduction. Those who draft these other plans and documents must consider the LMS as the Working Group has considered their documents in the current efforts. This creates cohesion between projects and not redundancy. Building, utility and water codes should be written with emergency management policies as their basis. Storms have a lasting effect on infrastructure. Each jurisdiction can glean from the LMS where the areas of greatest concerns are. In so doing, this document creates an interdisciplinary approach to plans and grant writing.

The appropriate membership of the Working Group (to include County, agency, municipal and private business representatives) will review the Strategy; amend their responsibilities under the Strategy; and update the Hazard Identification / Vulnerability Assessment and Mitigation Initiatives by modifying procedures, maintaining current data and/or adding new projects and deleting completed projects.

Proposed amendments to the Local Mitigation Strategy that are approved by the Working Group shall be submitted to the Levy County Emergency Management Director for presentation to the Levy County Board of County Commissioners for public comment and final adoption.

Nominating and Ranking Projects and Initiatives

The first step toward developing the required single, prioritized list of mitigation initiatives is to establish and educate the Working Group. The initial core Working Group members were the County and municipal representatives as appointed by their respective jurisdictions. At their first formal meeting the Working Group initiated more participation from the private sector, as directed in the "Guidebook," by inviting the local Chambers of Commerce to participate in the LMS process. Various local religious institutions and aid services have participated. Though they have not provided projects, their input was received and has helped craft the final work product. Once formed, the Working Group adopted a representative membership for voting on issues brought before the group. The current Working Group roster is included at the end of Chapter II.

Education of the group is and will remain an ongoing process. The Working Group found that the most useful information for the LMS process pertained to mitigation grants and the competitive grant process. Also of great interest were the maps generated for structural damage and storm surge. The most valuable information given by the Working Group were examples of the effects of previous flooding or storm events. These were used as a measure of vulnerability.

Before projects were submitted, a system for evaluating and ranking the projects had to be set into place. The adoption of criteria to rank mitigation projects featured lengthy discussion through the course of

Therefore the majority of the projects gain the most benefit points by suggesting mitigation for critical facilities such as hospitals, fire stations, assisted living facilities, and schools. Cost effectiveness is a big key to having a project funded. Each project then is scored against itself - there can be no comparison because each project has a myriad of possibilities.

Adoption and Implementation of the Local Mitigation Strategy

This is an all-county document as is the Comprehensive Emergency Management Plan (CEMP). It is expected that the administration and update of future editions of this LMS will fall under the responsibility of the Levy County Emergency Management Department. In light of this expectation, the Working Group has directed that the local process to adopt the LMS be the same as the local process to adopt the CEMP.

Implementation of the LMS will be done by each of the local governments in Levy County or by other entities that may identify funding for projects listed in this LMS or future updates of the LMS. As with all plans, studies and strategy documents the final goal is implementation. The timing of implementation a factor that is dependent on funding mechanisms and a timeline for implementation cannot be established. However, it is clear that those initiatives with life-safety implications or initiatives that will eliminate losses should be implemented first. The methods for implementation are important, but stand as a secondary goal. It is the intent of this Strategy to keep all windows of funding opportunity open and open them further if possible. With this goal, the Local Mitigation Strategy plan will incorporate county planning department along with all participating agencies adopted ordinances, regulations, procedures or existing programs in order to promote hazard mitigation efforts. These would include Comprehensive Plans, Land Development Regulations, Floodplain Ordinances, Building Codes, Utilities Codes, Water and Sewer Service Ordinances and the Florida Building Code.

Public Participation

With the availability of the internet, newspapers, public announcements and members of the Working Group that are involved in many different groups, there is a plethora of public interactions to promote the LMS. The public involvement that has the highest participation includes citizen groups such as the American Red Cross and a variety of church organizations. These persons are allowed to participate in all aspects of the Working Group meetings. Obviously the voting members of the Working Group are the decision makers for furthering the project lists and amendments to the LMS, based on the recommendations of the Working Group. During the 2015 LMS process, public participation was represented by the interested citizen members of the Working Group. No feedback was provided or logged directly by any citizen on part of public participation to the Working Group during the review process and the plans availability in emergency management and regional planning council offices. Working Group members representing the communities within the County spoke for their jurisdictions and their citizens through the process during meetings of the LMS Working Group. Otherwise, no direct input was offered by the general public.

The availability of the plan for public comment will be located on-line at the Levy County website before final adoption. The contact for public participation will be the planners revising the LMS based out of the NCFRPC as well as the director of Emergency Management for Levy County. The contact information will include both telephone as well as the email address for both of the agencies. This will allow the public to reach an agency they feel most comfortable with in discussing the LMS.

- Evaluation of success/failure - A method to formally evaluate the LMS should be identified by the Division of Emergency Management. The LMS will be a success to the citizens of Levy County if it can be used by local governments as a grant writing tool and can identify ways to reduce the impact of disasters.

- Updatable, objective achievement measures - Indicators for the evaluation of the performance of the LMS have not been developed at this time and their value remains questionable.

- Citizen participation in the LMS process - Questionnaires that have been distributed can be sent out again or recreated to provide additional information. It is recommended that future updates of the LMS receive media exposure through press releases to encourage public participation.

Each year the plan will be evaluated by the Chairman and the Working Group by the first meeting of the calendar year. The main question that should be raised, is whether or not the plan still reflects the character of the jurisdictions? The second question, have there been any rules or regulations that have been adopted in the year that would alter the effectiveness of the LMS document? Finally the third question, are there any changes in the administrative process or participation?

A check list approach is the best methodology for making sure all of the topics have been covered:

YEARLY REVIEW OF THE LMS DOCUMENT		
	Reviewed	Completed Change
CHARACTERIZATION CHANGES		
Population change of each jurisdiction		
Economic change / added businesses		
Annexations of properties		
Update the critical facilities list		
Update the sensitive facilities list		
Identify developments of regional impacts (DRI)		
Land Use map changes		
Updated Repetitive Loss Structure list		
RULES / REGULATION CHANGES		
EAR based amendments		
Land Development Regulations		
State Legislation		
ADMINISTRATIVE CHANGES		
Roster analysis		

Chair to monitor advancements or changes in mitigation projects being implemented by Working Group members. At every meeting the LMS Chair is going to ask for updates on current projects being implemented and suggestions for new projects. Any meeting announcement by agencies and organizations about project changes, problems, and advancements will be itemized by the LMS Chair in the project priority list and included in the summary of the meeting. This allows the project advancements and changes to be noted on paper on a quarterly basis every year.

- All LMS Working Group members will usually be given the meeting date and time around 6 months in advance, a reminder at the previous LMS Working Group meeting 3 months in advance, and an email reminder as well as a U.S. Postal mail packet sent three weeks in advance for those without email access.
- Two weeks prior to the meeting, the LMS Chair will ask for a public notice announcement to be posted in the local courthouse and on the Levy County Emergency management website; www.LevyDisaster.com, at least 10 days in advance of the LMS meeting.
- The LMS Chair will call each agency that is working on a LMS project usually two to five weeks before LMS Working Group meetings to monitor progress, hear concerns, give assistance, and answer questions regarding the mitigation projects.
- If any agency or organization that is implementing a project can't attend the LMS Working Group meeting, the LMS Chair will request an overview of their project update so that the Chair can present the information at the meeting.
- All mitigation project changes and advancements will be provided by the LMS Chair to all LMS Working Group members approximately three weeks before each of the four Working Group meetings. The notice may be provided by mailing, email or during the Working Group meeting should they not be available in advance. This information may include supplemental information about grant programs, etc. as has been done in the past.
- If need be, the LMS Chair will schedule meetings and site visits with the agencies and organizations requesting certain assistance with a mitigation project.
- Yearly, the LMS Chair will look for new ways of incorporating the community into the LMS process.
- Yearly, the LMS Chair will ask the LMS Working Group to review parts of the LMS document that may need to be updated.
- Also, the LMS Chair will prepare an annual report that captures the highlights of the previously mentioned quarterly meetings and the LMS developments.

Evaluating

The LMS Chair (Levy County Emergency Management) is responsible for evaluating any changes or situations that need to be taken into account for the LMS Working Group goals and for the LMS document to prosper. This process includes the following schedule and method:

- Every year during the summer months and after all natural disasters, the Chair will conduct an evaluation on the nature, magnitude, and/or type of risks that may have possibly changed within that timeframe for the county. This will be done by seeking new hazard and hazard vulnerability

- After making the revisions from the review, the LMS Chair will send the document to the State Hazard Mitigation Officer for initial review. This will be done approximately 7 months before the plan's expiration date.
- After this review, any changes will be completed with acknowledgment from the Working Group before it is sent to FEMA. This will be accomplished at least 5 months before the plan's expiration date.
- Upon FEMA or DEM approval, the county and all jurisdictions will adopt the LMS document within the following year.

Future Meetings

The meeting dates will be established at the end of each 5-year update cycle. For the 2016 and beyond updates the future meetings will be held on the last Friday of each month quarterly (January, April, July and October) or as availability of Working Group members permits. In the upcoming years the Working Group will be called together by the Chairman. If for some reason the Working Group establishes a new chair, the responsibility will be transferred accordingly. The steps below indicated the protocol for these biannual meetings.

The meetings are to take place quarterly or biannually, whichever is more obtainable by Working Group members. This is to allow jurisdictions to initially look for changes in their projects and community profiles. The second meeting is for the nomination of new projects. Because it is important for projects to be included in the LMS document in order to receive funding, each year the ranked listing of projects should be updated.

The jurisdictions to include in the invitation – County departments, Planning, DOT, Natural Resources, Forestry, Economic Development, Chamber of Commerce, Emergency Management, and an Academic Representative.

At the meetings, a copy of the LMS on CD should be available upon request. To get a better feel for the changes that have occurred, a yearly survey could be conducted at each of the first yearly meetings asking for changes in each of the areas and projects previously added to the document. Keeping up with yearly changes is very important in the struggle to get projects funded and create a safer County to live in.

LEVY COUNTY
LOCAL MITIGATION STRATEGY
Levy County Emergency Operation Center, Bronson
November 6, 2015

Meeting Summary

Attendees:
John MacDonald, Levy County Emergency Management Director
Leatha Keene, Levy County Emergency Management
Liz Florence, City of Williston
Danny Wallace, City of Williston
Michael Hancock, Cedar Key
Robert Robinson, Cedar Key
Bill Hammond, Levy County Building Department
Lauren Yeatter, NCFRPC

Welcome and Introductions
John MacDonald, Director of Levy County Emergency Management and chairman welcomed all in attendance to the Local Mitigation Strategy (LMS) and called the meeting to order at 10:10 a.m. Attendees introduced themselves.

Levy LMS 5-year update
Lauren Yeatter, staff to the Working Group gave a presentation about the LMS 5-year update process. The presentation covered the topic of Mitigation generally and the requirements of the LMS, including the 5-year update. Data, sources, and methodologies were also presented to the Working Group.

The Working Group discussed the benefits of participating in the LMS process. The Working Group also discussed which hazards were identified in the LMS and the need to update the project list.

Future Schedule
The group was thanked for all their work and participation in the rewrite process. Staff informed the Working Group that the results of the hazard and vulnerability analysis would be presented for the next meeting. Working Group members were encouraged to be prepared to add and/or delete projects from the list during the next meeting.

Next Meeting
December 10, 2015

Adjourn-11:30 a.m.

XIII. Appendix B: Agenda and Sign-In Sheet

LEVY COUNTY COMMUNITY WILDFIRE PROTECTION PLAN WPORKING GROUP

Friday
May 20, 2011

Name	Agency/ Contact Information
Benjamin W. Beauchamp	DOF
Lydie Bond	DOF
Danny Wallace	WFR
[illegible]	LCDEM 352-486-5213
Michael Arnold	WRPC
Reatha Keener	LCDEM

LEVY COUNTY LOCAL MITIGATION STRATEGY 2012- 2013

Friday
May 3, 2012

Name	Agency/ Contact Information
TOM SHOLES	YANKEETOWN COUNCIL 954-650-0212 TSHOLES@BELLSOUTH.NET
Laurie Copeland	City of Chiefland 493 6711 laurie@chieflandfla.com
BILL HAMMOND	city of Chiefland 493-6827
Adam Hall	city of Williston 352.528.3060
Cyndie McQuaig	City of Williston 352-528-3060
Danny Wallace	Williston Fire 352-528-3203
MARK S. Johnson	Levy County Emergency Management
David Knowles	Levy County Public Safety 352-486-5209
Sara Douglass	BOT WOP Yankeetown
Cheryl Nichols	City of Fanning Springs

(Board of Directors Withlacoochee Gulf Pirates)

LEVY COUNTY LOCAL MITIGATION STRATEGY 2012- 2013

Thursday
April 11, 2013

Name	Agency/ Contact Information
Sally Price	Inglis Commissioner
Mayor Glenda Kirkland	Mayor of Inglis
Laurie Copeland	City of Chiefland laurie@chieflandfla.com
David Pieklik	NCBDC . director@naturecoast.org
Bill Hammond	Levyco. Levyb2@bellsouth.net
Danny Wallace	City of Williston / WFR
Adam P McNiece	Yankeetown
Jimmy Dunford	Town of Bronson
Jerry Horton	Forest Service
Joe Rinaudo	LCDPS
Connie Caldwell	Otter Creek - Town Clerk
Cheryl Nikola	Fanning Springs
Alesha Arnold	[illegible] Levy Public Safety
W. Casey DuQuette	Levy Co. Rd Dept.
Ludie Bond	Florida Forest Service
Mark J. Johnson	Levy Co. E.M.
McArnold	WRPC LMS staff

LEVY COUNTY
LOCAL MITIGATION STRATEGY

Community Wildfire Working Group

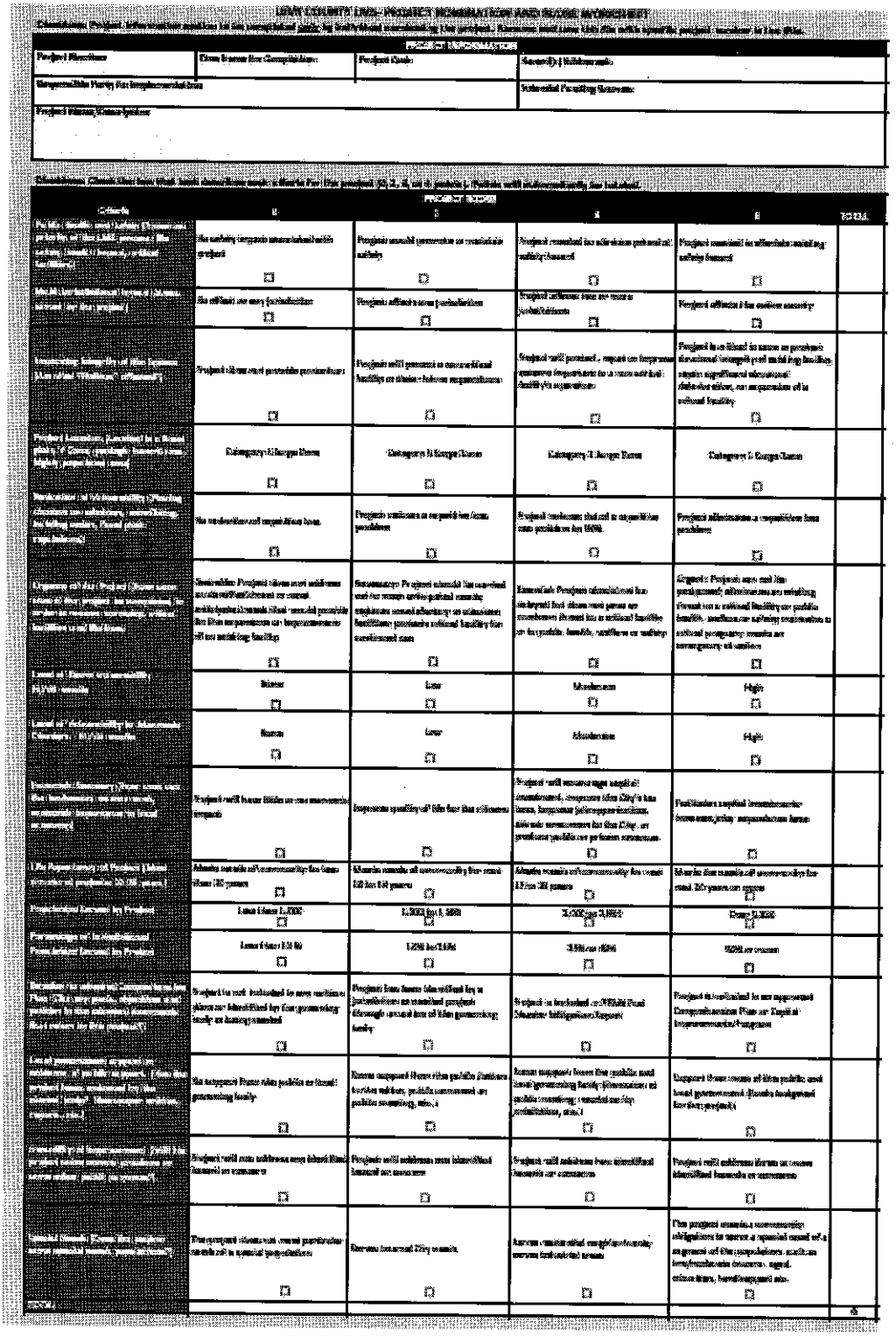
Thursday
May 8, 2014

Name	Agency/ Contact Information
JOHN McPHERSON	CEDAR KEY WATER & SEWER DISTRICT 352 543 5285 JOHN@CKWATER.ORG
RON GRANT	PLANNING COMMISSION YANKEETOWN
TOM SHOLES	TOMMYSHOLES@GMAIL.COM
[illegible]	FANNING SPRINGS
Dave Pieklik	NCBDC director@naturecoast.org
[illegible]	LCEM
Robert Robinson	Cedar Key Fire / City cedarkeyfire@bellsouth.net
Glenda Kirkland	MAYOR Inglis
Michael Arnold	WRPC
David Knowles	KU Levy County DPS
~~Michael Arnold~~	~~WRPC~~ MA

LEVY COUNTY
LOCAL MITIGATION STRATEGY

Community Wildfire Working Group

Thursday
May 7, 2015

Name	Agency/ Contact Information
Ron Grant	CERT
Drinda B Merritt	Inglis
TOMMY SHOLES	YANKEETOWN TOMMYSHOLES@GMAIL.COM
Debra L Weiss	yankeetown dlweiss@bellsouth.net
LAUREN YEATTER	WRPC / LYEATTER@WRPC.CL
Leatha Keene	LCEM leathakeene@levydisaster.com
Michael Arnold	WRPC / Staff
[illegible]	Levy EM

XIV. Appendix C: Project Nomination and Scoring Worksheet