



City of PALM COAST

Community Development Department
Planning Division

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City of Palm Coast Floodplain Management Annual Progress Report August 2016

Executive Summary

The purpose of this document is to provide an annual account of activities associated with the City of Palm Coast (“City”) Floodplain Management Program. This document facilitates information that can benefit public officials, businesses, and the Citizens of Palm Coast.

The Flagler County Local Mitigation Strategy (LMS) serves as the City’s Floodplain Management Plan under the Community Rating System (CRS) of the National Flood Insurance Program (NFIP).

Under CRS Activity 510, the City is required to complete a Floodplain Management Plan annual progress report. This document serves as that report.

Annual Progress Report Development and Staff Roles

This document was prepared by one (1) of the City Certified Floodplain Managers (CFM), Denise Bevan, and subsequently reviewed by the two (2) remaining City CFM staff, Kendra Iannotti and Michael Brennan. The referenced staff and a newly formed team, Floodplain, Outreach, Awareness, and Management (FOAM) Team, routinely conduct meetings to ensure that CRS program activities are managed and processed throughout the year. Additional discussion of the Team’s role and responsibilities are discussed in the following sections.

Ms. Denise Bevan has been designated as the City’s primary CFM since the departure of Mrs. Constance Bentley in April 2016. She manages the City’s CRS program and facilitates updates throughout all City Departments. Ms. Bevan currently serves as the Team Leader of the newly established FOAM Team comprised of staff from various divisions. Additional Team detail is provided in the subsequent sections. Further, Ms. Bevan is the primary reviewer of elevation certificates during the building permit stage of development and serves as the City Liaison for the Flagler County Local Mitigation Strategy (LMS) Working Group. Lastly, her core responsibility revolves around the development process and reviews land use changes, development agreements, plats, and site development applications.

Mrs. Kendra Iannotti actively participates in all CRS program activities and CFM meetings. Mrs. Iannotti’s primary responsibility is within the City Manager’s Office. She provides support for public information that includes website updates, brochures and library resources.

Mr. Michael Brennan secured the CFM designation in March 2013 and has dually served as a City Liaison to the LMS Working Group. Mr. Brennan is the Stormwater Manager with the newly formed Construction Management & Engineering Division in the Community Development Department. Mr. Brennan oversees a multitude of flood hazard mitigation projects. His role and knowledge will continue to serve the CRS program and has proved to be a tremendous asset.

FOAM (Floodplain Outreach, Awareness & Management) Team Mission Statement:

To support and educate our citizens about flood hazards and the National Flood Insurance Program, while ensuring a safe community through steadfast stewardship of floodplain management, hazard mitigation, open space protection and comprehensive stormwater management.

The Team's priority is to ensure the City's esteemed reputation in the floodplain community is maintained while providing a safe environment for our citizens.

Members, Titles and CRS Activity Focus:

- Denise Bevan, CFM
City Administration Coordinator; Role: CRS Coordinator & City Floodplain Manager (All Activities)
- Damaris Ramirez
Land Development Technician; Role: All Activities
- Kendra Iannotti, CFM
Executive Assistant to the City Manager; Role: Activities 330, 350, 360
- Mike Brennan, CFM
Stormwater Manager; Role: Activities 360, 450, 540
- Conrad Troha
Swale Specialist; Role: Activities 360, 450, 540
- Cathy Almberg
GIS Specialist; Role: Activities 420, 440, 501
- Rickie Lee
Chief Building Official; Role: Support from Building Division
- Daniel Rewis
Plans Examiner; Role: Support from Building Division

Adoption of the LMS / Updates

The Flagler County LMS was adopted by *Resolution No. 2016-49* by the City Council on May 17, 2016. The LMS is required to be updated every five years and is due for an update by May 2021. This report respects the effective LMS that gives Flagler County and its municipalities the opportunity to determine what all-hazards mitigation actions need to be taken to minimize damage before the next disaster strikes. The 2016 LMS has undergone major revisions from the previous version.

In the 2014 annual report, it was noted that Flagler County secured a new planner, Mrs. Laura Nelson, whose primary area of expertise is hazard mitigation. Before coming to the Flagler County Emergency Management (FCEM) team, Mrs. Nelson served as the Lead Mitigation Planner at the Florida Division of Emergency Management. Since coming on in May 2014, Mrs. Nelson secured three interns of which one became a permanent position with FCEM as a full-time mitigation planner. The newly created position was the impetus that inspired a renewed and energetic approach by the County toward mitigation initiatives. County staff worked closely with City staff on the LMS rewrite while seeking the goal of securing applicable approvals before the close of the CRS community verification visit in April 2016. With close teamwork, this goal was achieved. During the 2013 CRS verification visit, the City received 162 points. The adopted LMS almost doubled the achieved points by scoring a total of 318 points; the rewrite secured Palm Coast one of the highest scores on the 510 activity in the State of Florida. County staff also assisted the City with securing additional points in numerous other activity areas. City staff will continue to work with County staff and other LMS stakeholders quarterly to enhance floodplain management activities across the entire County.

As part of this annual report, the City of Palm Coast reviews the LMS project list. Concurrently, the 5-year Capital Improvement Plan (CIP) is being evaluated for qualifying projects and fiscal year 2017 pending projects are nearing adoption via the budgeting process. City staff is currently merging the documents into the “Prioritized Project List” but do not expect final consideration until after this report has been transmitted.

Purpose and Objectives of the LMS

The purpose of the LMS is to develop a unified approach among County and municipal governments for dealing with identified hazard and hazard management problems, including flooding, in the Flagler County area. It established an ongoing process that makes hazard mitigation part of the daily routine for the entire community. The LMS also helps establish funding priorities for current proposed mitigation projects and develop priority mitigation projects to be completed with such disaster assistance funds as may be available after a disaster. Implementation of planned, pre-identified, and cost-effective mitigation measures not only helps reduce loss of life, destruction of property, and damage to the environment, but also aides in the decision making process during the recovery and reconstruction following a disaster.

The primary hazard mitigation goals, objectives, and guiding principles of the LMS are to:

- Goal 1.0** Minimize impacts from hazards to infrastructure, critical facilities, and property.
- Goal 2.0** Minimize the impact to natural resources (including water resources, wetlands, and coastal habitats).
- Goal 3.0** Promote community awareness of vulnerability and mitigation options.
- Goal 4.0** Reduce potential hazard related economic losses to businesses.
- Goal 5.0** Strengthen regional relationships in regards to mitigation among municipalities, agencies, and other organizations.
- Goal 6.0** Promote methods of funding mitigation projects, including innovative methods.

Flagler County Local Mitigation Strategy Working Group

As noted in the LMS, “the Working Group acts as a local coordination committee to support and recommend projects for various grant programs; recommends to other regulating agencies or organizations ideas on how to better mitigate the community against natural disasters; and provided educational outreach to the general public about ways to prepare for disaster and mitigation opportunities for their homes and businesses.” The Group’s core consists of representatives of local municipalities, local organizations and County departments, and is coordinated by staff of the County Emergency Management Division. The LMS Working Group meetings are scheduled quarterly scheduling with supplemental topic-based meetings (i.e. floodplain managers, infrastructure, wildfire mitigation, etc.). The Working Group will continue to regularly review and revise its Prioritized Project List that are eligible for federal and state funding, i.e. Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA) Program, etc.

List of Mitigation Initiatives

The LMS Working Group has established a list of mitigation projects. The list contains projects that are eligible for HMGP, FMA, and other federal and state funding. Many of the projects listed help to mitigate the potential of flood hazards.

See Attachment A to the report for the complete Prioritized Project List. As referenced in the previous section, the list is a living document and routinely updated. Additional consideration by the Working Group is anticipated due to the ranking process also being modified through the LMS rewrite.

Of the originally listed projects, over half have been completed since being placed on the list. “Weir Canal Palm Coast” and “Bridge Rehabilitation” line items inventory the major planned projects. Photographs have been provided for a selected completed project.

Weir Canal Palm Coast projects

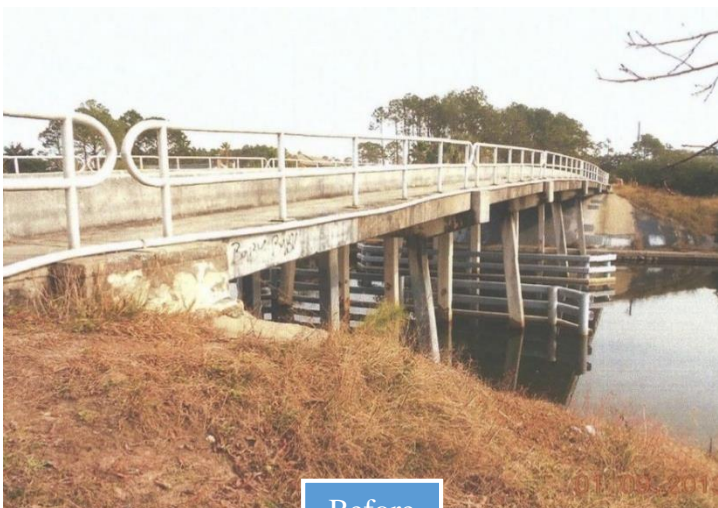
- LO-1: Completed (reported in 2015)
- PA-1: Completed (reported in 2015, an Emergency Project)
- BS-2: Future (2017)
- K-6: Future (2018)
- L-1: Future (2019)

Bridge Rehabilitation projects

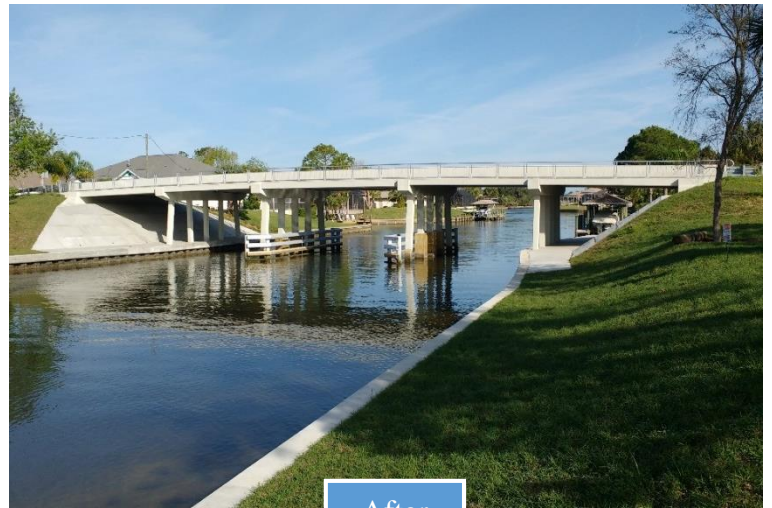
- 734063: Completed
- 734064: Future (2017)

Completed Improvements

Colechester Lane Bridge (734063 Rehabilitation Project)



Before



After

Beyond LMS projects, the City maintains a well-structured and rigid maintenance schedule of the stormwater drainage network which reduces the risk of flooding hazards. The following section inventories 2015-2016 maintenance activities conducted to ensure long-term sustainability of the City's infrastructure.

- Swale maintenance and rehabilitation (48.44 miles)
- Resurfacing and maintaining streets (17.33 miles)
- Valley gutter removal and replacement (13)
- Culvert pipe replacement (40 locations)
- Drainage ditch maintenance (154 miles 2x per year)
- Freshwater canal weed control (500 acres continual maintenance)
- Alternative weed control (1 per year, sediment removal pilot study in 2 canal segment locations)
- Repair /replacement of stormwater pipes thru seawall to saltwater canals (7 locations)

The actions taken within the section(s) above are part of the City of Palm Coast 5-year Capital Improvement Plan (CIP). The following Exhibit depicts the projects associated with maintaining the City's drainage and was effective during the reporting timeframe of this report.

STORMWATER MANAGEMENT FUND	FY 14 Actual	FY 15 Actual	FY 16 Budget	FY 17	FY 18	FY 19	FY 20	FY 21
Operating Expenses/Debt Service	3,904,977	4,169,599	4,433,213	4,521,877	4,612,315	4,704,561	4,798,652	4,894,625
Swale Rehab	55105	1,336,656	1,356,142	1,428,590	1,449,162	1,470,065	1,491,306	1,512,889
Swale Rehab Labor		528,820	542,068	628,590	641,162	653,985	667,065	680,406
Swale Rehab Materials		807,836	814,074	800,000	808,000	816,080	824,241	832,483
Pipe Replacement	55003	862,274	730,780	763,821	870,097	876,499	883,029	889,690
Pipe Replacement Labor		309,125	274,114	313,821	320,097	326,499	333,029	339,690
Pipe Replacement Materials		553,149	456,666	450,000	550,000	550,000	550,000	550,000
Weirs	55001	457,629	944,880	30,000	365,000	330,000	350,000	300,000
LO-1 Weir Replacement		-	412,373	-	-	-	-	-
M2 Weir Replacement		-	-	-	-	-	-	-
K1 Weir Replacement		-	-	-	-	-	-	-
K6 Weir Replacement		-	-	-	330,000	-	-	-
P1 Weir Replacement		-	-	-	-	-	300,000	300,000
M3 Weir Replacement		457,629	-	-	-	-	-	-
L1 Weir Replacement		-	-	-	-	350,000	-	-
BS-2 Weir Replacement		-	-	365,000	-	-	-	-
PA1 Weir Replacement Failure		-	532,507	-	-	-	-	-
Lehigh Canal Road Structure Access Improvements		-	-	10,000	-	-	-	-
Structure Repairs		-	-	20,000	-	-	-	-
Structure Replacement		-	-	-	-	-	-	-
Major Crossings	55232	5,265	13,250	500,000	-	300,000	-	400,000
Major Crossings - Boulder Rock		5,265	13,250	500,000	-	-	-	-
Major Crossings - Smith Trail K6		-	-	-	-	300,000	-	-
Major Crossings - Belle Terre P1		-	-	-	-	-	400,000	400,000
Modeling Improvements	55231	144,151	129,847	318,000	430,000	200,000	275,000	-
Modeling Improvements Sec 31		-	-	-	-	-	-	-
Modeling Improvements Sec 35		144,151	-	-	-	-	-	-
Modeling Improvements Sec 37		-	129,847	287,000	-	-	-	-
Modeling Improvements Sec 34		-	-	18,000	230,000	-	-	-
Modeling Improvements Sec 3C		-	-	13,000	-	200,000	275,000	-
Modeling Improvements -Matanzas		-	-	-	200,000	-	-	-
Electronic Monitoring System								
Canal & Seawall Replacements	55230	28,485	32,850	35,000	40,000	50,000	50,000	50,000
Valley Gutter Replacements		73,608	73,066	75,000	75,000	75,000	75,000	75,000
Land Acquisitions		76,062	18,662	20,000	20,000	20,000	20,000	20,000
Fresh Water Dredging		-	-	-	-	-	100,000	100,000
Freshwater canal bank clearing		-	-	-	-	-	-	-
Water tower road/structures (B-1, B-3)		-	-	-	-	135,000	-	-
Water tower road/structures (B-2)		-	-	-	-	-	-	-
Lehigh access and dredge @ Old Kings		-	-	110,000	-	-	-	-
New Equipment		146,107	6,900	126,000	-	-	-	-
Fund Balance		323,085	-	-	-	-	-	-
Total Expenditures		7,358,299	7,475,976	7,839,624	7,771,136	7,933,879	8,003,896	8,166,232
								8,290,931

CRS Program Participation

The LMS references the importance and benefit of the City’s participation in the Community Rating System (CRS) of the National Flood Insurance Program (NFIP). Under the CRS, the City undertakes flood protection measures beyond the minimum requirements of the NFIP. By doing so, the City achieved a “Class 5” certification, resulting in a 25% discount of flood insurance premiums issued within the Special Flood Hazard Area (SFHA) in the City. The City is currently undergoing recertification through a CRS verification visit and awaiting the final results.

The City achieves CRS points by undertaking various activities that promote flood protection. These activities are conducted by Floodplain Managers and various City departments. Following is a summary of certain ongoing activities by the Floodplain Managers and various departments:

Activity	Departments	CRS Activity #
Collect, review, and maintain elevation certificates. Provide copies to the public.	Floodplain Managers/ Planning/ Zoning/ Stormwater and Engineering	310
Provide Flood Insurance Rate Map (FIRM) information. Provide Flood Zone Determination Letters to the public. Review, maintain and update FEMA Letters of Map Amendments or Revisions. Provide flood insurance information.	Floodplain Managers	320
Provide outreach to the community. Provide flood protection information.	Floodplain Managers	330
Provide flood protection information at the library and on City website	Floodplain Managers/ Information Technology/ Flagler County Public Library	350
Provide technical advice and assistance to public with flooding conditions. Annually publicize the service.	Floodplain Managers/ Stormwater and Engineering	360
Encourage residents and businesses to purchase flood insurance coverage	Floodplain Managers	370
Preserve floodplain in open space and public acquisition.	Planning	420
Maintaining higher regulatory standards. Provide low density areas for floodplain properties. Review new development for compliance. Enforcement of regulations.	Floodplain Managers/ Planning/ Stormwater and Engineering/ Building Department/ Code Enforcement	430
Maintain and use digitized maps. Day to day management of the floodplain. Maintenance elevation reference marks.	Floodplain Managers/ Information Technology/ Stormwater and Engineering	440
Stormwater management, soil and erosion control, and water quality. Review building elevation to meet floodplain regulations.	Stormwater and Engineering/ Planning/ Floodplain Managers	450
Maintain repetitive loss records. Provide yearly notice of property protection.	Floodplain Managers	502

Implement and update Floodplain Management Plan.	Flagler County/ Planning/ Capital Improvements/ Floodplain Managers	510
Drainage system maintenance. Enforce and publicize stream dumping regulations.	Floodplain Managers/ Stormwater and Engineering	540
Emergency response program.	Stormwater and Engineering/ Flagler County	610

Certified Floodplain Manager Program

The Association of State Floodplain Managers (ASFPM) has established a national program for professional certification of floodplain managers. The program recognizes continuing education and professional development that enhances the knowledge and performance of local, state, federal, and private-sector floodplain managers. As referenced, one staff member is in the City’s Planning Division, one in the City Manager’s Office, and one in the Construction & Engineering Division has achieved the status of Certified Floodplain Manager (CFM). It should be noted 3 additional FOAM Team members will be seeking certification in the upcoming year bringing the total number of City CFMs to 6. These pursuits reflect the City’s commitment to professional services in implementing the City’s Floodplain Management Plan.

Training

The City CFM staff have participated in many training sessions to maintain the required Continuing Education Units (CEU) and beyond.

- April 2016: FFMA Annual Conference (St. Augustine, Florida)
- June 2016: EPA Releases 1st Ever National Wetland Condition Assessment Webinar
- June 2016: Annual Florida Stormwater Conference (Lee County, Florida)
- July 2016: Elevation Certificate Basics & CRS EC Requirements (Palm Bay, Florida)
- August 2016: Communicating Flood Risk Webinar

CRS Users Group

Through the leadership of Northeast Florida Regional Council (NEFRC) staff, a CRS Users Group was created to network government officials including the State Floodplain Manager to encourage communities to participate in the CRS program. The purpose of the group is to share approaches that have been working for our communities so that each local government can benefit, to identify issues and gaps that NEFRC and partnerships could help fill, and to generally create a support system within Northeast Florida so we can maximize community resiliency and the benefits of CRS. It is City staff’s understanding that this is the first Regional CRS User Group in the State. City of Palm Coast CFMs routinely participate in the functions of this Users Group.

Outreach

City staff targets opportunities to initiate and partner with external agencies to educate the general public regarding floodplain management and associated effects on insurance policies and safety matters. Staff has participated in various events to promote flood awareness. Please see the following.

- Annual Intracoastal Waterway Cleanup (September 2015)
- FEMA Open House (May 5, 2016)
- Arbor Day (May 7, 2016)
- Earth Day (April 2016)
- Citizen's Academy (60 citizens in 2015-2016)
- Employee Academy (86 employees in 2015-2016)
- Survivors Group presentation (July 2016)



Monitoring Proposed Preliminary Flood Insurance Rate Maps and Flood Insurance Study

City staff attended the FEMA Consultation Coordination Officer (CCO) Meeting and public Open House conducted on May 5, 2016 that shared the proposed Preliminary County-wide Maps and Flood Insurance Study. During the Open House, two Palm Coast citizens attended the event according to City staff. After the event, staff launched an interactive viewer that reflects effective and proposed map designations. The public can locate a property by property address. The Open House event was the first step in a process that may take until the summer of 2017 for adopting the preliminary maps that would supersede the current effective maps.

Interactive Map Viewer:

<http://copcgis.maps.arcgis.com/apps/webappviewer/index.html?id=fbd08192f4954973addf6dc2ed972a3b>

Summary

The Flagler County Local Mitigation Strategy (LMS), which serves as the City's Floodplain Management Plan under the CRS of the National Flood Insurance Program (NFIP), was formally adopted by the City of Palm Coast City Council on May 17, 2016. As part of the LMS, the City accounts for Mitigation Initiative Projects and associated status. One major bridge rehabilitation project and ongoing stormwater maintenance has been completed since the 2015 annual report with many other structures planned for rehabilitation / construction in future years.

The City of Palm Coast participated in the CRS community verification visit conducted on April 28, 2016. At this time, staff has been notified that activities continue to meet a Class 5 certification under the CRS; however, the technical review is ongoing with a final point determination still pending. Activities are undertaken by various City departments on an ongoing basis to retain the CRS certification, which results in substantial discounts to flood insurance premiums in the City of Palm Coast. These visits are conducted every 3 years for Class 5 or better communities.

City staff have steadily improved educational outreach activities beyond previous years. Further, the release of the Preliminary Flood Insurance Rate Maps and Flood Insurance Study has broadened staff's focus regarding outreach. City website content, publications, mailings and annual event venue elements have been enhanced to include information on the proposed map changes.

Attachment A

2016 LMS Prioritized Project List

Appendix F - Prioritized Project List

File #	Score	Project Name	Project Description	Hazard Mitigated*/ Jurisdiction	Agency Representative	Time frame	Possible Funding Source(s)	New or Existing Buildings/ Infrastructure	2016 Goal/ Objective	Status**	Last Updated
BNL-4	70	Stormwater Master Plan - Bunnell	Master plan will map all critical infrastructure, link to GPS, and identify infrastructure deficiencies/ critical needs and projects	Flooding/ Bunnell	City of Bunnell	Now-2.5 years	FMA, HMGP, PDM	New & Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer facilities	In-progress	2/17/2016
BNL-5	45	Stormwater Master Plan Implementation - Bunnell	Implementation of Stormwater Master Plan	Flooding/ Bunnell	City of Bunnell	2016	FMA, HMGP, PDM, Stormwater Utility	New & Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer	In-progress	2/17/2016
BNL-6	40	Hardening of Bunnell Community Center	Harden the Bunnell Community Center	Wind/ City of Bunnell	City of Bunnell	2015	HMGP, PDM, capital funds	Existing Buildings	Obj 1.2 Identify mitigation projects	Updated	2/17/2016
BNL-7	56	Hardening of Bunnell Fire Station	Harden the Bunnell Fire Station	Wind/ City of Bunnell	City of Bunnell	2015	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	Updated	2/17/2016
BNL-8	44	Hardening of Bunnell Public Works Facility	Harden the Bunnell Public Works Facility	Wind/ City of Bunnell	City of Bunnell	2015	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	Updated	2/17/2016
BNL-9	50	Hardening of Bunnell City Hall	Harden Bunnell City Hall	Wind/ City of Bunnell	City of Bunnell	2015	HMGP, PDM, capital funds	Existing Buildings	Goal 4 Reduce economic loss to businesses	Updated	2/17/2016
BNL-13	56	Portable Generator	Purchase a 3 phase 480v generator with trailer for backup power at lift stations and to assist with treatment facility power	Wind & Flood / City of Bunnell	City of Bunnell	2016	HMGP, PDM, capital funds	Existing Infrastructure	Goal 1 Minimize Impacts	Updated	2/17/2016
BNL-14	58	Residential Construction Mitigation Retrofits	The City received \$194,000 to retrofit residential homes against the wind hazard	Wind/City of Bunnell	City of Bunnell with Flagler County EM	1 year	State RCMP (grant program)	Existing Infrastructure	Goal 1 Minimize Impacts	In-progress	3/16/2016
FLB-2	72	Wastewater Pump & Lift Station Generators	retrofit 11 of the 25 lift stations with generator backup to ensure operation during power outages greater than 12 hours	Floods/ Flagler Beach	City of Flagler Beach	6 months	HMGP, PDM, CIP Fund	Existing Infrastructure	Obj 1.7 & Obj 1.6 resiliency of water/sewer facilities	Application Materials Complete	2/17/2016
FLB-3	60	Rebuild/Enhance Wastewater Pump Station #2	Above-ground pump is rusting away rapidly. Brand new pumps need to be installed below-ground, with a complete rebuild and upgrade of connecting infrastructure.	Floods/Winds/ Flagler Beach	City of Flagler Beach	7 months	CIP Fund, HMGP PDM	Existing Infrastructure	Obj. 1.7	Application Materials Complete	2/17/2016
FLB-4	51	Potable Well Generators	Well 10 and 12R do not have backup power. During a power outage, it is important to continue to provide water to the populace, without overtaxing other two wells.	Wind/Flood/ Flagler Beach	City of Flagler Beach	1 year	CIP Fund, HMGP PDM	Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer facilities	Application Materials Complete	2/18/2016
FLB-5	52	Ocean Palm Subdivision Stormwater Improvement	New swales, pipes, outfall, retention ponds and improvements to an existing outfall to help mitigate flooding to homes in the surrounding area	Flood/ Flagler Beach	City of Flagler Beach	6 months	CIP Fund, HMGP PDM, Legislative	New & Existing Infrastructure	Goal 1 Minimize Impacts	Application Materials Complete	2/18/2016

Appendix F - Prioritized Project List

File #	Score	Project Name	Project Description	Hazard Mitigated*/ Jurisdiction	Agency Representative	Time frame	Possible Funding Source(s)	New or Existing Buildings/ Infrastructure	2016 Goal/ Objective	Status**	Last Updated
FLB-6	56	Alleviate Nuisance Ponding on A1A in Flagler Beach	During normal rainfall events, A1A in Flagler Beach becomes littered with larges, deep puddles.	Flood/ Flagler Beach	City of Flagler Beach	3 years	FDOT, FDEP, PDM, FMA	Existing Infrastructure	Goal 1 Minimize Impacts; Goal 2; Goal 4	New	3/2/2016
FLB-7	58	Residential Construction Mitigation Retrofits	The City received \$194,000 to retrofit residential homes against the wind hazard	Wind/Flagler Beach	City of Flagler Beach with Flagler County EM	1 year	State RCMP (grant program)	Existing Infrastructure	Goal 1 Minimize Impacts	In-progress	3/16/2016
PC-2	72	Surface Water Control Structures	Rehabilitate or replace designated SWCS for the stormwater drainage system within Palm Coast. Designated structures that remain are: BS-2, W-1, L-1, K-6, K-1, & P-1	Flood, Drought, Saltwater Intrusion/ Palm Coast	City of Palm Coast	6 yrs total	HMGP, Ad Valorem Tax, Stormwater fees	Existing Infrastructure	Goal 1 Minimize Impacts	Current	2/27/2016
PC-3	70	Weir gate Automation and monitoring (SCADA)	Retrofit and upgrade all surface water control structures (SWCS) to a Supervisory Control and Data Acquisition (SCADA) System to permit the monitoring and control of drainage system allowing rapid lowering of water levels to account for stormwater accumulation	Flood, Drought, Saltwater Intrusion, trop cyclones/ Palm Coast	City of Palm Coast	4 years	HMGP, Ad Valorem Tax	Existing Infrastructure	Goal 1 Minimize Impacts	Current	2/17/2016
PC-4	68	Drought Mitigation Pumps permanently installed at weirs	Install high volume, low pressure water pumps at the sites of the Cities Surface Water Control Structures (SWCS) to pump stormwater upstream to recharge upstream aquifers and control water levels. A co-located SCADA System would provide automatic recharge during drought conditions, replenishing the ground water table and maintaining the proper head pressure to reduce possible saltwater intrusion.	Drought, Saltwater Intrusion/Palm Coast	City of Palm Coast	5 years	HMGP, Ad Valorem Tax, PDM, SJRWMD	New equipment at Existing Infrastructure	Goal 1 Minimize Impacts	Current	2/17/2016
PC-5	62	Water Resource weir installed on St Joe Canal at corner of US-1 and Palm Coast Parkway	Constructing a Water Resource Control Structure (WRCS) on St Joe Canal at the corner of US-1 and Palm Coast Parkway to hold back ground water to replenish and rehydrate the well fields: west of US-1	Drought, saltwater intrusion /Palm Coast	City of Palm Coast	5 years	HMGP, PDM, Ad Valorem Tax	New Infrastructure	Goal 1 Minimize Impacts	Current	2/17/2016
PC-6	80	PEP Panel Replacement	Retrofit PEP Panel with current upgraded panel with new power receptacle to allow operation be portable generator during extended FPL power loss.	All Hazards/ Palm Coast	City of Palm Coast	7 yrs	HMGP, Ad Valorem Tax	Existing Infrastructure	Goal 1 Minimize Impacts	ongoing	2/17/2016
PC-7	48	Bridge Rehabilitation	Rehabilitate existing bridges: 734064 (Colorado@College Waterway)	Wind, Flood, Wildfire/ All Jurisdictions	City of Palm Coast	1.5 years	Ad Valorem Tax, PDM, HMGP	Existing Infrastructure	Obj 1.5 Improve resiliency of transportation structure	Current	2/17/2016

Appendix F - Prioritized Project List

File #	Score	Project Name	Project Description	Hazard Mitigated*/ Jurisdiction	Agency Representative	Time frame	Possible Funding Source(s)	New or Existing Buildings/ Infrastructure	2016 Goal/ Objective	Status**	Last Updated
PC-8	78	Palm Coast Water Treatment Plant #2 Wellfield Expansion	Develop (5) additional Aquifer wells over a larger geographic area w/o increasing allocation to allow existing wells to rest, be rotated and reduce individual production rates lessening potential for saline water intrusion	Saltwater Intrusion/All Jurisdictions	Palm Coast Utilities	May-17	Palm Coast CIP, Existing Bond proceeds, water connection fees, SJRWMD Cost Share Grants, DEP Cost Share Grants	New & Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer facilities; Goal 2	In Progress	2/28/2016
PC-9	58	Residential Construction Mitigation Retrofits	The City received \$194,000 to retrofit residential homes against the wind hazard	Wind/Palm Coast	Palm Coast Planning	1 year	State RCMP (grant program)	Existing Infrastructure	Goal 1 Minimize Impacts	In-progress	3/16/2016
MJD-1	65	Backup Generator @ Government Services Complex Lift Station	Purchase & install 75kw backup generator for the utility lift station at the Flagler Co. Gov. Services Complex. Complex has backup but sewer does not.	Wind, Flood/City of Bunnell & Flagler Co.	City of Bunnell	<12 months	HMGP, PDM	Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer facilities	New	9/18/2014
MJD-2	60	Backup Generator @ Inmate Facility Lift Station	Purchase & install 75kw backup generator for the utility lift station at the Flagler Co. inmate facility. Jail has backup but sewer does not.	Wind/ City of Bunnell/ Flagler County	City of Bunnell	<12 months	HMGP, PDM	Existing Infrastructure	Obj 1.6 Improve resiliency of water/sewer facilities	New	10/27/2014
MJD-5	48	Purchase 4 Portable Generators	Purchase 2 (15KW) and 2 (25KW) portable generators to deploy during emergencies	Wind & Flood/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings & Infrastructure	Goal 1 Minimize Impacts	New	9/18/2014
MJD-6	62	Harden Flagler County Fire Station #31	Install impact resistant windows and doors	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	New	9/18/2014
MJD-7	62	Harden Flagler County Fire Station #51	Install impact resistant windows and doors and add a phase 1 generator	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	Submitted under DR 4177	9/18/2014
MJD-8	62	Harden Flagler County Fire Station #71	Install impact resistant windows and doors and add a generator	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	Submitted under DR 4177	9/18/2014
MJD-9	52	Harden Flagler County Public Library	Install impact resistant windows and doors	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	New	9/18/2014
MJD-10	40	Harden the UF/IFAS Extension Office	Install impact resistant windows and doors	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	New	9/18/2014
MJD-11	56	Harden the Flagler County Health Department Building	Install impact resistant windows and doors	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj 1.7 Retrofit structures	New	9/18/2014
MJD-12	50	Structural Survey of County Buildings	Hire an engineering company to perform a structural inspection of Flagler County Buildings in need of hardening.	Wind/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Obj. 1.2 Identify mitigation projects	New	9/18/2014
MJD-13	52	Westside Drainage System Planning & Permitting (Phase 1)	Conduct a conceptual study of major drainage systems to improve the efficiency of drainage and improve water quality in Western Flagler Co.	Flood/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, FMA, legislative funds	New & Existing Infrastructure	Objs. 1.2, 1.6, 1.7, 1.9	New	9/18/2014
MJD-14	48	Demo Rebuild of Fire Station 92 & FireFlight hanger	Construct a new Fire Station #92 outside the floodprone area and build a bigger station to house fire admin.	Flood/ Flagler County	Flagler County BOCC	<36 months	HMGP, PDM, FMA, capital funds, taxes	New & Existing Buildings	Objs. 1.8, 2.2	New	9/19/2014

Appendix F - Prioritized Project List

File #	Score	Project Name	Project Description	Hazard Mitigated*/ Jurisdiction	Agency Representative	Time frame	Possible Funding Source(s)	New or Existing Buildings/ Infrastructure	2016 Goal/ Objective	Status**	Last Updated
MJD-16	48	Elevation/reconstruction of Fire Station #81	Elevate the current station in the floodprone area and harden the facility to withstand 150mph winds	Wind & Flood/ Flagler County	Flagler County BOCC	<36 months	HMGP, PDM, capital funds, taxes	New & Existing Buildings	Objs. 1.1, 1.7	New	9/19/2014
MJD-22	54	Shelter Retrofit- Bunnell Elementary	Retrofit Bunnell Elementary to serve as a shelter during evacuations	Wind, Flood, Wildfire/ All Jurisdictions	Flagler County EM/School Board/BOCC	2 yrs	State Shelter Retrofit Program	Existing Buildings	Obj. 1.7 Retrofit to withstand impact	In Process	2/19/2016
MJD-19	48	Emergency Preparedness and Local Mitigation Strategy Educational Pamphlet	All hazard/ all jurisdiction flip page guidebook on all hazard preparedness for the residents of Flagler County as well as education on benefits of joining LMS Taskforce	All Hazard/ All Jurisdictions	Flagler County Emergency Management	1-1.5 yrs	Ad Valorem Tax, EMPA, HMGP	New Infrastructure	All Goals	In Process	1/30/2013
MJD-20	54	Wildfire Mitigation, Containment, and Suppression Improvements	Improve wildfire containment and suppression throughout Flagler County	Wildfires/ All Jurisdictions	Flagler County Emergency Services	Ongoing	HMGP, CDBG, Ad Valorem Tax	Existing Infrastructure	Obj. 1.4 Promote firewise techniques	In process	9/21/2013
MJD-21	35	Flagler County Shore Protection Project	Protect shoreline from increasing rate of erosion and deteriorating dune system	Floods, Tropical Cyclones, Severe Storms/All Jurisdictions	Flagler County Engineering	<1 yr	HMGP, CDBG, Ad Valorem Tax	Existing Infrastructure	Objs. 2.4 Enhance coastal ecosystems; 2.5 ID erosion solutions	Updated	2/27/2016
MJD-23	67	School Board Stormwater Analysis	Engineering study to plan for mitigation of longstanding stormwater drainage issues along SR 100, particularly the area that feeds into Graham Swamp	Floods/ Palm Coast/ All Jurisdictions	School Board	2 yrs	HMGP, CDBG, School Board Tax	New & Existing Infrastructure and Bldgs	Obj. 1.2 Identify mitigation projects	Updated	2/27/2016
MDJ-24	77	Develop a Community Wildfire Protection Plan	Develop a countywide CWPP and integrate it in with the LMS. Wildfire is one of Flagler's most threatening hazards.	Wildfires/ All Jurisdictions	Florida Forest Service	1 year	Florida Forest Service, PDM	New & Existing Bldgs & Infrs	All Goals	In Process	3/4/2016
FLG-1	64	Malacompra Drainage System- Phase 1	Construction of backbone system including stormwater ponds and outfall	Flood/ Flagler County	Flagler County BOCC	<24 months	HMGP, PDM, FMA, legislative funds	New & Existing Infrastructure	Obj 1.3, 1.6, 1.7, 1.8, 1.9	Some money set aside	3/3/2016
FLG-2	64	Malacompra Drainage System- Phase 2	Construction of the main trunk line	Flood/ Flagler County	Flagler County BOCC	<24 months	HMGP, PDM, FMA, legislative funds	New & Existing Infrastructure	Obj. 1.6 Improve resiliency of water/sewer facilities	Planning complete	3/3/2016
FLG-3	64	Malacompra Drainage System- Phase 3	Construction of side street lateral collectors in the Marineland Acres subdivision	Flood/ Flagler County	Flagler County BOCC	<24 months	HMGP, PDM, FMA, legislative funds	New & Existing Infrastructure	Obj. 1.6 Improve resiliency of water/sewer facilities	Planning complete	3/3/2016

Appendix F - Prioritized Project List

File #	Score	Project Name	Project Description	Hazard Mitigated*/ Jurisdiction	Agency Representative	Time frame	Possible Funding Source(s)	New or Existing Buildings/ Infrastructure	2016 Goal/ Objective	Status**	Last Updated
FLG-4	56	Restoration of Shoreline in Styles Creek at Princess Place Preserve in Flagler County	Restore enhanced erosion areas along the meanders of Styles Creek from Pellicer Creek to the Island House at the Preserve	Erosion/Flagler County	Flagler County BOCC Land Management	TBD	USFWS, NERT	Existing Infrastructure	Objs. 2.4 Enhance coastal ecosystems; 2.5 ID long term erosion solutions	Planning	12/1/2015
FLG-5	48	Backup Generator - Sheriff's Inmate Admin Center	Replace existing generator with a 100KW diesel powered generator to ensure uninterrupted operations. Current generator is very old	Wind & Flood/ Flagler County	Flagler County BOCC	<12 months	HMGP, PDM, capital funds	Existing Buildings	Goal 1 Minimize Impacts	Updated	3/2/2016
FLG-6	44	Replace and Repurpose Generator at Justice Center	Replace existing 400 KW generator at the County's Justice Center with a 600 KW generator so that the entire building will have backup power and move existing generator to a fire station	Wind/Flagler County	Flagler County BOCC	1 year	HMGP, PDM, Capital Funds	Existing Buildings	Goal 1 Minimize Impacts	New	3/3/2016
FLG-7	60	Bay Drive Park Drainage Project	Bay Drive Park routinely floods due to heavy rains. Drainage improvements are needed so that homeowners can access their properties	Severe Storms, Flood, Trop Cyclones/Flagler County	Flagler County BOCC (Engineering)	9 months	Capital Funds	Existing Buildings	Goal 1 Minimize Impacts	In Progress	3/4/2016
FLG-8	58	Residential Construction Mitigation Retrofits (grant 1)	The County received \$233,000 to retrofit residential homes against the wind hazard	Wind/All Municipalities	Flagler County Emergency Management	1 year	State RCMP (grant program)	Existing Infrastructure	Goal 1 Minimize Impacts	In-progress	3/16/2016
FLG-9	58	Residential Construction Mitigation Retrofits (grant 2)	The County received \$194,000 to retrofit residential homes against the wind hazard	Wind/All Municipalities	Flagler County Emergency Management	1 year	State RCMP (grant program)	Existing Infrastructure	Goal 1 Minimize Impacts	In-progress	3/16/2016

*Hazards mitigated do not necessarily match up to the hazards identified in Section 4 of the LMS Plan; hazards may be attributed to the impacts caused by the various hazards identified in Section 4. For example, "Power Outage" may appear in the hazard mitigated column which would equate to projects that have power failure as an impact such as tropical cyclones, torandoes and severe storms.

If the hazard mitigated is listed as "Wind," it refers to hazards that contain high wind, such as tropical cyclones, severe storms, and tornadoes. The "Flood" hazard would mitigate hazards such as sea level rise, coastal flooding, storm surge and floods.

**Deferred projects are listed as such due to a lack of funding.