



November 6, 2018

Christina Turpin
5 N Hwy 101, #399
Warrenton, OR 97146
Email: cturpin@crsresources.org
Ph: (503) 741-5991

Subject: 2017 ~ 2018 Flood Mitigation Plan, Annual Progress Report Documentation

Dear Ms. Turpin:

As required by Section 510, Floodplain Management Planning of the Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP) - Community Rating System (CRS), Coordinator's Manual, we are submitting our Flood Mitigation Plan, Annual Progress Report for our Flood Mitigation Plan activities for City of Savannah, GA. This report, which was acknowledged by the City Manager contains ongoing program activities as well as program improvements, updates to our training activities, short term drainage projects and, long term structural drainage projects. Documentation of our continued efforts relative to public outreach campaigns is included.

The Annual Recertification Report was prepared partly through the efforts of the Flood Mitigation Planning Committee (FMPC) and the Coastal Georgia CRS Users Group (Group). Other components for the report were completed by the Floodplain Administrator with assistance from staff members of the City of Savannah (COS) Development Service Department, Stormwater Department, Chatham Emergency Management Agency (CEMA), Public Information Office (PIO), the Unincorporated Chatham County (UCC), and the Metropolitan Planning Commission (MPC). The FMPC meetings were coordinated and scheduled by the City of Savannah's (COS) Floodplain Administrator. The FMPC and the CRS Users Group will be referred to as the Group moving forward in this report.

The Group held discussions of various new and current CRS activities. Generally, the most popular discussion topics involve activities where most participating communities presently receive CRS credit. Specific topics of discussion were selected by the Group relative to their communities' ongoing yearly CRS activities and upcoming annual FEMA Re-certification by Insurance Service Offices (ISO). During the previous twelve months of 2017/2018, the Group convened on August 28, 2017, November 7, 2018, and April 19, 2018 to review CRS Activities so that each community could maintain and/or improve their respective CRS Class Ratings. More importantly, the Group initiated various new activities to better protect people and property from potential flood damages as stated in our current Flood Mitigation Plan, dated July 2015 that City of Savannah Council approved on August 6, 2015. The activities were discussed at length during the Group meetings. As a direct result of these meetings and efforts, COS acquired sufficient CRS points to qualify for a CRS Class 5 community. CRS Class 5 communities receive a 25% flood insurance discount off insurance premiums for those homes and businesses located in FEMA's Special Flood Hazard Area (SFHA) or areas designated as A, AE or VE flood zones. As a result of these

Group meetings, six Chatham County municipalities and a few other coastal communities along the 100 miles stretch of the Georgia Coast either enhanced their individual CRS point score, improved a CRS

Class and/or gained a better understanding of the CRS Coordinator’s Manual.

The general details of our yearly floodplain management progress and activities are mentioned in the following bullets. The bullets also provide a brief description of scheduled events attended and other milestones accomplished thus far this year. For the purpose of this document, a calendar year spans August 2016 through August 2017. The projects outlined are referenced in our Flood Mitigation Plan, approved on August 6, 2015, and are available for review upon request. They are as follows:

- August 06, 2015: City Council approved the resolution for the CRS Floodplain Mitigation Plan (FMP) dated July 2015 and Repetitive Loss Area Analysis (RLAA) Plan dated July 2015.

2017 Year Activities:

August 2017:

- August 22: Attended and provide input at the Community Rating System (CRS) Workshop for GIS users hosted by the Carl Vinson Institute of Government at the Richmond Hill City Center from 9:00 am to 2:00 pm. Several local CRS coordinators were invited to help highlight activities within the CRS program where GIS analysts can help gain points that lower their community’s CRS class rating. The information specifically explained the required maps that display flooding areas and natural hazards information. Additional topics explained the need for GIS analysts to create databases and images for outreach projects to reduce flooding effects.
- August 28: The Coastal Georgia CRS User Group along with Michael Blakely of Chatham County Engineering Department and the City of Savannah, Co-organized/co-hosted the FEMA National Flood Insurance Program Elevation Certificate Instructions Workshop at 761 Wheaton St from 8:00 to 12:30. The workshop was set up for coastal surveyors, insurance agents, home builders, and CRS coordinators. Mrs. Janice Mitchell of FEMA instructed workshop that discussed the proper method of completing an elevation certificate (EC), identifying building diagrams, and utilizing the EC for Letters of Map Amendments (LOMA).
- August 31: The City Council approved the Strategic Plan. The implementation work sessions consisted of teams from across the city’s business units that are inter-related in meeting the goals and/or may be a part of the strategies and action items to accomplish the goals for the priorities. The city’s internal teams generated first the measures for the goals, followed by the detailed strategies and action items for each of the 29 priority goals.
Within Priority 2 – Infrastructure: Goals include:
 - By 2025, the City of Savannah will reduce by 25% structure flooding resulting from a 25-year rain event (8 inches of rain within a 24-hour period).



- By 2025, the City of Savannah will experience a 5% reduction in street flooding resulting from a 25-year rain event (4.9" inches of rain within a 2-hour period).

The Strategic Plan outlines that having a hydraulic analysis on all City of Savannah basins by 2023. Additional information on any of the mentioned drainage improvement projects can be obtained by contacting Tom McDonald (912) 651-6530.

September 2017:

- September 1: Interview with WTGS (Fox News) concerning Flood zones and flood insurance. Talked about 1,700 flooded structures in the City of Savannah and how low percentage of Chatham County residents carry flood insurance. Over fifty percent of the flooded structures are in the X zone, the area outside the Special Flood Hazard Area.
- September 10 and 11: Hurricane Irma impacts hit Chatham County. In the days that followed Hurricane Irma, I added flood protection measures information and helpful links to the City's Flood Protection web page.
- September 18: Last day for FEMA's ninety days public review period of the Preliminary Flood Insurance Rate Maps (FIRM). I received an email from the State DNR office that the Chatham County and surrounding municipalities should receive the Letter of Final Determination from FEMA in February 2018 and the Preliminary FIRM to go into effect in August 2018. (Letter and FIRM adoption dates are subject to change.)
- September 25: Help advertised the FEMA training workshop for "Flood Insurance Adjuster's Briefing" at the City's Civic Center. The workshop was held to certify insurance agents so they could write flood claims due to flooding caused by Hurricane Irma.

October 2017:

- October 14 : As part of Savannah Shines project the City of Savannah hosted a Clean Up and Information Fair in the Edgemere/Sackville neighborhood on Saturday, October 14th from 9:00 until 1:00 PM. Tom Jeanquart, Systems Analyst and Tom McDonald, Floodplain Administrator from Development Services Department participated by demonstrating the Stormwater Floodplain model. Using this learning tool, they highlighted the floodplain attributes, the adverse flood effects of poor construction, and how City ordinances can prevent negative impacts on existing and future developments.
- October 29: Start distribution of the six pages OPC outreach to the community. The insert is required as part of the CRS program that advertises City's services. The fall 2017 Outreach Project to the Community (OPC) was distributed via the Sunday newspaper and other promotional edition of the Savannah Morning News. The OPC is an annual joint effort between the COS, the MPC and UCC. The six full pages, multi-jurisdictional outreach included pertinent websites and community contacts, a map of Stormwater Department's flooded structures, and current FIRM. Additionally, subject matter that addresses flood insurance, storm water drainage, floodplain management, no adverse impact, elevation certificates, permitting requirements, financial assistance, the CRS program and CEMA's hurricane warning system. In addition to distribution of the flyer, the



Savannah Morning News also printed and assisted with editing the document. The Savannah Morning News utilizes the Savannah Penny Saver and Savannah Tribune media organizations to boost circulation to satisfy FEMA's 95 percent household and business penetration requirement. A minimum household and business penetration of 90 percent is required by FEMA. On average, areas targeted include just fewer than 90,000 residents and businesses.

November 2017:

- City of Savannah's Repetitive Loss Area Analysis Plan is used as an example on the CRS Resources web site. The website is provided for CRS coordinators and CRS users groups to obtain reference materials related to the National Flood Insurance Program's CRS Program
<http://crsresources.org/500-2/>
- November 07: Coastal Georgia CRS User Group: This month's meeting was hosted by Madeleine Russell at the Georgia Sea Grant Building, 715 Bay St, Brunswick, GA. About ten floodplain managers, GIS analysts, and engineers from several Georgia coastal communities attended the meeting. The meeting's discussion focused on communities Flood Damage Prevention Ordinance, what are the differences and how the regulations are implemented.
- November 09: As part of Thomas and Hutton's (T&H) participation to the Engineering Explorer Post Program – Coastal Georgia Council, Jennifer Roach (T&H) Project Engineer) and Tom McDonald (COS) demonstrated the Stormwater Floodplain model to 12 students. Using floodplain model learning tool, Jennifer and Tom highlighted the floodplain attributes, the adverse flood effects of poor construction, and how City ordinances can prevent negative impacts on existing and future developments.
- November 15: Along with Michael Blakely of the UCC and Thomas Jeanquard of COS, presented floodplain information at the 11th Annual GIS Day held at Savannah State University, Student Union Building from 9 AM until 4 PM. The goal of GIS Day was to educate close to 400 local 8th grade students about the adverse flooding effects poor development has on a community. This event serves as an Additional OPA to the community to satisfy the CRS requirement of Activity 330 in the CRS Coordinator's Manual. During this event parents, grade school students, and teachers were made aware of the usefulness of Geographic Information System (GIS) programs and the usefulness of these tools in floodplain mapping. Recalling and displaying flood damage information was one of many useful applications demonstrated. As part of the event the UCC and COS maned booths that included the XBOX sand modeling.
- November 16: Outreach: Co-instructor of the Realtor Workshop: What every Realtor Needs to Know About Flood Insurance Course (8am-12pm). The training provided detailed information pertaining to flood insurance, ICC, the Flood Protection Information website, the CRS program, local flooded structures, SD/SI, LOMR, FEMA grants, access to Elevation Certificates, LOMA and historic FRIM on community web, natural benefits of floodplain, needing a building permits, on site visits, flood warning, FEMA grants, retrofitting, property protection, new FIRMS, LiMWA, CBRA, Resource web sites, flooding in the X zones, and useful layers in SAGIS.org web site. Realtors will use this information to better serve their clients.



December 2017:

- December 6: ASCE Lunch and Learn: Co presenter with Michael Blakely of Chatham County. The Community Rating System (CRS) / Floodplain Management Presentation provides insight how the CRS intertwines the activities of insurance and real estate agents, mortgage bankers, developers, builders, architect and engineers and most importantly the homeowner. The presentation explains the evolution of the NFIP / CRS programs, how the programs work, and level of Unincorporated Chatham County / City of Savannah involvement. The program is intended to inspire communities to build more flood resilient while offering increased flood protection to the residents. Audience members are exposed to the basics of how the CRS Program works, how communities and homeowners benefit from the program, and what is instore for the whole Chatham County area.
- December 8: Outreach to the Floodplain (OPF). As part of the CRS program Activity 330, sent out over 25,300 flyers to all structures in the Special Flood Hazard Area in the City of Savannah and Unincorporated Chatham County. The required yearly outreach informs the recipient that their property is in the High Risk area. The flyer provides FIRM map, contacts, web sources, flood history, FEMA grants, flood protection and insurance information. The leaflet is also used at other public outreach presentation activities as a handout.

End of 2017 Activity

2018 Year Activities:

January 2018:

- January 3, 2018 Chatham County began 2018 by testing the early Warning Siren System. On the first Wednesday of each month, CEMA performs a test of the early Warning Siren System. If severe weather is imminent on the first Wednesday, the test is postponed to a later date. This system consists of a series of sirens strategically placed throughout the County to warn citizens and visitors of pending dangers from natural or manmade events. Information about the early Warning Siren System is published in a variety of media including the County Connection supplement newspaper, the CEMA Signal and in the City's OPC and OPF outreach pamphlets and mailers that are delivered to households and businesses. Pamphlets, brochures and flyers are also handed out during public events, such as the Earth Day celebration and the Annual Home Depot Hurricane Expo. Information about the early Warning Siren System is also broadcasted on Channel 16, the County Government channel, Chatham County social media venues and is announced on local public television stations. This Activity satisfies the requirements of Activities 330 and 610 of the CRS Coordinator's Manual. Supporting documentation of this event can be provided upon



request.

February 2018:

- February 9-11: CRS Outreach: participated with the Development Service team at the Home & Garden Show providing floodplain information concerning flood zones, building requirements, flood insurance, and FEMA grants.
- February 14: Several Development Services personnel attended the Savannah Chapter SEAOG meeting. Topic: Resilient Coastal Construction: Structural Design Considerations in Flood Hazard Area. As a class participants we informed the class of local code and floodplain ordinance requirements.
- February 16: As part of GA DNR grant program, COS submitted a Letter of Support with Chatham County for Chatham County's Coastal Incentive Grant (CIG) Application to analyze "Sea Level Rise Impacts on Stormwater Systems in Chatham County." If GA DNR approves the grant application, the study will provide additional CRS points and meet one of the two prerequisite for Savannah to become and Class 4 CRS community.
- February 15: Floodplain Management Planning Committee (FMPC) meeting for Chatham County's Floodplain Mitigation Plan (FMP). Participated in the 2:00 PM to 5:00 PM meeting. The FMP is a vital plan as Chatham County charges forward in building a more flood resilient community. During this meeting, the committee addressed the final draft review.
- February 22: CRS Outreach: Instructor at Heard Elementary School's STEM night. Along with Mr. Michael Blakely of Chatham County Engineering, we used the Wards Floodplain Model to demonstrate how development can cause flooding but local ordinances can provide solutions to prevent flooding. In a span of twenty minutes per cycle, we demonstrated four different phases of development to an estimated 100 students and parents.

March 2018:

- March 7: CRS Outreach: Co—presenter at the Savannah Builder Owners and Manager Assn (BOMA) at the downtown Hyatt. Discussion covers information concerning flood zones, flood ordinance, flood insurance, Letter of Map Changes (LOMC), FEMA grants, and new FIRM that go into effect on August 16, 2018.
- March 16: Attended the Savannah Green Infrastructure to Green Jobs Incentive meeting as a member of the stake holder committee (3 pm to 5pm, 1375 Chatham Parkway). Nick Deffley of Savannah's Office of Sustainability received a grant to implement a workforce development training program. The pilot program will train 15 recruit on how to plant and care for trees with prospect of future employment. The program will use City purchased FEMA lots in the West Savannah, Victory Heights, and Daffin Heights areas to plant 200 trees. After three years, 160 trees will be transplanted throughout the City. The benefits include training for low income individuals, promotes green infrastructure, and reduce Savannah's flood vulnerability.



- March 19-22: Attend the Active Conference Committee member for putting on this year's Georgia Association of Floodplain Management (GAFM) 12th annual statewide floodplain conference, No Drought About It - A Flood is Coming, at the University of Georgia Center for Continuing Education & Hotel, 1197 S Lumpkin St, Athens, GA 30602. 160 people attended the conference. I was voted to be GAFM's Coastal Region Representative for the next two years.

April 2018:

- April 3: Mr. Michael Blakely (Chair) and I (Georgia Coastal Representative) presented Mr. Scott Brazell, of Camden County, with Georgia Association of Floodplain Management (GAFM) Floodplain Manger of the Year during Camden Co. Council meeting at the Government Services building, 200 E. 4th Street, Woodbine, GA.
- April 10: Outreach at SAMSOG meeting. Co presenter with Mr. Michael Blakely (Chatham County) at Savannah's chapter of the Surveying and Mapping Society of Georgia (SAMSOG). We discussed the current and potential Flood Damage Prevention Ordinance. We also showed what roll surveyors play within the CRS program by providing comments of incorrectly completed elevation certificates from a ISO CRS Reviewer's report.
- April 19: Co-instructor of the Coastal Georgia CRS User Group at the Marine Extension Bldg, 715 Bay St., Brunswick, GA. About fifteen floodplain managers, GIS analysts, and engineers from several Georgia coastal communities attended the meeting. Scott Brazell, Michael Blakely and I discussed potential ordinance changes due to the new FRIMs to go into effect August 16, 2018. Provided forms to help with Substantial Damage/Substantial Improvement determinations. Jack Krolkowski from GA DRN discussed higher standards in the floodway.
- April 21: Earth Day Outreach: Along with Mr. Michael Blakely of Chatham County Engineering, we participated in Earth Day by providing citizens with flood zones, flood insurance, ICC, FEMA Grants, structural flood history, and flood protection information. Discussed how development can cause flooding but local ordinances can provide solutions to prevent flooding.

May 2018:

- May 22: Participated as a Steering Committee Member for GA Tech's "GA Sustainable Communities Challenge and The Sea Level Rise Sensors" grant. Nick Deffley, COS Sustainability Director, hosted the meeting. With funding through Ga Tech, the team will install several sensors throughout Chatham County to read water levels elevations to identify future floods and mitigation actions. By the end of August some of the sensors will be assembled to be installed on a few bridges.
- May 31: As Co Chair of ASFPM Coastal Committee, organized for a Lunch and Learn of hurricane history in Georgia. The topic included 1. History of coastal flooding in Georgia, 2. The factors that make Georgia particularly vulnerable to high storm surges, 3. Interpretation of recent history....such as an explanation of why Irma generated worse flooding than Matthew for much of coastal Georgia, even though Matthew's storm surge was higher, and 4. Recent updates from the U-Surge Project, which provides the first coastal flooding climatology for coastal cities. Over 60



caller participated in the webinar across the nation.

June 2018:

- June 18: Community outreach event: Home Depot Hurricane Expo (9 am-1pm). Along with insurance agencies, building material vendors and emergency response agencies to talk with Savannah citizens concerning flood determinations, Flood Insurance, and how to protect their home.
- June 11: Outreach: Savannah Academy Co-Instructor at the Savannah Engineering Academy Camp (2pm—5pm). Used the Floodplain Model to explain Hydraulic engineering principals as development occurs in a community. Illustrated the adverse flooding affect that can occur to existing developments as new projects increased impervious surfaces and decrease flood water capacity. Discussed how flood zones change and local ordinance can help reduce poor construction.
- June 14: Outreach: Co-instructor of the Realtor Workshop: What every Realtor Needs to Know About Flood Insurance Course (8am-12pm). The training provided detailed information pertaining to flood insurance, ICC, the Flood Protection Information website, the CRS program, local flooded structures, SD/SI, LOMR, FEMA grants, access to Elevation Certificates, LOMA and historic FRIM on community web, natural benefits of floodplain, needing a building permits, on site visits, flood warning, FEMA grants, retrofitting, property protection, new FIRMS, LiMWA, CBRA, Resource web sites, flooding in the X zones, and useful layers in SAGIS.org web site. Realtors will use this information to better serve their clients.

Mr. Tom McDonald, CFM serves as COS's Floodplain Administrator and CRS Program Manager. Readers can obtain access to the August 6, 2015 Flood Mitigation Plan and/or receive copies of any of the documents previously referenced by contacting him or viewed them on the City's Flood Protection Information web page: savannahga.gov. Comments, suggestions and any questions can be submitted to him by calling (912) 6351-6530 or via email at tmcdonald@savannahga.gov.

Thank you for your time and assistance.

Regards,



Tom McDonald, CFM

CC: Rob Hernandez, City Manager

Haydn Blaize, State Floodplain Management Coordinator and NFIP Coordinator