


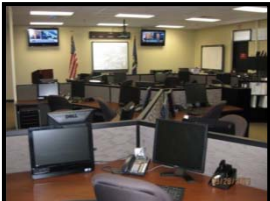




Activity 610: Flood Warning and Response




Old (~1988) ALERT standpipe on right, with its replacement ALERT2 installation (2016) on the left. Elkridge, MD




Outline

- Introduction
- Basic Credit Criteria
- Method of Documentation
- Scoring of Documentation
- Wrap Up / Summary
- Questions




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 **Introduction**

Activity 610 serves to evaluate a community's emergency management program in regard to its:


- Flood threat recognition system;
- Emergency warning dissemination;
- Flood response operations;
- Critical facility planning, and;
- CRS recognition of the NWS SRC and TRC programs.




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 **Introduction (continued)**

This activity ties into the emergency management Preparedness Cycle:





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 **Introduction** (continued)

Emergency Management Focused:

- Roles of the local emergency manager, in regard to:
 - Advancing Public Safety;
 - Property Protection, and;
 - Disaster resiliency / recovery through the NFIP and the CRS programs.



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 **Introduction** (continued)



2017 Coordinator's Manual

Download the complete manual from crsresources.org/manual.

Download the Documentation Checklist from crsresources.org/600-2

Activity 610 webinar:
<https://youtu.be/gbtsp4qBad8>

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Introduction (conclusion)

It would be prudent for a community to review the CRS Coordinator's Manual before documentation collection begins. This will serve to:

- Understand what is actually requested;
- Enhance the emergency manager's understanding of why it is necessary to participate in the community's CRS program, and;
- Provide the reasoning behind the extensive documentation checklist.

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Basic Credit Criteria

There are six credit criteria in Section 611.b.:

- 1 ▪ Must obtain credit in the first four elements (FTR, EWD, FRO and CFP) to receive any credit.
- 2 ▪ The community must have a description of its flood hazard that includes:
 - Nature, flood depths, velocities, warning times, historical flood problems and special flood-related hazards;

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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- The community must have a description of its flood hazard that includes: (conclusion)
 - Development exposed to flooding, such as number and types of buildings, land use, critical facilities and historic flood problem areas, and;
 - Expected impacts of flooding on health and safety, community functions and potential for secondary hazards.

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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- 3 ▪ Must have a flood inundation map(s) that depicts at least two different storm surge levels for a coastal community and three or more for a riverine community.




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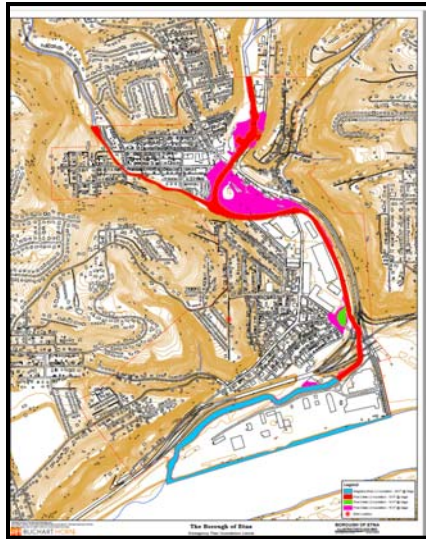
 **Basic Credit Criteria (continued)**

(3) The community must have a flood inundation map(s), also known as a flood stage forecast map. The map must show areas that are inundated by at least three different flood levels in riverine areas and/or two storm surge levels in coastal areas. If a community is only inundated by flash flooding, impact area maps based on cubic feet per second (cfs) alert levels, rainstorm thresholds, or flow depths are acceptable. Such maps must be used in planning the community's flood response when different flood levels or rainfall amounts are predicted. An example of a riverine and coastal map is shown in Figure 610. A community may show that only one flood level is appropriate for some areas of the community, such as for an area subject to shallow flooding.

In large counties, there may not be detailed mapping and flood warning planning for the entire floodplain. In such cases, some counties designate the entire 100-year flood level as the initial area to be notified by the Emergency Alert System and other flood alerts and have detailed, multi-layered flood levels only in the populated areas. If the flood threat recognition system and flood response plan utilize such a scenario, they can be considered a creditable flood warning and response system.

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 **Basic Credit Criteria (continued)**



Legend

- Allegheny River L2 Inundation - 26 FT @ Gage
- Pine Creek L2 Inundation - 13 FT @ Gage
- Pine Creek L3 Inundation - 14 FT @ Gage
- Pine Creek L4 Inundation - 15 FT @ Gage
- Siren Location

BOROUGH OF ETNA
ILLUSTRATIVE FLOOD MAP
Created: 10/22/2015

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The image shows two screenshots of the 'Susquehanna Inundation Mapping Viewer' web application. The top screenshot shows a regional map of the Northeast United States with a red circle highlighting the New York area. The bottom screenshot shows a detailed view of a flood stage forecast for a specific area, with a color-coded legend on the left. The legend includes categories such as '125% of Record Flow', 'Major Flood Stage', 'Moderate Flood Stage', 'Flood Stage', 'Action Stage', 'No Flooding', 'Study Limits', 'Flood Protection Structures', 'Stream Centerline', 'Levee Risk Area', and 'River Forecast Point'. The map shows a river with a large area of inundation colored in yellow and orange.

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The image shows a screenshot of a web browser displaying a flood depth map for St. Charles Parish, Louisiana. The map is titled 'ST. CHARLES PARISH LOUISIANA' and shows various flood zones in different shades of blue. A legend on the right side of the map lists 'Flood Depth (FD)' with color-coded boxes for values: 0-1, 1-2, 2-3, 3-4, 4-5, 5-6, 6-7, 7-8, 8-9, 9-10, 10-11, 11-12, 12-13, and 13-15. Below the legend, there is a 'MAP SCALE' of 1:160,000 and a scale bar showing 0, 0.5, 1, and 2 miles. The map also includes a north arrow and a disclaimer section. The browser address bar shows the URL 'http://www.stcharlesparish-la.gov/home/showdocument?id=6391'.

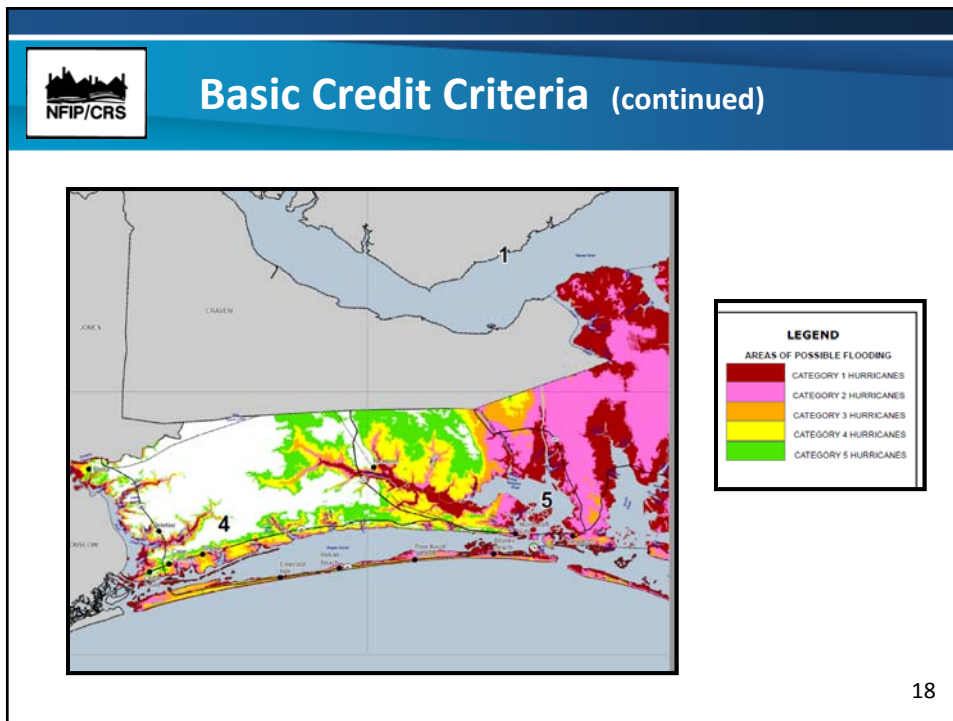
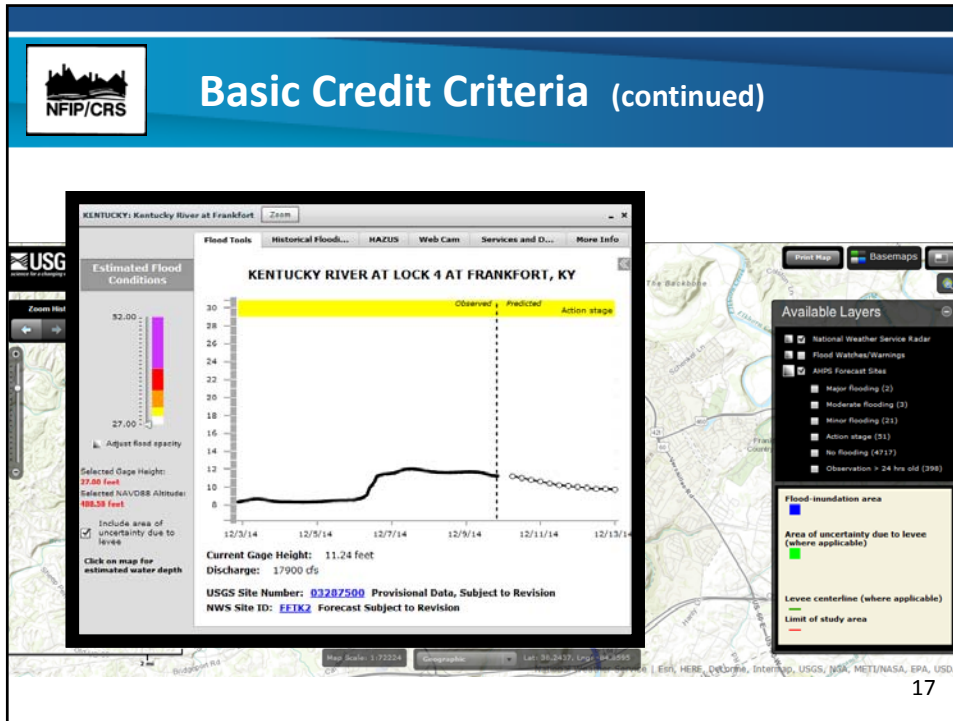
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Basic Credit Criteria (continued)

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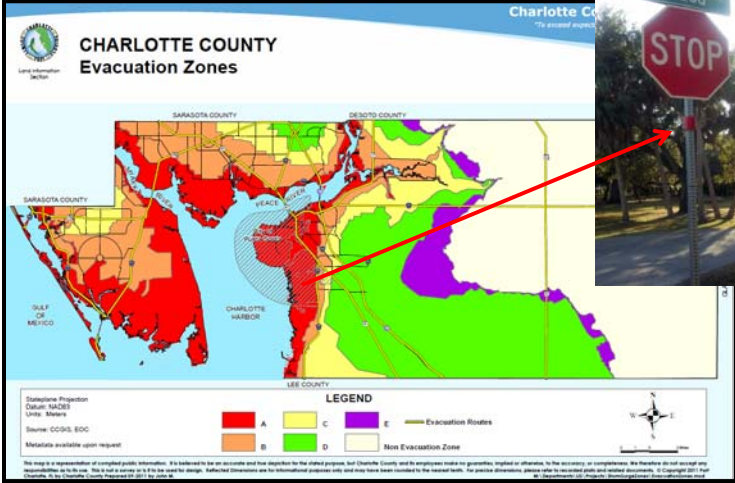
Basic Credit Criteria (continued)


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Basic Credit Criteria (continued)

■ Must have a flood inundation map(s):





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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

4 ■ The community must have an adopted flood warning and response plan that:

- Describes the methods and warning devices used to disseminate emergency warnings to the general public that are credited under EWD;
- Include specific flood response actions that are taken at the different flood/surge levels that are credited under FRO, and;

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 **Basic Credit Criteria** (continued)

There are six credit criteria: (continued)

- The community must have an adopted flood warning and response plan that: (conclusion)
 - Be adopted by the community's governing body or by an office that has been delegated approval authority by the governing body.

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 Basic Credit Criteria (continued)	
III. Flood In Process	
Level 1 Prediction of river rise to Elevation 685+.....	4
Level 2 River Elevation at 683 & rise predicted	5
Level 3 River Elevation at 684	5
Level 4 River Elevation at 684 & rise predicted.....	5
Level 5 Inland Water Elevation at 685 & rise predicted	6
Level 6 River Elevation at 686 & rise predicted.....	7
Level 7 River Elevation at 688	7
Level 8 River Elevation at 689 & prediction of 692+	8
Level 9 River Elevation at 695+ (500 yr elevation)	8
Level 10 Emergency Evacuation	8
IV. Demobilization	9 - 11

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Level 4 River Elevation at 684 for Sustained Period and Rise Predicted

It is likely that seeping water is now visible in the 10-year floodplain. As the river level rises, the inland seeping water will rise more quickly. Pumping may hold the inland water elevations as much as four feet lower than the river elevation.

- The Incident Commander will by delegation :
 - Move contents from City Garage to safe location
 - Initiate mobilization of required equipment..
 - Prepare pump sites at 20th & Redwing and at 19th & Riviera, and secure any Waivers of Trespass as needed
 - Arrange congregate care (food, clothing, housing, etc.) from Red Cross and Salvation Army
 - Notify residents of availability of home contents storage trailers
 - Contemplate request to City Council for Declaration of State of Emergency and the need for National Guard and Sheriff Command Post if situation warrants
- The Setup Coordinator will:
 - Take possession of bobcat/forks, pallets, sand, sandbags, cell phones, portable toilets, truck, shelter for pump workers
 - Build ramp over pump discharge pipes at 20th Street
 - Install water elevation rulers in river bank
 - Secure rowboat with motor. Place at 20th St.
 - Continue to monitor 17th Street culvert cap
 - Monitor resident pumping so ensure that force of water being discharged does not erode the levee face
 - Inspect for boils (river water intruding) at water-main valves in streets and at fire hydrants. Past problem areas have been at 20th & Redwing, septic system by Laurel March's home, Kurt Schmidt's well, Christgau's well and 17th Street culvert.
 - Purchase motor oil, filters, etc. for pumps
 - Set-up flood safety measures as needed:
 - Barrier in bluffland if slumping occurs
 - Notices to KEEP OFF Levees 1 & 2
 - Street barriers where needed
 - Life ring with 50 feet of rope at levee 1
 - Life jackets for dike walkers and county workers.

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- The Sandbag Coordinator will:
 - o Make the required number of sandbags
 - o If leaking occurs, place sandbags on base of levee #1 by 17th Street as needed
- The Volunteer Coordinator will:
 - o Prepare volunteer schedules for pump watchers, dike walkers and sandbaggers as needed
 - o Arrange volunteer hotline with Washington County Community Volunteer Service
- The Pump Coordinator will:
 - o Train all pump volunteers
- The Communications Coordinator will:
 - o Produce and distribute resident flood information kit and access passes if needed.

Once, and if, pumping is initiated and while the water is contained below ground level (ground water), the greatest benefit is realized by properties closer in proximity to the pumps. Owners of properties further from the pumps may need to make other provisions to deal with increased hydrostatic pressure and potentially higher ground water levels than observed at the site of the pumps. Other provisions may be required to provide additional protection to these properties. Decisions will need to be made if this is to be done by property owners or by the City. Property owners in the floodplain area should be apprised of this situation at this time and that the responsibility for their property is the owner's responsibility.

Pinellas County 2012 Evacuation Zones


Pinellas County EMERGENCY MANAGEMENT Hurricane Evacuation Implementation Guide 2013

CITY OF PINELLAS PARK HURRICANE RESPONSE PLAN June 2012

Evacuation Zone	Number Evacuation Zones	Number Considered	New	Evac	Total
A	1	1	0	0	1
B	1	1	0	0	1
C	1	1	0	0	1
D	1	1	0	0	1
E	1	1	0	0	1
F	1	1	0	0	1
G	1	1	0	0	1
H	1	1	0	0	1
I	1	1	0	0	1
J	1	1	0	0	1
Total	10	10	0	0	10

C Comprehensive
E Emergency
M Management
P lan


D & C Areas, continue evacuation of all mobile home and 5) to twenty (20) feet.
B, C & D Areas, continue evacuation of all mobile home
6) to twenty-four (24) feet.
B, C, D & E Areas, continue evacuation of all mobile home



Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- 5 ■ The community must implement one or more outreach projects that tells its residents and businesses how they will be warned and the safety measures they should take during a flood.



BEFORE A FLOOD:

- Know your neighborhood flood history.
- Consider purchasing flood insurance. Most homeowners' policies do not cover damage from rising water. Your insurance agent will have more information about the National Flood Insurance Program (NFIP).
- Determine if your home and workplace are in a flood zone.
- Ask your landlord for emergency evacuation instructions.
- When you evacuate include the contents for flooding, get out of your home, workplace and other important locations.
- Flooded basements may flood, consider filling up them, basements and other structures with water.


DURING A FLOOD:

- If you receive a flood warning, make it higher ground immediately. Do not attempt to walk, wade and drive through floodwaters.
- If you cannot evacuate safely, go to the highest floor in your house. Move your emergency supplies and pets to a safe place. Do not use electrical appliances.
- Do not attempt to cross water that is above your ankles.
- Do not drive into a flooded area or around barricades.
- Avoid a flooded area and immediately report to emergency services.
- After rising water - the higher you climb you get your feet wet. Do not touch anything that is up.
- Avoid standing water - it will likely be contaminated and contain large amounts of debris.

AFTER A FLOOD:

- Listen for instructions of authorities and stay until they are safe to discontinue if the water is safe to drink.
- Do not drink water and food that has come into contact with floodwater.
- Check for utility outages. Utilities will have to be turned back on in a systematic way.
- Avoid contact with flood debris because of contamination or electrical and plumbing effects.
- Consider asking a professional to inspect your home for leaks.
- Consider flood clean-up. It is not effective in killing bacteria and can still leave your home unsafe.
- Do not drive or enter flooded car pools if it is safe.

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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- Outreach projects: (continued)
 - Send a brochure/letter/newsletter each year to all residents and businesses in the community;
 - Send an outreach project each year to all residents and businesses in the floodplain where the warning program is in effect;
 - Develop an approach as part of a Program for Public Information (PPI) under Activity 330;

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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- Outreach projects: (continued)
 - IF the community has at least three days of flood notification, it may document that it provides repeated watch, warning and safety information to all residents and businesses beginning at least 72 hours in advance of predicted flooding; or

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Basic Credit Criteria (continued)

There are six credit criteria: (continued)

- Outreach projects: (conclusion)
 - A community with more than one source of flooding may need to use different types of approaches to reach different audiences.

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Basic Credit Criteria (conclusion)

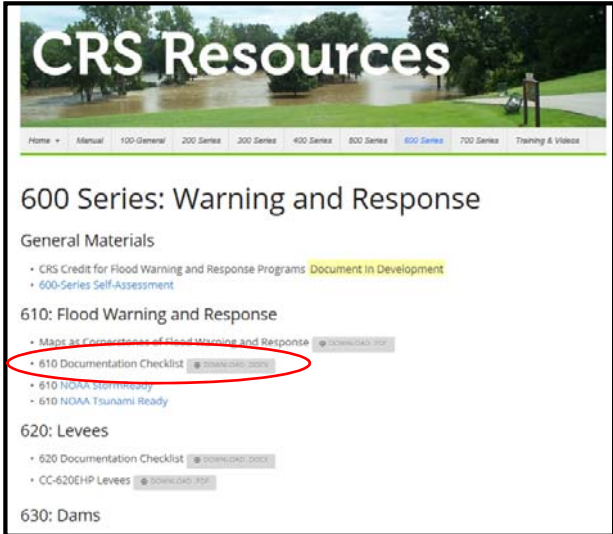
There are six credit criteria: (conclusion)

- 6 ■ There must be at least one exercise and evaluation of the flood warning and response plan each year. The exercise can be for a flood, levee failure, dam failure or hurricane. This criterion can be met if the plan is implemented in response to an actual event. In either case, there must be an evaluation of the performance of the plan and recommended changes.

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Method of Documentation



The screenshot shows the 'CRS Resources' website. Under the '610: Flood Warning and Response' section, the '610 Documentation Checklist' is circled in red. Other items listed include 'CRS Credit for Flood Warning and Response Programs Document in Development', '600-Series Self-Assessment', 'Maps as Components of Flood Warning and Response', '610 NOAA StormReady', '610 NOAA Tsunami Ready', '620: Levees', '620 Documentation Checklist', 'CC-620EHP Levees', and '630: Dams'.

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Method of Documentation (continued)

CID _____ Community _____ Co _____ State _____

CRS 600 Series: Warning and Response

The 600 series of activities within the National Flood Insurance Program's (NFIP) Community Rating System (CRS) is focused on linkages between a community's emergency management mission program and its related CRS activities. These combined activities focus on the life safety aspect of a community's floodplain management program, particularly its emergency management flood warning programs and can result in additional CRS discounts for your citizens. For more information, the following Uniform Resource Locator link is provided for the current Activity 610 website: <https://www.fema.gov/nfip/crs/610>

Catalyst of Change. Even though flood preparedness and response operations primarily rest within the purview of the community's (or borough/county/parish) emergency management office, the emergency manager's role in advancing public safety, property protection, disaster readiness and sustainability through the National Flood Insurance Program and the CRS is sometimes overlooked by the community. The community CRS Coordinator should begin with the community emergency management office, to promote alignment. These activities that are critical to success credit under the 600 Series. The daily emergency management issues of prevention, preparedness, response, recovery and mitigation can successfully be integrated with the CRS. Activities 610, 615 and 616 are designed to evaluate the community's emergency management program regarding flood warning, levees and dams.

Background. Activities under the 600 Series encourage and promote the development and use of community-based flood detection systems, warning dissemination programs, coordinated flood response activities and critical facility planning. These are the activities that help reduce the threat to life safety, health and property damage. The emergency manager is the identified catalyst of this effort.

These activities make up the 600 Series. Activity 610 (Flood Warning and Response) forms the building block of the series, because all communities must have these basic services. Activity 615 (Levees) and Activity 616 (Dams) are for more specific threats that are not present in every community, mostly levees and dams. All three activities are organized in a similar fashion, with pertinent credit criteria and require some actions for:

- Advance notification of an impending flood (leak or overtopping).
- Warnings issued to the threatened population (warning).
- Steps taken to protect life and reduce losses (preparation), and
- Continuation with critical facilities (critical facilities planning).

All three activities have a public information prerequisite to educate residents and businesses concerning safety measures before, during and after a flood. All three activities require the annual completion of a drill, a flood exercise or demonstration of an actual response to a flood related emergency. The latter also requires the submission of an after action report improvement plan or lessons learned document, including any recommendations for changes to the adopted plan. A flood, levee failure, dam failure or hurricane exercise qualifies as an exercise for all three activities.

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CID _____ Community _____ Co _____ State _____

Focus of this checklist. Activity 610 (Flood Warning and Response) is based on the principle that an ample warning combined with a flood response plan can prevent loss of life and property damage. It also encourages the development and dissemination of hydrologic warning capabilities, enhancements in the acquisition and dissemination of hydrologic warning, greater accuracy in forecasting flood arrival times and peak elevations and enhanced flood contingency planning that involves critical facilities.



The possible 393 points found within the five elements of Activity 610 are the building blocks of every community's emergency management program.

- Flood threat recognition system (FTR) is used at determining the capability level of the community's FTR system or systems. (75 points)
- Emergency warning dissemination (EWD) looks at the linkages between FTR and the community's dissemination of flood warning to the public. (75 points)
- Flood response operations (FRO) credits are based on the extent and level of the community's specific tasks to reduce or prevent damage to health, safety and property. (113 points)
- Critical facilities planning (CFP) considers the coordination of flood warnings between the community and the operators of critical facilities within its territory. (75 points)
- StormReady community (SRC) (25 points) and TransactReady community (TRC) (20 points) credits a community's participation in the National Weather Service's StormReady and TransactReady programs.

The community must receive some credit in the first four elements to receive any credit under Activity 610, which regulates the standard preparedness cycle. For more details, refer to the 2017 CRS Coordinator's Manual.

The Corner Stones of Activity 610 (Flood Warning and Response).

The community must have a program that overviews its flood threat recognition system, flood inundation map(s) and its adopted flood warning response plan. (This requirement is a basic component of any community emergency management program.) When preparing this documentation, provide a copy of the flood inundation map, flood stage forecast map, flood hazard impact map or storm surge map (showing multiple levels of inundation), which depicts your community's flood threat. Such maps are used for multiple planning purposes by emergency management and must be addressed in the adopted flood warning response plan, CEMP, EOP, etc. (This map or maps are not the FEMA provided FIRM, but can include them as additional levels of inundation.) They must be logically tied into whatever flood threat recognition system provides real-time flood by zone community, such as text pages, ALERT systems, social pages, SCOD modeling, etc. Therefore, a flood threat recognition system, combined with a flood inundation flood stage forecast map and an adopted plan provides the required basis for Activity 610 credit.


+


610 Documentation Checklist March 2017

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CID _____ Community _____ Co _____ State _____

Activity 610 (Flood Warning & Response) Documentation Checklist

Provide this checklist and the following for each item checked:

- (1) A CD with the documents. Note the file name and the appropriate pages and section numbers, or
- (2) The URL link to on-line documents with the appropriate pages and section numbers noted here, or
- (3) A paper copy of the documents with the appropriate sections marked in the margin.
- (4) A copy or URL link to the Comprehensive Emergency Management Plan, Emergency Management Plan, or similar plan through which the community is applying for Activity 610 credit.
- (5) If the community is included in another jurisdiction's plan (which implements a multi-jurisdictional flood warning program), then:
 - (a) A copy of a resolution or memorandum of agreement that specifies the community's responsibilities must be included, or
 - (b) A statement from the applicant community's Emergency Manager or a similar community program designer must be submitted which lists those flood warning and response activity elements that are undertaken by the applicant community and those activities that are undertaken by the other jurisdiction on behalf of the applicant community.

Emergency Manager	CRS Coordinator
Name	
Title	
Address	
Phone	
E-mail	

Completed By: _____

Title: _____

Date: _____

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For more information, Contact Al Goodman at Al@awgconsulting.comcastbiz.net.

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CID: _____ Community: _____ Co: _____ State: _____

(3) The community must have a flood inundation map(s), also known as a flood stage forecast map.

The inundation map must show areas that are inundated by at least three different flood levels for each riverine area, two different flood or storm surge levels in coastal zones and/or a series of impact area maps for flash flooding. [See Attachment _____ Pages _____]

(4) The community must have a flood warning and response plan or flood annex to a CEMP that has been adopted by the community's governing body. The plan must:

(For the community's own "stand alone" plan):

Describe the methods and warning devices used to disseminate emergency warnings to the public that are credited under EWD. [See Attachment _____ Pages _____]

Include specific flood response actions that are taken at the different flood levels that are credited under FRO. The FTR system must be correlated to the flood inundation map. [See Attachment _____ Pages _____]

For full credit for flood response operations, the plan needs to

(a) Describe the actions to be taken, [Pages _____]

(b) Identify the office or official responsible for the action, [Pages _____]

(c) Define the time needed to carry out the activity, and [Pages _____]

Contain other critical information that designated agencies and organizations will need to perform their assigned responsibilities. [Pages _____]

Be adopted by the community's governing body or by an office that has been delegated approval authority by the community's governing body. If the plan is prepared at the county/borough/parish level, it must be adopted by the individual community seeking credit. [See Attachment _____ Pages _____]

OR

(If the community is included in another jurisdiction's plan, which implements a multi-jurisdictional flood warning program, then):

A copy of a resolution or memorandum of agreement that specifies the community's responsibilities must be included, or [See Attachment _____ Pages _____]

A statement from the applicant community's Emergency Manager or a similar community program designee must be submitted which lists those flood warning and response activity elements that are undertaken by the applicant community and those activities that are undertaken by the jurisdiction on behalf of the applicant community. [See Attachment _____ Pages _____]

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CID: _____ Community: _____ Co: _____ State: _____

(5) The community must implement one or more outreach projects that tells its residents and businesses how they will be warned and the safety measures they should take during a flood. This can be done by using **one or more** of the following approaches (check or highlight approach used).

Sending an outreach project (e.g., a brochure, letter, or newsletter) each year to all residents and businesses in the community.

Sending an outreach project each year to all residents and businesses in the floodplain where the warning program is in effect.

Developing an appropriate approach as part of a Program for Public Information (PPI).

If the community has at least three days of advance flood notification, such as coastal areas subject only to tropical storms and hurricanes or communities on large rivers, it may document that it provides repeated watch, warning, and safety information to all residents and businesses, beginning at least 72 hours in advance of the predicated flooding.

A community with more than one source of flooding (e.g., coastal and riverine) may need to use different types of projects to reach different audiences.


A copy of the outreach material used to tell people how they will be warned and the safety measures they should take. [See Attachment _____ Pages _____]

If the outreach material is also credited under Activity 330 (Outreach Projects), a separate submittal is not needed, if the other document (including a PPI, if used) is annotated to show where the Activity 610 outreach topics are covered.

(6) There must be at least one exercise and evaluation of the flood warning and response plan each year. The exercise can be for a flood, levee failure, dam failure, or hurricane. (Criterion can be met if implemented by an actual flood or threat of failure.) A description of the flood exercise, drill, or response to an actual emergency or flood disaster response conducted during the previous year. The description must include a list of who participated, lessons learned, and any recommendations for changes to the system. A copy of the after-action report/improvement plan or any similar report for any actual response is required. [See Attachment _____ Pages _____]

NOTE: If the community experienced a flood during the past year, it must submit an evaluation report on the flood warning program's performance.

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Method of Documentation (continued)

Documentation: FTR

Complete documentation checklist for tech reviewer:

- **Community’s flood hazard description;**
- **Community’s flood inundation map;**
- **Copy of adopted flood warning and response plan (marked up);**
- **Description of flood threat recognition system;**
- **Copy of maintenance procedures for any community owned gages;**
- **Impact adjustment map showing how the number of buildings used were determined;**
- **Copy of outreach materials, and;**
- **Description of flood exercise, with an AAR / Improvement Plan.**

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CID: _____ Community: _____ Co: _____ State: _____

Flood Threat Recognition System (FTR) Credit Criteria and Additional Documentation

The maximum credit for this element is 75 points.

(1) The activity credit criteria must be met.

(2) The community must have a manual system, or an automated flood alarm system or an automated flood warning system that provides early notice of a flood for at least one location within the community. The system must be able to receive or provide flood warnings 24-hours a day, seven days a week. A community may have different levels of service for different sources of flooding and in different locations in the community.

a. Provide a description of your community’s flood threat recognition system (please check the system used). Is the system:

A manual system (Level 1) which relies on a person to interpret the data received from river and/or tide gages, often using paper tables and graphs. In many cases, the gage data are collected and reported manually, usually by volunteers, or

An automated flood alarm system (Level 2) which issues a signal when a flood threatens. When water reaches a certain height on a river or tide gage, an alarm is sent to the monitoring location. Unlike automated flood warning systems, this system does not predict flood heights or provide any other data than the current water level, or

An automated flood warning system (Level 3) which provides information such as the timing and potential crest of an oncoming flood. Typically, these systems are operated by the NWS or USGS in riverine situations. In coastal areas, SLOSH models are used.

The description must identify the rivers, streams, and coastal floodplains where flood stage forecasts are prepared and each forecast point.

If the community has its own gage system, such as an ALERT system, the description must include the locations of the stream and precipitation gages.

Include documentation of early notice of a flood at one or more locations within the community. If appropriate, describe how the community provides flood forecasts for areas other than the above forecast points.
[See Attachment _____, Page(s) _____]

Provide documentation that demonstrates that the community is prepared to receive flood warnings on a 24-hour basis from what federal, state, or other agencies.
[See Attachment _____, Page(s) _____]

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March 2017

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CITY _____ Community _____ Co. _____ State _____

If the community or another local agency uses rainfall and/or runoff data on a real-time basis and makes flood forecasts from these data, provide a description of the system. [Tell whether the collection system is based on precipitation and/or river gage data that are manually or automatically read and reported, the location gage network density, etc.]
[See Attachment _____ Pages _____]

Provide documentation showing the method used to predict downstream arrival time and peak flow or elevations.
[See Attachment _____ Pages _____]

If flood warnings are received from another agency, include

- A description of how the notice is received.
[See Attachment _____ Pages _____]
- Identify local agency procedures for monitoring the system. [Include the written instructions available to the person monitoring the warning system.]
[See Attachment _____ Pages _____]

Provide examples of one or more flood forecast notices issued for the community.
[See Attachment _____ Pages _____]

If the community has its own gage system, such as an ALERT system, a copy of the maintenance procedures for the system and records showing that the system is being maintained.

- Provide documentation of the annual maintenance and testing of the data collection, communications, and data analysis components of the flood threat recognition system.
[See Attachment _____ Pages _____]

(3) The flood threat recognition system must be correlated to the flood inundation map, so that the emergency manager can see what areas will be affected by the predicted flood.


An impact adjustment map showing the area(s) affected by each element and documentation showing how the numbers of buildings used in the calculations were determined.
[See Attachment _____ Pages _____]

Emergency Warning Dissemination (EWD) Credit Criteria and Additional Documentation
The maximum credit for this element is 75 points.

(1) The activity credit criteria must be met.

(2) The warning must reach people in a timely manner. For example, television or radio announcements are not credited in areas subject to flash flooding during the night.

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Method of Documentation (continued)

FTR Credit points

FTR = EITHER

(1) 25 points, for a Level 1 manual system, OR

(2) 50 points, for a Level 2 automated flood alarm system,
OR

(3) 75 points, for a Level 3 automated flood warning system



Method of Documentation (continued)

Documentation: EWD

Complete documentation checklist for tech reviewer:

- Copy of adopted flood warning and response plan (marked up);
- Copy of outreach materials credited under EWD;
- Copy of pre-scripted messages;
- Impact adjustment map showing siren locations and coverage areas;
- Description of publicly owned call system or contract with provider;
- Copy of cable agreement and override procedures;
- Description of other forms of public notification, and;
- Description of flood exercise and AAR or lessons learned.

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CID: _____ Community: _____ Co: _____ State: _____

If the community or another local agency uses rainfall and/or runoff data on a real-time basis and makes flood forecasts from these data, provide a description of the system. [Tell whether the collection system is based on precipitation and/or river gage data that are manually or automatically read and reported, the location gage network density, etc.]
[See Attachment _____ Pages _____]

Provide documentation showing the method used to predict downstream arrival time and peak flow or elevations.
[See Attachment _____ Pages _____]

If flood warnings are received from another agency, include

- A description of how the notice is received.
[See Attachment _____ Pages _____]
- Identify local agency procedures for monitoring the system. [Include the written instructions available to the person monitoring the warning system.]
[See Attachment _____ Pages _____]

Provide examples of one or more flood forecast notices issued for the community.
[See Attachment _____ Pages _____]

If the community has its own gage system, such as an ALERT system, a copy of the maintenance procedures for the system and records showing that the system is being maintained

- Provide documentation of the annual maintenance and testing of the data collection, communications, and data analysis components of the flood threat recognition system.
[See Attachment _____ Pages _____]

(3) The flood threat recognition system must be correlated to the flood inundation map, so that the emergency manager can see what areas will be affected by the predicted flood.

An impact adjustment map showing the area(s) affected by each element and documentation showing how the numbers of buildings used in the calculations were determined.
[See Attachment _____ Pages _____]

Emergency Warning Dissemination (EWD) Credit Criteria and Additional Documentation
The maximum credit for this element is 75 points.

(1) The activity credit criteria must be met.

(2) The warning must reach people in a timely manner. For example, television or radio announcements are not credited in areas subject to flash flooding during the night.

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CID: _____ Community: _____ Co: _____ State: _____

(3) For those warning systems requiring specialized equipment, such as sirens, the equipment and procedures must be tested at least annually. Equipment that is used routinely throughout the year, such as television notices and message boards, do not need testing records for CRS credit.

Copies of any written warning materials, such as handouts or the flood inundation map created under EWD 10. [See Attachment _____]

[For EWD1, 2, 5, 6, 7, or 8] A copy of the pre-scripted messages. [See Attachment _____]

[For EWD3] A map, showing the fixed siren locations and their effective coverage areas. [See Attachment _____]

[For EWD6] A copy of the description of a publicly owned call warning system or a copy of the contract with a private provider. [See Attachment _____]

[For EWD7] Documentation of the community owned cable channel or a copy of the cable TV agreement and override procedures. [See Attachment _____]

[For EWD8] A description of the capability and use of other forms of public notification. [See Attachment _____]

Describe the community's program for testing warning dissemination equipment and procedures. [Include the frequency of the tests.] [See Attachment _____]

(4) EWD1 (10 points): Provide documentation that the flood warning and response plan includes pre-scripted messages or message templates and guidance for staff to quickly issue appropriate flood warnings. [See Attachment _____] Pages _____

(5) EWD2 (10 points): Provide documentation that public messages include information and instruction on the expected elevation of the flood waters, or storm surge, or the impact of flash flooding and instructions on when to evacuate. [See Attachment _____] Pages _____

(6) EWD3 (10 points): If an outdoor voice-activated system or fixed siren system is used that covers the community's jurisdiction. [See Attachment _____] Pages _____

(7) EWD4 (either 3 or 15 points): _____ Five points if the plan identifies the primary and support agencies responsible for door-to-door or mobile public address warning or _____ 15 points if the plan identifies the routes, procedures, responsible staff and equipment necessary for door-to-door or mobile address warning. [See Attachment _____] Pages _____

(8) EWD5 (10 points): If the Emergency Alert System through all channels/vibrations with pre-scripted draft messages is used. [See Attachment _____] Pages _____

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CID: _____ Community: _____ Co: _____ State: _____

(9) EWD6 (15 points): If a telephonic warning/enhanced telephone notification is used. [See Attachment _____] Pages _____

(10) EWD7 (10 points): If television broadcast or message scroll notifications are implemented by the community. [See Attachment _____] Pages _____

(7) EWD8 (15 points): If the community uses other forms of public notification for emergency warnings, such as recorded alert notification products and social media coordination of emergency-related topics. [See Attachment _____] Pages _____

(8) EWD9 (10 points): If some alert radios or NOAA Weather Radios either provide a system of notification to or are physically located within the schools, hospitals, nursing homes, prisons and similar facilities that need flood warning. [See Attachment _____] Pages _____

(11) EWD10 (10 points): If the flood inundation map or evacuation map or series of maps used to meet the credit criteria in Section 611.1 are posted online. URL link _____

Flood Response Operations (FRO) Credit Criteria and Additional Documentation
The maximum credit for this element is 115 points.

(1) The activity credit criteria must be met.

(2) For full credit for flood response operations, the plan needs to:

(a) _____ Describe the actions to be taken;

(b) _____ Identify the office or official responsible for the action;


(c) _____ Define the time needed to carry out the activity, and;

(d) _____ Contain other critical information that designated agencies and organizations will need to perform their assigned responsibilities. General statements or an assignment of responsibilities with no specifics about what is to be done are not credited.

(3) Bonus credit is provided under FRO5 if there is a list of the personnel, equipment, facilities, supplies and other resources needed to complete each task. For full credit the list must identify what is available within the community and what is needed from private suppliers or other jurisdictions. [See Attachment _____] Pages _____

(4) FRO5 also provides bonus credit for preparing for mitigation opportunities that may arise in the aftermath of a disaster-a time when hazard awareness is high, funds are more likely to be available, and disruption of the status quo makes it possible to rethink the design and location of facilities and infrastructure. This should be coordinated with the public information activities credited under flood response preparations (FRP) under Activity 130 (Outreach Projects), which encourages owners to take mitigation measures during repairs. [See Attachment _____] Pages _____

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Method of Documentation (continued)

EWD Credit points

EWD = the total of the following, up to the maximum of 75 points

EWD1 = 10 points, if the flood warning and response plan includes pre-scripted messages and guidance for staff to quickly issue appropriate flood warnings

EWD2 = 10 points, if the public messages include information and instruction on the expected elevation of the flood waters or storm surge, or the impact of flash flooding, and instructions on when to evacuate


EWD3 = 10 points, if an outdoor voice-sound system or fixed-siren system is used that covers the community's jurisdiction

EWD4 = EITHER:

- (a) 5 points, if the plan identifies the primary and support agencies responsible for door-to-door or mobile public address warning; OR
- (b) 15 points, if the plan identifies the routes, procedures, responsible staff, and equipment necessary for door-to-door or mobile public address warning

EWD5 = 10 points, if the Emergency Alert System through all channels/stations with pre-scripted draft messages is used

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Method of Documentation (continued)

EWD Credit points

EWD6 = 15 points, if telephone warning/enhanced telephone notification is used





EWD7 = 10 points, if television broadcast or message scroll notifications are implemented by the community

EWD8 = 15 points, if the community uses other forms of public notification for emergency warnings, such as geocoded alert notification products and social media coordination of emergency-related topics

EWD9 = 10 points, if tone alert radios or NOAA Weather Radios either provide system of notification to or are physically located within the schools, hospitals, nursing homes, prisons, and similar facilities that need flood warning


EWD10 = 10 points, if the flood inundation or evacuation map or series of maps used to meet the credit criteria in Section 611.a are posted online.

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Baton Rouge, LA. August 2016

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Method of Documentation (continued)

Documentation: FRO

Complete documentation checklist for tech reviewer:

- Copy of adopted flood warning and response plan (marked up);
- Copies of documents credited under FRO, if they are not in the flood warning and response plan, and;
- Description of flood exercise and AAR or lessons learned.

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CID: _____ Community: _____ Co: _____ State: _____

(9) EWD6 (15 points): If a telephonic warning/enhanced telephone notification is used. [See Attachment _____ pages _____]

(10) EWD7 (10 points): If television broadcast or message scroll notifications are implemented by the community. [See Attachment _____ pages _____]

(7) EWD8 (15 points): If the community uses other forms of public notification for emergency warnings, such as pre-coded alert notification products and social media coordination of emergency-related topics. [See Attachment _____ pages _____]

(8) EWD9 (10 points): If tone alert radios or NOAA Weather Radios either provide a system of notification to or are physically located within the schools, hospitals, nursing homes, prisons and similar facilities that need flood warning. [See Attachment _____ pages _____]

(11) EWD10 (10 points): If the flood inundation map or evacuation map or series of maps used to meet the credit criteria in Section 611.j are posted online. URL link _____

Flood Response Operations (FRO) Credit Criteria and Additional Documentation
The maximum credit for this element is 115 points.

(1) The activity credit criteria must be met.

(2) For full credit for flood response operations, the plan needs to:

(a) _____ Describe the actions to be taken;
 (b) _____ Identify the office or official responsible for the action;
 (c) _____ Define the time needed to carry out the activity, and;
 (d) _____ Contain other critical information that designated agencies and organizations will need to perform their assigned responsibilities. General statements or an assignment of responsibilities with no specifics about what is to be done are not credited.

(3) Bonus credit is provided under FRO5 if there is a list of the personnel, equipment, facilities, supplies and other resources needed to complete each task. For full credit the list must identify what is available within the community and what is needed from private suppliers or other jurisdictions. [See Attachment _____ pages _____]

(4) FRO5 also provides bonus credit for preparing for mitigation opportunities that may arise in the aftermath of a disaster—a time when hazard awareness is high, funds are more likely to be available, and disruption of the status quo makes it possible to rethink the design and location of facilities and infrastructure. This should be coordinated with the public information activities credited under flood response preparations (FRP) under Activity 330 (Outreach Projects), which encourages owners to take mitigation measures during repairs. [See Attachment _____ pages _____]

610 Documentation Checklist 15 March 2017

CID: _____ Community: _____ Co: _____ State: _____

(5) FRO6 provides bonus credit for identifying response and recovery measures to take that support property protection, such as providing a high-ground site for relocated vehicles, helping move building contents and distributing sandbags. [See Attachment _____ pages _____]

(6) FRO1 (15 points): If the community has developed scenarios that review how flood incidents might develop at the different levels shown on the flood inundation map. [See Attachment _____ pages _____]

(7) FRO2 (Up to 35 points): If the plan identifies flood response tasks and responsible community staff and other public and private organizations with responsibilities related to the flood tasks in the plan, the estimated equipment, supplies and time required for each response task and the sources of necessary resources. [See Attachment _____ pages _____]

(a) (5 points): For identified flood response tasks and responsible staff. [See Attachment _____ pages _____]

(b) (10 points): For an estimate of the number of personnel needed for each task. [See Attachment _____ pages _____]

(c) (5 points): For an estimate of the time required for each response task. [See Attachment _____ pages _____]

(d) (15 points): For a list of equipment and supplies expected to be needed and how they will be obtained. [See Attachment _____ pages _____]


(8) FRO3 (25 points): If specific actions are keyed to the different flood levels shown on the flood inundation map or maps used for credit under Section 611.b (3). [See Attachment _____ pages _____]

(9) FRO4 (10 points): For maintaining a data base of people with special needs who require evacuation assistance when a flood warning is issued and for having a plan to provide transportation to secure locations. [See Attachment _____ pages _____]

(10) FRO5 (Up to 15 points): If the plan includes instructions for When and how returning evacuees can recover their damaged homes and businesses, Permit requirements during the recovery phase, Implementing the community hazard mitigation plan's identified flood loss mitigation measures on community property and Promoting flood loss mitigation measures for private property. [See Attachment _____ pages _____]

(11) FRO6 (20 points): If the plan identifies actions that support property protection measures that could be carried out during response and recovery phases. [See Attachment _____ pages _____]

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Method of Documentation (continued)

FRO Credit points

FRO = the sum of the following, up to the maximum of 115 points:

FRO1 = 15 points, if the community has developed scenarios that review how flood incidents might develop at the different levels shown on the flood inundation map

FRO2 = Up to 35 points, if the plan identifies flood response tasks and responsible community staff and other public and private organizations with responsibilities related to the flood tasks in the plan, the estimated equipment, supplies, and time required for each response task and the sources of necessary resources


FRO2 = the sum of the following:

- (a) 5 points, for identified flood response tasks and responsible staff,
- (b) 10 points, for an estimate of the number of personnel needed for each task,
- (c) 5 points, for an estimate of the time required for each response task, and
- (d) 15 points, for a list of equipment and supplies expected to be needed and how they will be obtained

FRO3 = 25 points, if specific actions are keyed to the different flood levels shown on the flood inundation map or maps used for credit under Section 611 b(3)

FRO4 = 10 points, for maintaining a data base of people with special needs who require evacuation assistance when a flood warning is issued and for having a plan to provide transportation to secure locations

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Method of Documentation (continued)

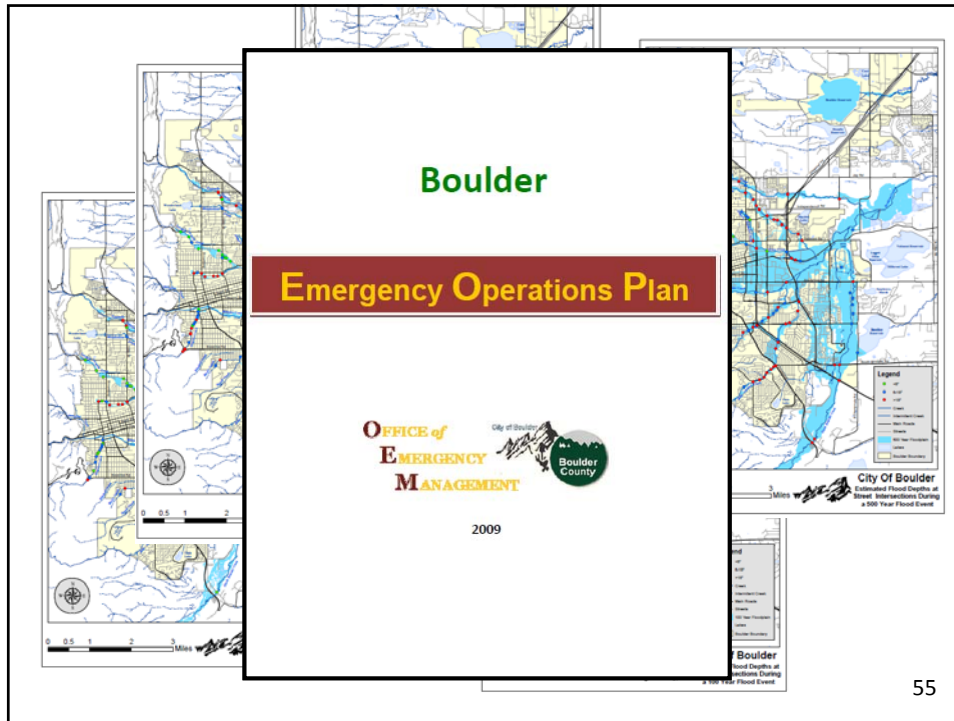
FRO Credit points


FRO5 = Up to 15 points, if the plan includes instructions for

- o When and how returning evacuees can reoccupy their damaged homes and businesses,
- o Permit requirements during the recovery phase,
- o Implementing the community hazard mitigation plan's identified flood loss mitigation measures on community properties, and
- o Promoting flood loss mitigation measures for private property

FRO6 = 20 points, if the plan identifies actions that support property protection measures that could be carried out during response and recovery phases

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Method of Documentation (continued)

Documentation: CFP

Complete documentation checklist for tech reviewer:

- A list of all public and private critical facilities affected by flooding, with contact information and agreed-upon warning needs;
- A list of all critical facilities that have developed their own flood warning and response plans (reviewed and accepted by community), and;
- Sample page from latest list of critical facilities (updated annually).

Method of Documentation (continued)

City: _____ Community: _____ Co: _____ State: _____

Critical Facilities Planning (CFP) Credit Criteria and Documentation
The maximum credit for this element is 75 points.

(1) The activity credit criteria must be met. CFP1 is a prerequisite for any CFP credit.

(2) If your community doesn't have critical facilities that can be affected by flooding, the community must provide documentation stating this on community letterhead and provide a copy of the community's adopted definition of critical facilities. Credit will be limited to a total of 3 points in CFP.

(3) For CFP1, the community's flood warning and response plan must list the facilities considered critical in a flood. This can be in a separate document or SOP. In general, facilities not subject to flooding do not need to be addressed, although in some cases loss of access can cause a critical situation. There may also be facilities in flood free sites that are needed to support the flood response effort (e.g., sandbag suppliers and shelters for evacuees). The list must be updated at least annually. The community must also contact the facilities to determine if they need any special warning arrangements. The community does not need to provide a special warning to all critical facilities, only those that need one.

(4) CFP1 (3 to 25 points): The plan includes the contact information, including the names and phone numbers of the operators of all public and private critical facilities affected by flooding, and (See attachment _____ page _____)

(5) Arrangements for special warnings or early notifications directly to those critical facilities that need advanced warning. (See attachment _____ page _____)

(6) CFP2 (up to 50 points): If critical facilities listed under CFP1 have their own flood warning and response plans that have been developed, reviewed or accepted by the community. The credit is based on the percentage of affected critical facilities that have creditable plans. (See attachment _____ page _____)

At each verification visit, a list of all public and private critical facilities affected by flooding or needed to be operational during a flood, with the contact information and agreed-upon warning needs must be provided. (For CFP2) The list of critical facilities marked to identify those that have developed their own flood warning and response plans that have been reviewed and accepted by the community. The ISO-CRS Specialist will ask for samples of the plans for review.

At annual recertification, a page from the latest list of the critical facilities provided for CFP1 credit must be provided to the ISO-CRS Specialist, which is updated at least annually.

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Method of Documentation (continued)

CFP Credit points


CFP = the sum of the following, up to 75 points:


CFP1 = up to 25 points, if the flood warning and response plan includes

- (a) the names and phone numbers of the operators of all public and private critical facilities affected by flooding, and
- (b) arrangements for special warnings or early notifications directly to those critical facilities that need advanced warning

CFP2 = up to 50 points, if critical facilities listed under CFP1 have their own flood warning and response plans that have been developed, reviewed, or accepted by the community. The credit is prorated based on the percentage of affected critical facilities that have creditable plans


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Livingston Parish 911 dispatch center. August 2016

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 **Method of Documentation (conclusion)**

CID: _____ Community: _____ Co: _____ State: _____

StormReady Community (SRC):
The maximum credit for this element is 25 points.

(1) The activity credit criteria must be met.

(2) For SRC credit, the community is not required to provide documentation. SRC is documented by its inclusion on the NWS maintained list of designated "StormReady Community" members posted on its website. The community must be listed individually (by name) on the website or be included in a NWS designation letter from the borough county parish SRC program.

TsunamiReady Community (TRC):
The maximum credit for this element is 50 points.

(1) The activity credit criteria must be met.

(2) The community must be designated as a TsunamiReady community by the NWS.


(3) The community must meet the CRS tsunami hazards mapping requirements of element MTS (Mapping tsunami hazards), in Section 412.f(2) of the Coordinator's Manual.

(4) The community must have adopted a tsunami hazards operations plan that describes the actions the community is to take upon receiving a tsunami warning.


ANY ADDITIONAL INFORMATION YOU WISH TO SUBMIT:

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Scoring of Documentation



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610 FLOOD WARNING PROGRAM (Max 385 Points) CID: _____

Community _____ County: _____ State: _____

611 Credit Points:

Credit Points: (Some credit in FTR, EWD, FRO and CPP must be obtained to receive any 610 credit.)

a. Activity Credit Criteria:

- (a) Flood-related hazard descriptions, (yes or no) _____
- (b) The development exposed to flooding submitted, (yes or no) _____
 - Number of buildings in Special Flood Hazard Area _____
 - Number of buildings that are covered by FTR _____
 - Number of buildings that are covered by EWD _____
 - Number of buildings that are covered by FRO _____
- (c) Expected impacts of flooding submitted, (yes or no) _____
- (d) Flood inundation maps with at least three different riverine flood, two storm surge levels depicted or flash flood impact area maps correlated to the FTR system submitted, (yes or no) _____
- (e) Flood warning and response plan submitted, (yes or no) _____
- (f) Did the above plan describe methods and warning devices used to disseminate emergency warnings to public, (yes or no) _____
- (g) Did the above plan include specific actions tied to different flood levels credited in FRO and correlated to FTR, (yes or no) _____
- (h) Was the above plan adopted by community's governing body or delegated approval officer, (yes or no) _____
- (i) Implements one or more creditable outreach projects, (yes or TBD) _____
- (j) Conducted flood warning plan exercise/activation, (yes or no) _____

b. Flood Threat Recognition system (FTR) (Up to 75 points)


- (a) Receives/provides flood warnings on 24/7/365 basis, (yes or no) _____
- (b) Level 1: Manual FTR system (25 points): _____
- (c) Level 2: Automated flood alarm system (50 points): _____
- (d) Level 3: Automated flood warning system (75 points): _____

FTR = _____

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<p>c. Emergency Warning Dissemination (EWD): (up to 75 points)</p> <p>(a) EWD 1: Scripted messages and staff guidance (10 points): _____</p> <p>(b) EWD 2: Public message centers (10 points): _____</p> <p>(c) EWD 3: Outdoor voice-sound system or fixed-airer system (10 points): _____</p> <p>(d) EWD 4: Either _____</p> <p style="padding-left: 20px;">a. Agencies responsible for door-to-door, (5 points), or _____</p> <p style="padding-left: 20px;">b. Alert routes, procedures, staff and equipment (15 points): _____</p> <p>(e) EWD 5: EAS with pre-scripted messages (10 points): _____</p> <p>(f) EWD 6: Telephonic warning/enhanced notification (15 points): _____</p> <p>(g) EWD 7: TV broadcast or message scroll (10 points): _____</p> <p>(h) EWD 8: Other forms of warning (15 points): _____</p> <p>(i) EWD 9: Facility tone alert or NOAA weather radios (10 points): _____</p> <p>(j) EWD 10: Credited inundation map(s) posted online (10 points): _____</p> <p>EWD = the total of (a) through (j) above: _____</p> <p>If the total is greater than 75, then EWD = 75: EWD = 0</p>	
<p>d. Flood Response Operations (FRO): (up to 115 points)</p> <p>(a) FRO 1: Scenarios for predicted flood levels (15 points): _____</p> <p>(b) FRO 2: Up to 35 points, if plan includes _____</p> <p style="padding-left: 20px;">a. Identified flood tasks and responsible staff (5 points): _____</p> <p style="padding-left: 20px;">b. Estimated number of personnel for tasks (10 points): _____</p> <p style="padding-left: 20px;">c. Estimated time for each task (5 points): _____</p> <p style="padding-left: 20px;">d. List of equipment and supplies needed (15 points): _____</p> <p>(c) FRO 3: Specific actions keyed to different flood levels (25 points): _____</p> <p>(d) FRO 4: Special needs database and plan (10 points): _____</p> <p>(e) FRO 5: Up to 15 points, if plan includes _____</p> <p style="padding-left: 20px;">a. Reoccupation of damaged structure instructions (3.75 points): _____</p> <p style="padding-left: 20px;">b. Permit requirements during recovery (3.75 points): _____</p> <p style="padding-left: 20px;">c. Implementing haz-mat plan for community property (3.75 pts.): _____</p> <p style="padding-left: 20px;">d. Promoting mitigation measures for private property (3.75 pts.): _____</p> <p>(f) FRO 6: Identified property evacuation orders for response and recovery (20 points): _____</p> <p>FRO = the total of (a) through (f) above: _____</p> <p>If the total is greater than 115, then FRO = 115: FRO = 0</p>	
<p>e. Critical Facilities Planning (CFP): (up to 75 points)</p> <p>(a) CFP1 (prerequisite for any CFP credit): Contact information (up to 25 points): _____</p> <p style="padding-left: 20px;">• Arrangements for needed direct early notifications/warnings, (yes or no) _____</p> <p>(b) CFP2: Individual plans (up to 50 points): _____</p> <p>CFP = the total of (a) through (b) above: CFP = 0</p> <p>f. StormReady Community (25 points): SRC = 0</p> <p>g. TsunamiReady Community (30 points): TRC = N/A</p>	
<p>610 Community Score Sheet Version: March 2017</p>	

<p>613 Impact Adjustment: (A is based on number of buildings in SFHA and number of affected buildings.)</p> <p>(1) $fFTR = \frac{SFTR}{BSF} = \text{_____} = \text{_____}$</p> <p>(2) $fEWD = \frac{fEWD}{BSF} = \text{_____} = \text{_____}$</p> <p>(3) $fFRO = \frac{fFRO}{BSF} = \text{_____} = \text{_____}$</p>	
<p>614 Credit Calculation:</p> <p>a. $cFTR = fFTR \times fFTR = \text{_____}$ $dFTR = \text{_____}$</p> <p>b. $cEWD = fEWD \times fEWD = \text{_____}$ $eEWD = \text{_____}$</p> <p>c. $cFRO = fFRO \times fFRO = \text{_____}$ $dFRO = \text{_____}$</p> <p>d. $cCFP = CFP1 + CFP2 = \text{_____}$ $eCFP = \text{_____}$</p> <p>e. SRC = _____ SRC = _____</p> <p>f. TRC = _____ TRC = _____</p> <p>g. Add lines a through f above = _____</p> <p>c610 = value above rounded to the nearest whole number: c610 = 0</p>	
 Al W. Goodman Jr., CFM August 16, 2017	
<p>610 Community Score Sheet Version: March 2017</p>	

CID: _____

Community: _____ County: _____ State: _____

Comments:

Flood Warning Program credit is currently verified at zero points. * There are 601 buildings within the community's SFHA. These same buildings are reported to benefit from their flood threat recognition system, from the flood emergency warnings, and are covered by their flood response operations. The village of Floodville (encompasses approximately 3.75 sq. miles) is subject to canal overbank flooding, ponding, flash flooding and storm surge from Atlantic tropical cyclones.

Points are valid only if the community has received some credit in FTR, EWD, FRO and CFP and has provided documentation that: (1) describes the flood hazard, (2) the development exposed to flooding, (3) the expected impacts of flooding, (4) flood inundation maps that must show at least three different riverine flood levels, two different storm surge levels or flash flood impact areas, (5) an adopted flood warning and response plan which references the levels shown on the flood inundation map(s), (6) one or more warning and safety presentation outreach projects and (7) at least one exercise and evaluation of the flood warning and response plan is conducted each year. Since items one, two, three, four, five and seven's credit criteria were not met and credit was not assigned in FTR and CFP, no Activity 610 credit can be assigned.

Documentation was not submitted for the city's participation in a flood related exercise or actual event activation within the past 12 months. After it has been determined that outreach requirements are satisfied and EWD equipment testing is documented, then the above score can be assigned. The ISO/CRS Specialist will assign credit for outreach, which can also be covered by FPI credits under Activity 330 *

Flood Threat Recognition (FTR) could have been verified at 75 points of credit based on the use of an automated flood warning system which is correlated to the flood inundation map and an adopted plan.

Emergency Warning Dissemination (EWD) could have been verified at 70 points based upon scripted messages and staff guidance, public message content, responsible agency identification, a telephonic warning system, cable TV override, the use of a subscriber emergency notification system, use of social media and posting of the flood inundation map online. Testing of EWD 6 and EWD 6 telephonic and text alerts must be verified before assignment of those credits.

Flood Response Operations (FRO) could have been verified at 78.75 points of credit for scenarios for predicted flood levels, identified staff tasks, specific actions tied to flood levels, maintenance of a special needs database, evacuee instructions and property protection during response and recovery. Documentation and an evaluation of participation in a flood drill, exercise or an actual flood emergency response during the past year must be verified prior to assignment of any FRO credit.

Critical Facilities Planning (CFP) could have been verified at 5 points of credit. The documentation submitted stated that no critical facilities can be impacted by flood. By CRS policy, credit is limited to five points if no critical facilities can be impacted.

StormReady Community (SRC) status is verified at zero points. Floodville is currently not listed as a National Weather Service 'StormReady' designated community by the National Oceanic and Atmospheric Administration. However, if Flood County has received a SRC recognition letter from the local NWS office designating the communities within the county covered by the county plan, then the city may provide that letter for SRC credit.


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DOCUMENTATION REVIEWED FOR CREDIT (8/16/2017):


- Activity 610 Documentation Checklist, completed/submitted by CRS Coordinator. (March 2017 version.)
- Document: Memorandum from Floodville stating that there are no critical facilities that can be impacted by flood. (undated)
- Document: Sign-in sheet for Hurricane Gibson exercise remote participation. (Dated 5/19/2015.) - ISO/CRS Specialist states that the cycle visit was conducted in 2015.
- Floodville website. (Accessed 8/16/2017.)
- FEMA FIRM panels: (Four non-sequential 'L' suffix panels plus two index panels. All panels are dated 9/11/2009.)
- NWS 'StormReady' website. (Accessed 8/16/2017.)

PREVIOUS DOCUMENTATION REVIEWED (cited 12/4/2009 with a potential of 100 points):


- Flood County Comprehensive Emergency Management Plan, 2008.
- Flood County Local Mitigation Strategy, 2008.
- Hurricane Evaluation Study Inundation Maps.
- Floodville Flood Insurance Rate Maps.



Scoring of Documentation (conclusion)



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Wrap Up / Summary

For the past 50 minutes or so I have:

- Explained the activity's credit criteria;
- Shown methods of documentation, and;
- Explained how I evaluate and report a score.

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