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CITY OF LYNN HAVEN COMMUNITY RATING SYSTEM **PROGRESS REPORT 2014**

On August 24, 2010, the City of Lynn Haven's City Commissioners adopted Resolution No. 2010-08-513, updating the Bay County Local Mitigation Strategy Plan. Upon acceptance, the City committed to continued participation in the updating and expansion of the Bay County Local Mitigation Strategy Plan. This report shall serve as part of the City's effort to continue to update and expand on the Local Mitigation Strategy (LMS) Plan, and shall serve as the annual progress report required as part of the City's continued participation in the National Flood Insurance Programs (NFIP) Community Rating System (CRS).

BACKGROUND

The purpose of the LMS Plan is to identify strategies to help in the mitigation of future natural disasters, including flooding. The LMS Plan is intended as a guiding or planning document to help the city achieve this. Communities that adopt a hazard mitigation plan must update their plan documents and processes to continue to remain eligible for various pre- and post-disaster grant programs, funding opportunities, and other mitigation programs. In 2010, Lynn Haven, Bay County, and other local municipalities undertook the process to update the LMS Plan to avail our communities of these opportunities and programs. During this process, representatives from the County and local municipalities completed the update to the LMS Plan through a coordinated effort. Once the Florida Division of Emergency Management and the Federal Emergency Management Agency found the update to Bay County LMS Plan compliant with federal standards, the City adopted the plan via Resolution No. 2010-08-513. Since that time, the City of Lynn Haven has continued to coordinate with other local government jurisdictions to keep the LMS updated and monitor the

progress of the goals and objectives specified in the plan.

The City of Lynn Haven, as well as the whole of Bay County, is susceptible to a variety of natural hazards which endanger the health and safety of its citizens, jeopardize its economic vitality, and imperil the quality of its environment. Historical experience has demonstrated that the County and its municipalities can be affected by flooding, winds associated with tropical storm/hurricanes, tornados, and wildfires.

Storm hazards have the potential to seriously impact the general population. All residences near water are subject to flooding during severe rainfall events. Bayous may overflow, wetlands reach their capacity, and lake levels rise up and can inundate surrounding property. Areas such as North Bay and West Bay are subject to flooding, as are properties surrounding smaller water bodies. Because the City is relatively flat, water flows over land and tends to gather in depressed areas. Property that is only slightly lower than the surrounding areas can become a holding pond for stormwater.

Hurricane History

Hurricane Eloise

In 1975 damage from Hurricane Eloise in Bay County totaled US \$50 million (1975 dollars), and is attributed with 4 deaths, all indirectly associated to the storm.

Hurricane Kate

In November 1985 Hurricane Kate crossed through the County with over 100 mile an hour winds, though damage to structures and beaches was not considered severe.

Hurricane Opal

Hurricane Opal in October of 1995 caused 125 mile an hour wind gusts, along with estimated seven foot storm surges in the County. Bay County sustained the most overall damage in the Panhandle, with damage to 341 coastal structures, due to the high density of development and large number of structures which were not designed and constructed adequately to withstand the impacts of a major (e.g., 100-year frequency) hurricane. The Coastal Construction Control Line (CCCL) for Bay County had not been reestablished prior to Opal, as it had been for the other Panhandle counties; therefore, habitable structures in Bay County were not required to meet the more stringent siting and design standards of the State's Coastal Construction Control Line (CCCL) program intended to prevent structural damage caused by a major storm event such as hurricane Opal.

Tropical Storm Barry

During Tropical Storm Barry in August 2001, Panama City reported as much as 11 inches of rain, and heavy damage caused by waves, and storm surge was extreme. Storm surges and tides associated with Tropical Storm Barry were 2-3 feet along Bay County beaches.

Hurricane Ivan

Hurricane Ivan struck in September 2004 causing over 2.5 million cubic yards of sand loss to the beach areas. The erosion impact and structural damage to the County's coastal development was significant, though not severe. The protective buffer of the Panama City Beaches Beach Erosion Control and Storm Damage Reduction Project can be credited with reducing losses to beachfront development. The project, which was completed in April 1999, consisted of the placement of 9 million cubic yards of sand over an approximate 17.5 mile shoreline length. Prior to Ivan, the project area still retained roughly 91% of its original volume. Although a significant volume of sand was lost from the beach area into offshore areas as a result of Ivan, the beach project did the job it was intended to do in providing storm protection to upland development in the Panama City beaches area

Hurricane Dennis

Hurricane Dennis of July, 2005 caused flooding to a significant number of homes and businesses along the coast in Bay County in Panama City, Panama City Beach and Lynn Haven.

Both Ivan and Dennis caused considerable erosion to the project area, and the erosion losses appear to have been comparable to the losses sustained during Opal of 1995; however, in comparison to the very severe coastal construction damage that was caused by Opal, Ivan and Dennis inflicted only a minor erosion, even though the storm tide conditions were essentially the same. The beach restoration project proved to provide adequate protection.

Hurricane Katrina

Hurricane Katrina of August, 2005 exacerbated the coastal erosion situation. No damage to any structures was reported.

Tropical Storm Lee

Tropical Storm Lee in September, 2011 brought a significant amount of rain to the area. However, no damage to any structures was reported.

Hurricane Isaac

Hurricane Isaac in September, 2012 resulted in very little rain throughout the area. There was some minor flooding in a few coastal areas as a result of storm surge. However, at the time of this report, no damages to any structures have been reported.

The primary cause of this flooding in Lynn Haven has been tidal surges associated with hurricanes. Less often, the cause has been heavy rainfall in a short period of time. The City of Lynn Haven’s low lying land areas in relation to our location on St. Andrews Bay makes the potential for flooding a significant threat. The attached cut-out map(s) outline the identified Repetitive Loss Area(s).

GOAL AND OBJECTIVES OF THE LMS

The following goals of the Bay County LMS Plan are intended to serve as general guidance that define the long-term hazard mitigation strategies for the City, County, and other local municipalities. As previously stated, the use of these goals and strategies help guide the City of Lynn Haven in its efforts to reduce or prevent flooding and other natural hazards.

IDENTIFYING AREAS VULNERABLE TO HAZARDS AND APPROPRIATE MITIGATION ACTIONS

The City of Lynn Haven is concerned about repetitive flooding and has an active program aimed at helping citizens protect themselves and their property from future flooding. While tidal surges associated with hurricanes are an issue outside of the City’s realm of control, we have enacted stricter development guidelines in the Special Flood Hazard Areas located throughout the community. Additionally, our Street Department and Stormwater Division are constantly making improvements to the drainage system.

The City’s repetitive flood loss areas, and the total number of parcels in each area, are broken down as follows:

Repetitive Flood Loss Area One:

- Kentucky Avenue – 57 parcels
- Virginia Avenue – 37 parcels
- Alabama Avenue – 52 parcels
- Carolina Avenue - 51 parcels

Missouri Avenue –	44 parcels
Montana Avenue –	21 parcels
Tennessee Avenue –	31 parcels
1 st Street –	1 parcel
2 nd Street –	7 parcels
3 rd Street-	6 parcels
4 th Street –	12 parcels
5 th Street –	8 parcels
6 th Street –	2 parcels
7 th Street –	8 parcels
W. 8 th Street Circle –	13 parcels
W. 8 th Street –	6 parcels

Repetitive Flood Loss Area Two:

Windjammer Drive –	22 parcels
Coral Drive –	21 parcels
Maryland Avenue –	5 parcels
New Jersey Avenue –	31 parcels
North Harbour Drive –	24 parcels

Total Parcels: 459 parcels

Repetitive Loss Properties:

As of December 31, 2011, the City’s Repetitive Loss (**RL**) data was as follows:

1823 Active NFIP policies

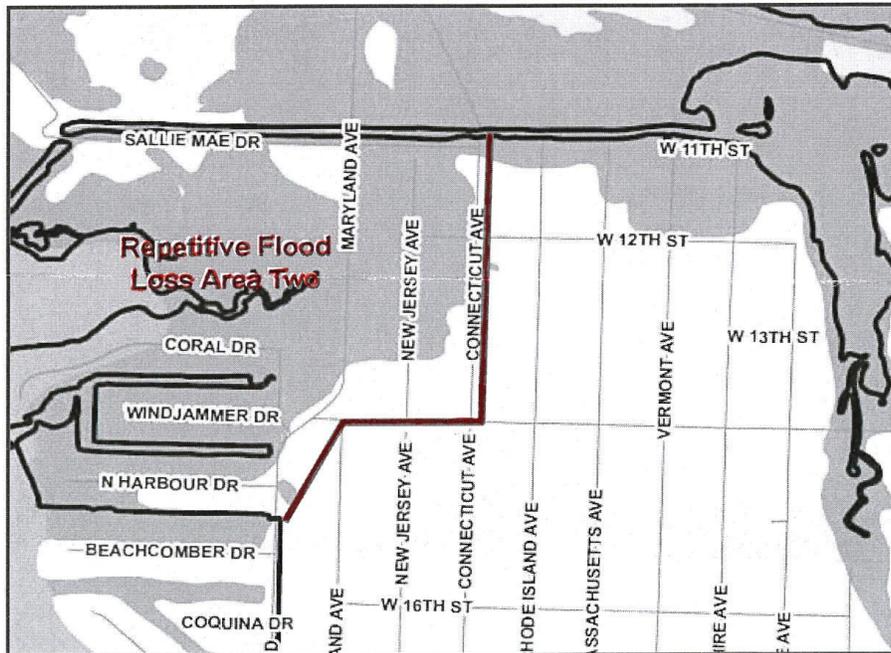
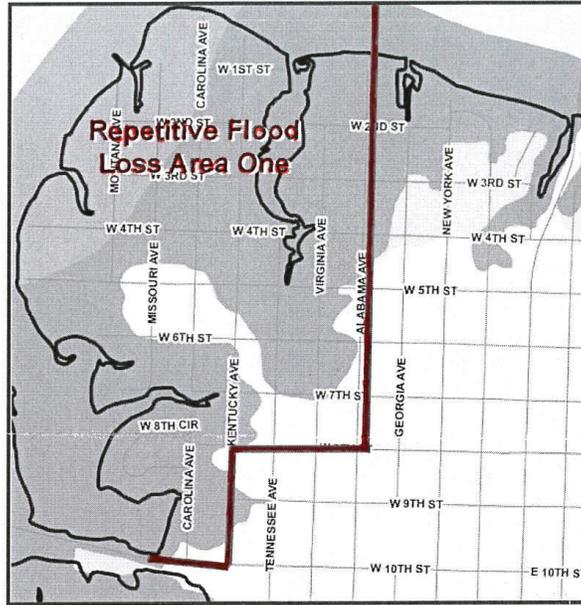
374 Total Historical claims

63 Total repetitive loss properties

8 Total mitigated Repetitive Loss (**RL**) properties

55 Total unmitigated Repetitive Loss (**RL**) properties

The corresponding maps for the above described areas are shown below:



The City of Lynn Haven has an aggressive program for maintaining and upgrading stormwater conveyances throughout the City. Our ongoing maintenance includes digging existing open ditches from culvert inlet to culvert inlet or outfall and replacing culvert pipes that have begun to deteriorate with either galvanized steel or aluminum pipes. The last five (5) years of maintenance has resulted in 12,690 lineal feet, or 2.40 miles of piped system being replaced or added to and 186,248 lineal feet, or 35.27 miles of open conveyances being maintained.

The following table gives a breakdown of these maintenance figures by year:

Table 1

Year	Linear Feet Installed Or Replaced	Linear Feet of Ditches Dug or Cleaned
2014	2,120	52,820
2011	2,350	23,420
2010	3,700	40,545
2009	2,320	40,208
2008	2,140	47,890
2007	2,180	34,185
Total	14,810	239,068

Source: Public Works Dept., 2012 & 2013

In addition to stormwater conveyance upgrade and maintenance that is performed “in house” by City personnel, the larger projects are budgeted for in our Stormwater Budget as capital Projects. These projects are then completed by a qualified contracting firm that was chosen by the competitive bid process. The following table lists the projects, along with descriptions and costs that were completed in the City within the last five (5) years.

Table 2

Year	Project	Cost
2014	Construction of 1,600 linear feet of new ditch on west side of Minnesota Avenue, north of 24th Street, to reduce flooding south of 24th Street.	16,471.00

2012	Camryn's Crossing Subdivision stormwater basin retrofit. Complete redesign, permitting and reconstruction of four stormwater ponds.	1,002,972.00
2012	Cross drain at Illinois Avenue and 10 th Street. Increased the size of an existing culvert pipe and extended it to the east to an outfall in Davis Lake.	141,090.00
2012	Replaced failing culvert at Delaware Avenue and Sydney Lane	13,750.00
2011	Replaced and upsized stormwater cross drain at 12 th Street and Virginia Ave	91,685.00
2011	Replaced Davis Lake drawdown and flood control structure.	51,999.00
2010	Cross drain replacement at Mississippi Avenue and 9 th Street. Upgraded size of under road culvert and reconstructed headwalls.	99,565.00
2010	Initial piping of 17 th Street ditch. To date, have piped 208 lineal feet of this extremely large drainage ditch with twin eight feet by eight foot concrete box culverts.	592,744.00
2009	Replaced undersized cross culvert pipes with concrete box culverts at Carolina Avenue and 16 th Street.	192,068.00
2009	Replaced stormwater pipes in Belaire subdivision on Moore Drive and Liddon Place.	58,116.00
2008	Slip lined existing stormwater pipe and replaced headwall on Floyd Drive in Belaire subdivision.	41,000.00

Source: Bay County LMS Plan, 2010

In addition to the above-listed improvements, the City of Lynn Haven continues to perform maintenance and inspections on existing infrastructure as part of its mitigation actions.

Flood safety property protection measures appropriate for the hazard

Lynn Haven has implemented specific measures that result in greater protection of properties. The City has a Building Inspector who is a Certified Floodplain Manager. The Building Department strictly enforces elevation certificate requirements, surveyor's benchmark regulations and other flood safety measures recommended by the NFIP. To overcome the problem of drainage issues the Unified Land Development Code (ULDC) requires that for new development stormwater run off cannot exceed predevelopment conditions. The UDLC also take the local building code above NFIP

development standards and require that homes not located in the Flood Insurance Rate Map (FIRM) designated flood zones, are elevated to at least one foot above the crown of the road. Homes built in A and AE zones require one foot of freeboard, meaning the bottom of the lowest floor must be at least one foot above base flood elevation (BFE).

ENHANCE PUBLIC AWARENESS AND UNDERSTANDING

As a participant in the Community Rating System (CRS) program and working within the defined goals of the Local Mitigation Strategy Plan, the City of Lynn Haven regularly promotes public awareness of the potential for flooding (as well as other natural disasters). Through the use of our City's website, informative articles in our local newspapers, relaying specific messages in our monthly water bills, and annual direct mailings to the 459 properties located in our two repetitive loss areas, our CRS/Flood Awareness Team constantly strives to keep our residents aware of the potential for flooding, mitigation suggestions, and the significant importance of flood insurance. We also send annual mailings to local real estate agents, insurance agents, mortgage companies and the like to make them aware of these efforts and to encourage their participation in keeping residents aware of the threat of flooding, what we are doing to combat it, suggesting flood protection measures for property owners and the all important need for flood insurance.

Flood related public information activities currently being implemented within the community

The City of Lynn Haven is located within Bay County. The Bay County Planning and Zoning Library and the Bay County Public Libraries currently contain a number of countywide FEMA booklets, brochures, and historic and current FIRMS in the reference section. Public information pages on the topic of flooding, hurricane safety, and other natural disasters are published each year in the Bay County Yellow Pages Phone Book. The Panama City News Herald issues a "Hurricane Guide" every year that shows flood-prone areas in the County, and provides a wealth of other flood related information. At various times during the year, flood protection information is included in the newsletters sent out by individual municipalities, the Chamber of Commerce, and various local companies.

The Bay County Emergency Management/Emergency Operations Center (EOC) provides short countywide presentations to increase flood awareness at local schools,

nursing homes, and a variety of other public and private organizations. The Fire Chief (head of the Bay County EOC), is frequently hosted on radio and television programs where he explains the flood safety program, and advises where to get additional assistance and information. The Emergency Management organization publishes evacuation maps which are also downloadable from the Bay County Emergency Management website. In addition, that organization publishes a booklet, “A Pocket Guide to Emergency Services in Bay County,” which is distributed at a variety of public forums throughout the year.

The Bay County Builders Services Department offers workshops to builders and developers discussing topics such as determining proper elevations, using FIRMs, the building code, flood problems, etc. (2 courses have been offered to date in 2012 serving builders and developers).

The Bay County GIS Department provides updated, digitized FIRM maps available online, as well as maps of the surge zones for the County and municipalities. The local media networks provide public service announcements about hurricane safety and the Red Cross works with the local media to boost preparedness and distribute “Emergency Kits”.

LMS MITIGATION INITIATIVES

Due to the fact that the Bay County LMS Plan has been adopted by the City, the City remains eligible for various pre- and post-disaster grant programs and other mitigation programs to help fund projects listed in the Mitigation Initiative Prioritization List.

PLANNING PROCESS

Planning with regard to how the City will deal with its flooding problems has necessarily involved the Department of Public Works, Department of Development and Planning, the Building Department and the Fire Department as well as the contracted City Engineer. Although planning to identify and mitigate for flooding requires a coordinated effort, as seen as such things as the NPDES program, and Technical review Committee (TRC) meetings held to review and comment upon proposed development within the City, there has not been a formal committee to meet and strategize specifically on floodplain management. The City has been a participant in updating the Bay County Local Mitigation Strategy (LMS) Plan, adopting the Bay County LMS Plan by resolution.

The planning process with regard to floodplain management is now being coordinated by the City Planner and will be conducted through a committee composed of staff from those departments that will be implementing the majority of the plans recommendations. The committee will have representation from the following departments:

- Building Department
- Public Works
- Code Enforcement
- Development and Planning
- Emergency Management
- Engineering
- Parks and Recreation

The public is involved when plans and projects are being proposed, discussed or approved, by their involvement in the planning process. The public are invited to attend public workshops, Planning Board meetings and City Commission meetings. In this way they have the opportunity to comment. In addition, board members are also members of the public. It is proposed that the planning process will look for ways to reach out to community members to actively engage them further into the planning process.

It is proposed that there will be at least one public meeting at the end of the planning process where proposals are explained and people can ask questions and submit comments.

The City coordinates with Bay County, contracting with Bay County to provide Building Inspection Services and therefore has also fallen under the umbrella of Bay County's Planning, Public Outreach and Public Participation processes.

PROMOTE COMPLIANCE WITH STATE & FEDERAL PROGRAMS

There are a number of State and Federal programs, policies, and regulations that encourage local governments to develop and adopt hazard mitigation strategy plans. Since adopting the Bay County LMS Plan on August 24, 2010, by Resolution No. 2010-08-513, the City has promoted and continues to encourage consistency with these programs, policies, and regulations. In order to comply with the policies and

regulations of the National Flood Insurance Program, the City amended portions of its floodplain management regulations and adopted the revised FEMA Flood Insurance Rate Maps in 2009. Since that time, the City has continued to enforce all applicable floodplain management regulations and requirements.

ENHANCE LOCAL POLICIES FOR HAZARD MITIGATION CAPABILITY

The Bay County Office of Emergency Management warns the community of approaching hazards through the Emergency Alert System (WFSY 98.5 FM radio, WPAP 92.5 FM radio and WJHG TV News Channel 7). This service provides time for homeowners to take the necessary steps to secure valuable property and to evacuate safely. This service is widely publicized through all media outlets (radio, print and television), frequent Emergency Management, County, Red Cross, and Extension office seminars, as well as the Telephone Book Yellow Pages.

While regulatory measures offer some degree of protection, the City outreach programs stress that it is up to the homeowner or renter to take additional measures to ensure that their homes and properties are protected. Through the City Community Rating System (CRS) outreach programs, homeowners and renters are made aware of the additional safety measures they can take, insurance protection that is available to them, as well as the availability of grant funds. For example, an existing, older structure may be permanently elevated, so that the lowest floor is at least one foot above the base flood elevation. Homeowners are also counseled to locate heating, hot water systems, electrical panels, all components of the electrical system (including the wiring), and utilities above the flood level. Repetitive Loss property owners are made aware of grant programs that can assist in elevating the home, buying the property outright, or demolishing and rebuilding the structure.

Hurricanes bring high winds that damage inland and coastal areas. If the area immediately surrounding a structure contains trees, outbuildings, trashcans, yard debris, or other materials that can be moved by the wind, it will be likely be damaged during a hurricane. Citizens are advised to bring in outdoor possessions, such as lawn furniture, grills and trashcans, or securely tie them down. Fuel tanks should be anchored.

Permanent hurricane shutters provide a long-term means of protecting a home. Temporary methods of securing windows, such as plywood, will protect glass from wind born debris damage, but are time consuming to install with every storm threat. Although the City and Bay County do not provide direct assistance with these types of

measures, citizens can become better informed through additional public education activities. The Builders Services inspectors are trained on flood proofing/prevention measures.

More specific information on property protection and safety measures utilized by the City can be found on the City of Lynn Haven website and the City of Lynn Haven Building Department, as well as at the Bay County Emergency Services office, Bay County Planning and Zoning, and the Bay County Libraries reference section. The libraries also provide computers and residents can access the FEMA website as well as the County GIS websites at no charge. The Bay County website contains elevation certificates, the 2002 and 2009 FEMA flood maps, evacuation zone maps, insurance information, properties with LOMAs, and other flood related resources.

Florida Building Code has recently been amended to comply with FEMA/NFIP standards. City staff is currently coordinating with State officials to draft new standards based on the State's model ordinance that will align the City's floodplain management regulations with both State and Federal requirements. During the past several years, the City has adopted and implemented policies in its Comprehensive Growth Development Plan that are aimed at enhancing hazard mitigation. To ensure timely and safe evacuation from the coastal areas, Lynn Haven has implemented land use and growth management policies to maintain a roadway clearance time for hurricane evacuation of 16 hours for a Category 3 storm at high tourist occupancy. Policies have been put in place to direct future growth away from coastal high hazard areas and buffer from environmentally sensitive areas, including low lying wetland and tributaries. The City has adopted policies to limit increases in densities, and restrict development and redevelopment in vulnerable coastal areas. Most recently, the City has adopted regulations to control erosion and sediment during development and construction activities. Erosion and sediment controls will ultimately reduce the frequency of repairs to drainage and storm sewers, and will have a long-term benefit for drainage and stormwater runoff in the City.

YEAR END STATUS OF THE COMMUNITY RATING SYSTEM (CRS) PROGRAM

Since the last Community Rating System (CRS) Annual Re-certification, City staff continues to coordinate with Bay County and other local municipalities concerning updates to LMS Plan and hazard mitigation efforts. The City has considered improvements to deficient stormwater infrastructure a top priority. The City has completed a number of drainage projects that will aid in controlling stormwater runoff

and help relieve areas from flooding. To help further the City's efforts to mitigate flood hazards, staff is drafting new floodplain management regulations that will align with the standards now incorporated in the Florida Building Code and FEMA/NFIP requirements.