

2010 CRS Progress Report

1. Introduction to the Local Flood Hazard

Bay County is highly prone to flood hazards associated with hurricanes, tropical storms, and rainfall with high intensity or duration. Bay County averages about 80 thunderstorm days each year. Since most Bay County flood basins are contained within the County, the threat of flooding is generally based on local rainfall conditions, and is not affected by rainfall from other states, or from upstream areas which are not in the County.

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, East Bay, and West Bay, are subject to flooding, as are properties surrounding smaller water bodies including Beatty Bayou, Laird Bayou, Bayou George, Callaway Bayou, Cook Bayou and Pretty Bayou. Econfina Creek, Bear Creek, Crooked Creek, Burnt Mill Creek and Cypress Creek flow through Bay County and are possible sources of flooding during heavy or prolonged rainfall. Because the County 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 storm water. The rapid growth that has occurred in the county over the past 5-10 years has resulted in increased impervious areas such as parking lots, buildings, and driveways, which has increased the potential for flooding.

Many of the property owners in Bay County have been long term residents, and prior to the past several years of increased development, were accustomed to a more rural setting where undeveloped land was abundant and solutions to localized flooding were simple. Many residents lived near vacant, wooded areas and did not experience flooding problems since the open spaces and woods absorbed run off from the neighborhood. As more properties become developed, the drainage of these areas changes. Often, newly constructed residences are built at a higher elevation than neighboring, older homes resulting in stormwater runoff onto the older established properties.

While stormwater conveyances transport water from the streets and neighborhoods, there are limitations to their capacity. If ditches are clogged or running full, flooding may occur. This also has become more of a problem as residential density increases.

Throughout the history of Bay County, hurricanes and tropical storms have threatened the coastal areas. These events are the most dangerous flood threats to Bay County residents. Not only do hurricanes increase the threat of storm surge flooding, but they can also generate high winds and wave action that further damages properties, and can result in the loss of life. In the past the County has experienced a tropical hurricane, on average, once every 3.5 years. In the past 30 years Bay County has been hit by several major storms:

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. ([Quarterly Journal of Engineering Geology & Hydrogeology](#); November 1979; v. 12; no. 4; p. 281-290)

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.

(<http://redcross.tallytown.com/kate.html>.)

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 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 CCCL program intended to prevent structural damage caused by a major storm event such as hurricane Opal.

(http://www.floridadisaster.org/BRM/Mit_Success/ms_cccl_buildings_survive_opal.htm.)

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.

(<http://www.nhc.noaa.gov/2001barry.html>)

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 (*Coastal Planning and Engineering, Inc., Post Ivan Storm report December 2004*).

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 (*CNN.com*).

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. (*Keehn and Armbruster, 2005*)

Hurricane Katrina

Hurricane Katrina of August, 2005 exacerbated the coastal erosion situation. No damage to any structures was reported. (*Coastal Planning and Engineering, Inc., 2005 Hurricane Impact and 2007 Renourishment Project Design Analysis Panama City Beaches, May 2007*)

2. Flood Safety Property Protection Measures Appropriate for the Hazard

Bay County has implemented specific measures that result in greater protection of properties. The Building Official and two plans reviewers are Certified Floodplain Managers. 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 Land Development Regulations (LDR) require that for new development stormwater run off cannot exceed predevelopment conditions. The LDR 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). Furthermore, the engineering department has strengthened regulations for road construction to improve stormwater conveyance designs and maintenance. Finally, a county wide Stormwater Outfall Identification Plan and Storm Drain Marking Program have been implemented. The purpose of the Stormwater Outfall Identification Plan was to locate and assess all stormwater conveyance pipes in the County, as the County's records did not show all pipes, particularly those less than 36" in diameter. While the NPDES rules require only 36" pipes and larger be accounted for, the group determined they could not effectively calculate water quantity unless all size pipes were noted. The majority of the drain pipes in Bay County are less than 36" in diameter. This program was developed with a \$500,000 grant awarded to Bay County and B.E.S.T., a local environmental group. The program was implemented by a team of volunteers with the intent of better understanding the flow of stormwater within the county's basins. The more conveyances the County can identify, the better prepared the stormwater engineering group will be to identify flood hazard potential. The Storm Drain Marking Program was created as a public outreach program with the goal of reaching every resident in the County to inform them of the importance of not dumping in drains, swales, and ditches, nor to allow them to remain clogged with vegetation, and how to report violations. A team of trained volunteers has started the process of distributing informative literature, and the County CRS Coordinator will also be present to answer any questions about flood issues, and schedule appointments for possible flood-proofing and retrofitting. (These programs are more fully described under Outreach Strategy Team Goals).

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 County regulatory measures offer some degree of protection, 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 County 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), 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.

The primary method of commercial flood-proofing in Bay County is dry flood-proofing. Dry flood proofing includes adding a waterproof veneer to the exterior walls, and sealing all openings to prevent the entry of water (primarily used in commercial buildings). Building a floodwall around doors and garages can also protect against flood damage.

As a final measure, a home that is found to be in a particularly hazardous area may be relocated to an area outside the flood zone. This is most effective method of avoiding flooding. In many cases moving the home to a more upland section of the same property has alleviated flood problems.

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 County does not provide direct assistance with these types of measures, citizens can become better informed through additional public education activities. For example, on March 22, 2008, The Friends of St. Andrew Bay sponsored "The Bay Green Expo" at Gulf Coast Community College. This was one of the most well attended "free educational events" ever held in Bay County. The Bay County Extension office invited guest speaker who gave presentations on "Hurricane Hardening for the Home", and "Flood Proofing Measures". The County is also looking into the State funded program, Florida Rebuilds for 2009. Through the State training, local contractors are trained in flood-proofing homes. Homeowners can request a free inspection from one of the certified contractors, who will then recommend specific flood-proofing measures. The homeowner will

be eligible for a matching grant from the state (up to \$5,000) for retrofitting and preventative flood proofing. In addition, one of the Builders Services inspectors will be trained in 2009 on flood proofing/prevention measures.

Representatives from the My Safe Florida Home Free Wind Inspection Program were in Bay County for approximately six months during 2008. Over 2,000 citizens received free inspections which included roof and window checks.

More specific information on property protection and safety measures utilized by the County can be found, at the Bay County Emergency Services office, Bay County Planning and Zoning (as well as the municipal zoning departments), 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 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.

3. Flood related public information activities currently being implemented within the community (including those by non-government agencies) (See CRS Activity 330 in the Bay County CRS Coordinator's Manual for more specific information and examples)

The Bay County Planning and Zoning Library and the Bay County Public Libraries currently contain a number of 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 EOC), a popular local speaker, 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. Mexico Beach has an ongoing program of public speaking engagements to distribute this booklets and educate citizens regarding hazard issues and public safety.

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 2009 serving over 100 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 distributes “Emergency Kits”.

4. Outreach Strategy Team Goals for Public Information and Outreach

Fortunately, since Hurricane Dennis in 2005 through the current reporting period in 2010, there have been no major hurricanes or storms affecting Bay County. In February 2008, there was a heavy rainfall event which caused substantial damage to two homes. Mitigation grants have been filed for both properties. During this less intense storm period the CRS Team Members were able to spend more time assessing the goals for the Outreach Strategy, and have completed the “Stormwater Outfall Identification” program. Additional efforts have continued on the Storm Drain Marking Program. The Outreach Strategy Team also disseminated information throughout the community, and brainstormed new activities for the current LMS reporting period. Despite the very strong and varied public education/outreach program, the team had decided that there was still a need to invest more time in planning and implementing one, overall, strategy that would mesh well with the County’s existing programs. This goal was reaffirmed for the 2009-2010 reporting period.

The primary goal was to implement an outreach program that included a more far-reaching public education goal to make citizens more aware of the measures they can take to protect their property and play a positive role in flood management in their community. This has become a priority for the Bay County and municipal local governments. As participants in the NFIP (National Flood Insurance Program) and CRS (Community Rating System), there are incentives to improve the availability of flood information by creating a strategy team that coordinates and implements efforts to educate citizens. The Bay County CRS Outreach Strategy Team was initially formed on February 23rd, 2004 with the support of the Bay County Board of Commissioners, the County Manager, and Department Directors, and continues through the present time. The team includes local citizens and stakeholders as well as County employees. Representatives from the Bay County Planning Division (Tita Sokoloff), Builder Services Division (Mike Gerald and Ed Schwoerer), Engineering Division (Josee Cyr), Geographical Information Systems (Jennifer Morgan), Information Systems (Fletta Norcross), Emergency Services (Sid Busick), and Community Outreach (Valerie Lovett), attend the meetings. At least one citizen and a local stakeholder represent the general public. The CRS Coordinator can be contacted through the Bay County Planning and Zoning Division for more information about the Outreach Strategy Team. Starting in 2010 it is the goal to invite the municipal CRS coordinators, who are primarily the LMS Team members to develop one, overall, CRS program for the county.

During 2009 the Outreach Strategy Team agreed on a number of goals, some of which will be immediately feasible, whereas others are long term, and may take years to accomplish.

During the first meeting of 2010, the team evaluated the outreach projects that were completed in 2009. It was agreed that most of the smaller projects would be continued again as they reached a wide variety of people who are often difficult to contact. For example, the Fire Chief has an extensive list of speaking engagements to discuss local hazards and how to prepare for them. He

speaks to citizens groups in nursing homes, and other venues infrequently visited by other CRS projects.

For the base projects, the team decided to continue the “Stormwater Outfall Identification” and the “Storm Drain Marking Program” since they were so successful. Success was measured in terms of in the field citizen contact which gave the opportunity to answer specific questions of homeowners on the spot, inform them of important aspects of localized flooding, and it involved community participation in terms of over 60 volunteers with over 400 hours who assisted in the search for and “GPSing” the location of previously unidentified stormwater conveyances, which was determined to be of primary importance.

I. The Stormwater Outfall Identification and Subsequent Studies

This program was identified as vital to the future efforts and success at managing stormwater within the County. Camp Dresser & McKee, Inc. (CDM) was hired as consultant to B.E.S.T (local environmental group) and Bay County on this project, and performed an extensive data collection and review effort in order to provide a better understanding of the regional issues related to surface water and water quality in the study area. The data collected and reviewed included: geographical information system (GIS) data; existing drainage studies and/or stormwater master plans; identified problem areas (flooding, erosion, and water quality); topographic data; land use data; soils data; watershed and subbasin delineations; rainfall data; evaporation data; stage and flow data; public land and conservation easements; stormwater system inventory information; existing hydrologic and hydraulic stormwater models; water quality data; existing stormwater permits; septic tank information; point source data, and Federal Emergency Management Agency (FEMA) information. The data presented were used extensively in developing the subsequent portions of this project. In conjunction with the data collection effort, a userfriendly database tool was developed that stores watershed related data that includes rainfall and evaporation data, topographic data, basin and subbasin delineations, soils data, aerial photography, existing and future land use data, stream gauge data, water quality data, wastewater treatment plant data, septic tank information, stormwater facility and inventory data, National Pollutant Discharge Elimination System (NPDES) data and FEMA Flood Insurance Rate Map (FIRM) data.

Stormwater management options were developed to address the ecological and social aspects previously mentioned. The cost-effectiveness aspect of the plan is two-fold: first, the plan addresses different avenues of funding available for the management options. Secondly, a “conceptual planning level capital cost estimate” for each management option was developed and a benefit-to-cost ratio, where applicable, was provided. CDM developed a methodology with input from BEST and the Stakeholders in order to establish long-term management strategies that are critical to the improvement and sustainability of surface water resources within the watershed. In order to determine where the greatest needs existed in the basin areas in terms of water quality and quantity, CDM developed an approach to assess the watershed based on the characteristics of each subbasin within the greater St. Andrew Bay Watershed (SABW). CDM used the subbasin boundaries as the unit of measure for assessment and prioritization. CDM developed a list of fourteen criteria important to the management of surface waters within the SABW based on Stakeholder feedback.

CDM also developed a long-term water resources management strategy to identify conceptual types of basin management activities that can be pursued by BEST and the local governments to

mitigate existing problems (quality and quantity) and provide for long-term flood control and water quality benefits. CDM examined each subbasin on an individual basis to determine which types of BMPs (both structural and nonstructural) would be appropriate to achieve the long-term goal of improving water quality and addressing existing flooding issues. The recommendations are presented as options and the use of a specific BMP depends on actual site conditions and objectives such as water quality protection, flood control, erosion control, or volume control. In many cases, there are multiple goals or needs for a given project. Additionally, several studies and stormwater master plans have already been developed by several of the local governments to address stormwater management problems within their jurisdictions. This plan is meant to supplement those recommendations previously made and by no means supersedes other studies that have been conducted within the SABW.

II. Storm Drain Marking Program

A. The outreach information is neighborhood specific. Maps were prepared for each neighborhood showing the location of the storm drains. The maps include aerial views of all the homes in each particular neighborhood. In addition to placing decals on each drain with the message “*No Dumping... Only rain down the drain*”, groups of trained volunteers distribute literature to each home that explains the relationship between storm water conveyances and flooding. Additional literature is also provided that explains other hazards. In neighborhoods where there are known flooding problems, a professional from County staff and/or outside specialists is present to discuss mitigation measures with the residents (stormwater engineer, builder services representative, CRS coordinator, Emergency Management representative, etc.), as well as other flood/hazard related issues. Each neighborhood marking event is thoroughly publicized.

B. The repetitive loss properties within each neighborhood are specifically targeted, and a face to face discussion with the appropriate professional can address their concerns.

C. The entire community is involved. This fosters a higher level of awareness, education, and interest to the flood/hazard issue. The program is structured as follows:

- 1) The CRS coordinator is working with a local environmental group, BEST/Friends of St. Andrew Bay. This organization has a large volunteer base, and issued a “call for volunteer team leaders” for the first trial round of neighborhood programs.

- 2) Those individuals who responded, have been trained by the CRS coordinator in flood issues, how to use the maps for their particular neighborhood, proper placement of storm drain decals, and how to handle/refer resident’s questions.

- 3) Each trained team leader has since recruited and trained volunteers from his company or organization. The trained groups include the local US Fish and Wildlife office, the Navy Base, The Garden Club, and a local construction company. The CRS coordinator conducts all team leader trainings, and explains the particular problems of each neighborhood.

- 4) After each neighborhood program, the team leader completes an evaluation/comments form. This includes referrals for the CRS coordinator to handle, or drainage problems for the Roads and Bridges Department, etc.

The program has been very successful. While not as many of the neighborhoods were covered in 2007 and 2008, as was originally intended (due to the commencement of the Stormwater Outfall Project), more time was spent in each neighborhood. This was due to the high interest level of the neighborhood residents. As well as marking the drains, the volunteers distributed 2 different brochures to each of the homes in the neighborhood. These brochures explain the flooding issues and provide phone numbers to call in the event of problems or questions. Many problems were uncovered and resolved: several drain locations had “fallen off” the routine maintenance logs, neighbors had intentionally plugged storm drains, certain residents pumped out their pools into roadways during rain events, etc.

III. Making CRS Information More Available

The CRS rating information has been made more readily available to the public. This includes maintaining copies of progress reports at the library and on the web site, as well as making them easily available in various county offices (GIS Department, Builder Services, Planning and Zoning, and the Emergency Operations Center).

The main Bay County Public Library has a wide range of publications on CRS topics, and the primary research librarian, Sandra McQuagge, has been well versed in the CRS program. 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 and have been updated for 2010. The Panama City News Herald issues an annual hurricane guide that depicts the flood-prone areas of 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 GIS Department provides updated, digitized FIRM maps that are available online. The local television networks and the News Herald provide public service announcements about hurricane safety and the Red Cross works with the local media to boost preparedness and distribute “Emergency Kits”. In July, the CRS Coordinator was interviewed on a popular Television News show to discuss the storm drain marking program and the CRS program.

IV Strengthening Protective Measures Offered by the Builders Services Department

Information related to elevation certificates is easily accessible both on the County website and in the Builder Services office. The County is now conforming to the “wind born debris region” as described in the Florida Building Code. This demonstrates the diligence of the Builder Services Division in addressing flood and other hazard concerns in a manner that results in property protection and consistent enforcement. This effort has increased the confidence in flood protection measures, and should encourage property owners to further the County’s efforts by taking additional measures on their own which are recommended in various outreach programs. In addition, contractors and builders have been made aware of the County’s requirements so that they can proceed accordingly in building to the new standards and advise

their clients appropriately. This department conducted two workshops in 2009 for a total of 120 builders and developers, and will conduct two classes again in August, 2010. The NFIP/CRS program and its requirements are discussed at length in these classes. Three “Plans Reviewers” from this department are Certified Floodplain Managers (CFM), which provides them with a greater knowledge of reviewing development plans in flood prone areas.

V. Diversify and Increase the Number of Target Audiences for Flood and Disaster Preparedness Information

The CRS program continues to reach a larger and more diverse group of citizens including elderly citizens, renters, and property owners. Targets for public outreach take into consideration that reaching property owners might not necessarily be reaching a significant portion of citizen subject to flood hazards; therefore, an attempt has been made to increase penetration into a larger number of citizen groups. We have also made an effort to distribute a larger number of brochures to local colleges, senior centers, real estate agents offices, supermarkets, etc. FEMA brochures have been placed at several of the larger condominium complexes that have been subjected to flooding in the past. In addition, the Emergency Management Office has continues talks and presentations to a variety of groups throughout the year. The Bay County Extension Office conducts workshops on flood preparedness and the CRS program.

VI. Coordination Between the County and Municipalities

The County CRS Coordinator is exploring a more coordinated effort between Bay County and the municipalities to improve public outreach and eliminate duplication of efforts. This should be considered a long-term goal and may be initiated by communicating with the Local Mitigation Strategy Board. At the August 2009 LMS update meeting it was decided that the CRS Coordinators from each local municipality in Bay County should be part of the LMS Team. The coordinators have had a major role in the 2010 update of the LMS Plan.

VII. Intensify Outreach efforts to Real Estate Agents, Bankers/Lenders, and Insurance Agents

In 2009 the CRS strategy team repeated the process of “blanketing” the offices of Realtors, Lenders and Insurance Agents, which resulted in very favorable contacts and invitations to speak from similar projects in the past. The CRS Coordinator is always available to speak at events for these groups. Once such example is a talk explaining the 2009 FEMA DFIRMS and promoting flood insurance to a Realtor’s group in September, 2009, and to the Bay County-Panama City Homebuilders Association in November, 2009. The CRS Team is also in the planning stages of an annual program for real estate agents training them on how to use the County websites to find elevation certificates and determine flood zones. Additional events are to be continued in 2010.

VIII. Ongoing Outreach Projects Created to Achieve Goals

The following is a list of projects generated by the Outreach Strategy Team:

- The primary goal will be to continue the “Storm Drain Marking Project” (outlined above in the Outreach Strategy 2009 document). [The St. Andrew Bay Watershed Stormwater Master Plan has been completed by the volunteers of the County, and BEST. CDM has completed their final report and recommendations.]
- Inform a more diverse group of residents who may be affected by flooding through the distribution of brochures and by holding special seminars at senior centers, colleges, business groups and other public offices. This may include the use of existing FEMA publications, as well as brochures, booklets, or information packets created by the County. The Emergency Services Department has greatly expanded their public information talks to include a wider variety of groups. In addition, Mark Bowen, the Chief has scheduled more appearances on radio and TV talk shows to explain the CRS program, preparation for a storm, emergency evacuation procedures, etc. The Chief is continuing with this effort.
- Continue to improve current efforts to educate the public including local contractors, builders, and developers. The Builders Services staff will continue to host presentations at GCCC for contractors and builders (two such workshops were held in 2009, and two workshops are planned for 2010). The CRS coordinators are looking into stimulating more interest and involvement from local builders and contractors in flood-proofing/retrofitting techniques, and in trying to generate a “Florida Rebuilds” type program in the County. An employee from the Builders Services Department will take the FEMA Retrofitting class and will assist with the neighborhood outreach “Storm Drain Marking Program” to advise/assist individual homeowners/renters with questions on how to make their home more flood safe.
- Reach a broader audience by requesting that the Gulf Coast Energy Cooperative and/or Gulf Power Company include an article in their monthly magazine distributed to their customers. Other possibilities include messages on the community calendars, and government day at the mall.
- Insert an Insurance Purchase Information document with the TRIM notice (FEMA/ISO will evaluate this project) sent out by the Bay County Property Appraiser’s office in order to stimulate County wide interest in the purchase of flood insurance.
- Provide training for damage estimators on FEMA’s “Residential Substantial Damage Estimator” software, a program that assists in assessing residential building values, and is used to evaluate a home’s market value prior to the damage and for determining the amount of damage following a disaster event. It shows how to rapidly, efficiently, and consistently assess substantial damage. It allows communities to compile a data base of inspected houses as well as help to identify areas that have received repetitive damages. An introductory seminar explaining the program was conducted in 2009, and the CRS/LMS coordinators are assessing methodology to implement the program countywide.

IX. Outreach Projects to Address Other Hazards

Tornadoes are recognized as another natural hazard that is common to the area, as well as thunderstorms and the accompanying threat hazards due to lightening. These topics are covered

online at the FEMA web site and through the Bay County Emergency Services office website and public seminars. The Local Hazard Mitigation Strategy also addresses these topics.

5. Process for Monitoring and Evaluating Projects

The CRS Team generally meets 3 times per year. At each meeting a summary is given of accomplishments made on the “to do list” assigned to team members from the previous meeting. New projects are assigned as old projects are completed. Team members provide information, comments or input to other members through email, telephone, etc. At each meeting team members will bring documents for the others to review and introduce any new information or updates that the team as a whole should be aware of. A progress report is compiled and reviewed by all team members in September, prior to the end of the CRS cycle.