

## CRS 600 Series: Warning and Response

The 600 series of activities within the Community Rating System (CRS) is focused on linkages between a community's emergency management mission and its voluntary CRS activities. These credited 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:

[http://www.youtube.com/watch?v=R\\_UiWz2Ogu8](http://www.youtube.com/watch?v=R_UiWz2Ogu8) = Link to 'YouTube' webinar 'CRS: Credits for Flood Warning.'

**Catalyst of Change.** Even though flood preparedness and response operations frequently rest within the purview of the community's (or county's) emergency management office, the emergency manager's role in advancing public safety, property protection, and disaster resiliency and sustainability through the National Flood Insurance Program and the CRS is sometimes overlooked by the community. The community CRS Coordinator typically coordinates with the county or community emergency management staff to document activities that are credited under the 600 Series. The daily emergency management mission of prevention, preparedness, response, recovery, and mitigation can successfully be integrated with the CRS. Activities 610, 620 and 630 evaluate the community emergency management program in regard to 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.

Three 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 620 (Levees) and Activity 630 (Dams) are for more specific threats that are not present in every community, namely 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 (threat recognition);
- Warnings issued to the threatened population (warning);
- Steps taken to protect life and reduce losses (operations), and;
- Coordination 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 documentation of an actual response to an emergency. The latter also requires the submittal of an after-action report 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.

**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 documentation of more flood warning capabilities, redundancies 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 395 points found within the five elements of Activity 610 are the building blocks of every community's emergency management program.

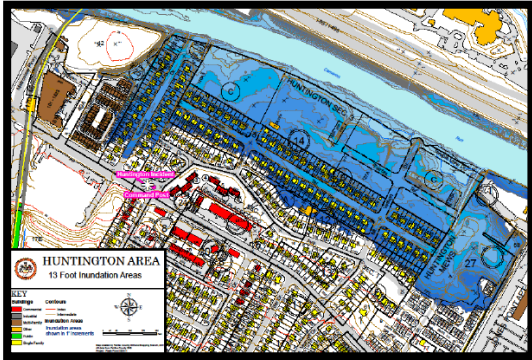
- Flood threat recognition system (**FTR**) is aimed at determining the capability level of the community's FTR system or systems. (75 points)
- Emergency warning dissemination (**EWD**) looks at the linkages between FTR and the community's response to the emergency. (75 points)
- Flood response operations (**FRO**) credit is based on the extent and level of the community's flood warning and response operations. (115 points)
- Critical facilities planning (**CFP**) considers the coordination between the community and critical facilities within its environs. (75 points)
- StormReady community (**SRC**) (25 points) and TsunamiReady community (**TRC**) (30 points) credits a community's participation in the National Weather Service's StormReady and TsunamiReady programs.

The community must receive some credit in the first four elements in order to receive any credit under Activity 610. For more details, refer to the 2013 *CRS Coordinator's Manual*.

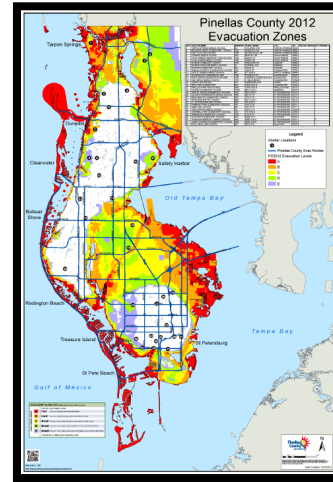
### **The Corner Stones of Activity 610.**

The community must have a program that correlates 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 your documentation, provide a copy of the flood inundation map, flood stage forecast 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. These documents are logically tied into whatever flood threat recognition system provides early notice of a flood to your community, such as river gages, ALERT systems, tidal gages, SLOSH modeling, etc.

Riverine flood threats and coastal storm surge zones are based upon different mapping formats and processes, but both indicate the flood threat areas. Examples of both are depicted below.



**Riverine flood inundation map**



The adopted flood response plan (by whatever name), **SLOSH generated evacuation map** must discuss the actions taken by the community at each level of inundation. In large counties, there may not be detailed mapping and flood warning planning for the entire Special Flood Hazard Area. In such cases, some counties designate the entire 1% chance flood level as the initial area to be notified by EAS and other flood alerts and have detailed multilayered flood levels only in the populated areas as is shown in the riverine flood inundation map above. If the flood threat recognition system and flood response plan utilize such a scenario, it can be considered as a creditable flood warning and response system.

Additionally, for any Activity 610 credit, the community must have one or more outreach projects on the warning and safety precautions and there must be an annual exercise of the plan with a lessons-learned report. These activity credit criteria are discussed on pages 610-4 and 610-5 of the CRS Coordinator’s Manual.

**If you have any questions concerning the following checklist, please contact Al Goodman at [Al@awgconsulting.comcastbiz.net](mailto:Al@awgconsulting.comcastbiz.net) or by phone at 769-251-5356.**

**The community reports with its documentation checklist:**

- The community is affected by overbank flooding on two streams and surge from tropical storms. An evacuation map (SLOSH product) is used in all of the coastal areas, but there are no gages or an associated warning and response program for one of the streams. There are 400 structures in the coastal high hazard area and 50 structures within the riverine floodplain. The program covers all 400 coastal structures, but only covers 25 of the riverine structures. The bSF is 450. There are 425 structures which are covered by the flood threat recognition system, 425 structures which are covered by flood emergency warnings and 450 which are covered by flood response operations.
- The number of buildings that benefit from the level of flood threat recognition system is 425. **FTR= 75, bFTR = 425.**
- The number of buildings that benefit from flood emergency warnings is 425. **EWD = 70, bEWD = 425.**
- The number of buildings in the area covered by the flood response operations is 450. **FRO = 75, bFRO = 450.**
- There are four critical facilities in the community, all of which are located in their warning and response program areas. **CFP 1 = 25.**
- The community is a StormReady Community. **SRC = 25.**

*Example Scenario:* The community has a flood warning and response program that covers 425 of 450 buildings in the SFHA. An automated flood warning system (Level 3) is used by the community. The EOC uses pre-scripted messages and staff guidance, they have an outdoor siren system, the plan identifies various departments responsible for portions of the planned response, a telephonic warning and notification system is used, they have a cable TV override system and a GIS based emergency notification system available to alert citizen subscribers by three means of notification. The flood response operations plan has assigned staff tasks, response actions keyed to specific flood levels shown on its flood inundation map, an estimated staff needed requirement, the estimated equipment and supplies needed and a well thought out response and recovery plan. There are four critical facilities identified which can be affected by flooding, with the contact information of the POCs provided. The NWS has awarded its StormReady Community designation to the community and listed the community on its StormReady website.

$$FTR = 75 \quad rFTR = \frac{bFTR}{bSF} = \frac{425}{450} = 0.94$$

$$EWD = 70 \quad rEWD = \frac{bEWD}{bSF} = \frac{425}{450} = 0.94$$

$$FRO = 75 \quad rFRO = \frac{bFRO}{bSF} = \frac{450}{450} = 1.00$$

$$CFP 1 = 25 \quad CFP 2 = 0$$

$$SRC = 25$$

$$TRC = 0$$

$$c610 = (FTR \times rFTR) + (EWD \times rEWD) + (FRO \times rFRO) + CFP + SRC + TRC$$

$$c610 = (75 \times 0.94) + (70 \times 0.94) + (75 \times 1.0) + 25 + 25 + 0 = 261.3 = \mathbf{261} \text{ (rounded)}$$

**Activity 610 (Flood Warning & Response) Documentation Checklist**

NEW APPLICATION     MODIFICATION     CYCLE DOCUMENTATION

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 for on-line documents with the appropriate pages and section numbers noted here, or
- (3) A paper copy of the documents with the appropriate acronym 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 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 other jurisdiction on behalf of the applicant community.

	<b>Emergency Manager</b>	<b>CRS Coordinator</b>
Name		
Title		
Address		
Phone		
E-mail		

Form Completed By: \_\_\_\_\_ Date: \_\_\_\_\_

Comments:

CID: \_\_\_\_\_ Community: \_\_\_\_\_ Co: \_\_\_\_\_ State: \_\_\_\_\_

Please provide the four totals requested below. The credit points for FTR, EWD and FRO are adjusted based on the number of buildings affected by the element. Determining these adjustments usually will require identifying the area affected and then counting the buildings within that area.

- (1) Number of buildings in the community's Special Flood Hazard Area. The Community CRS Coordinator has this number in the Program Data Table. \_\_\_\_\_
- (2) Number of buildings in the floodplain that are covered by the flood threat recognition system. \_\_\_\_\_
- (3) Number of buildings in the floodplain that are covered by the flood emergency warnings. \_\_\_\_\_
- (4) Number of buildings in the floodplain that are covered by the flood response operations. \_\_\_\_\_

### Activity Credit Criteria and Documentation

Credit criteria for this activity are described in more detail in Section 611.b of the *CRS Coordinator's Manual*.

- (1) The community must obtain some credit in the first four flood warning and response elements flood threat recognition system (FTR), emergency warning dissemination (EWD), flood response operations (FRO) and critical facilities planning (CFP) to receive any credit under this activity.
- (2) The community must have a description of its flood hazard. This can be some pages taken from the community's floodplain management or hazard mitigation plan. The description needs to include information about
  - The nature of the community's flood hazard, such as flood depths, velocities, warning times, historical flood problems, and special flood-related hazards.  
[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]
  - The development exposed to flooding, such as the number and types of buildings; land use (residential, agricultural, open space, etc.); critical facilities; and historic flood problem areas.  
[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]
  - The expected impacts of flooding on health and safety, community functions, such as police and utility services, and the potential for secondary hazards.  
[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]
- (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 two different flood or storm surge levels in coastal zones and three different flood levels for each riverine area.

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[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 plan:

- Describe the methods and warning devices used to disseminate emergency warnings to the general 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 in order 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/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 \_\_\_\_\_.]

- (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, provided that 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 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 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.

### **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 (check 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 show how the community provides flood forecasts for areas other than the above forecast points.

[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]

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 \_\_\_\_\_ Pages \_\_\_\_\_.]

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 \_\_\_\_\_.]

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- 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.

(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 credited under EWD 10. *[See Attachment \_\_\_\_\_.]*

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

[For EWD3] The impact adjustment 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 \_\_\_\_\_.]*

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- [For EWD7] 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 local government has adopted an emergency response plan which specifies when and how a warning is issued and what messages will be used. Provide a copy of the adopted policy that specifies when and how a warning is issued and pre-scripted messages. *[Include the written procedures that tell warning point personnel when, how, and what messages to issue.] [See Attachment \_\_\_\_\_.]*  
*Pages \_\_\_\_\_.]*
- (5) EWD2 (10 points): Provide documentation of the public messages which include information and instruction on the expected elevation of the flood waters, and instructions on when to evacuate. *[See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]*
- (6) EWD3 (10 points): If the community uses either an outdoor voice-sound system or siren system to disseminate flood warnings, provide a map showing the location of the sirens and the coverage area where they can be heard inside a closed building during storm conditions. *[See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]*
- (7) EWD4 (either 5 or 15points): Five points if the community uses door-to-door contact or a mobile public address system for flood 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 community's response plan includes flood warning using the Emergency Alert System, provide a copy of the community's activation policies, procedures, and pre-scripted draft messages. *[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]*
- (9) EWD6 (15 points): If a telephonic system is used to warn all residents in the SFHA, provide documentation describing how and when the system is updated, and its backup system for warning residents when there is no telephone answer provided. *[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]*
- (10) EWD7 (10 points): If a cable television override system is used or a dedicated cable station is used for public notification for emergency warnings. *[See Attachment \_\_\_\_\_ Pages \_\_\_\_\_.]*
- (7) EWD8 (10 points): Documentation of any other forms of public notification for emergency warnings. *[See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]*

(8) EWD9 (10 points): If all schools, hospitals, nursing homes, prisons and similar facilities that need flood warning have NOAA Weather Radio receivers and at least one other automated backup system for receiving flood warnings. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

(11) EWD10 (10 points): If the flood inundation map is posted online. URL \_\_\_\_\_.

### **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 in order 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) Bonus credit is provided under FRO6 for evacuee planning, permit requirements, implementing flood loss mitigation measures on community properties, and promoting flood loss mitigation measures on private properties. 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 \_\_\_\_\_.]

(5) Bonus credit is provided under FRO7 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.

(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 (2 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. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

- (8) FRO3 (28 points): If specific actions are keyed to the different flood levels shown on the flood inundation map. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]
- (9) FRO4 (10 points): For maintaining a data base of people with functional/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 30 points): If the plan includes a summary of estimated staff, equipment, supplies, and time required for each response task and the sources of necessary resources. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]
- (11) FRO6 (Up to 15 points): If the plan includes instructions for when and how returning evacuees can reoccupy their damaged homes and businesses, permit requirements, implementing flood loss mitigation measures on community properties, and promoting flood loss mitigation measures for private property. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]
- (12) FRO7 (20 points): If the plan identifies actions that support property protection measures that could be carried out during response and recovery. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

### **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.
- (2) CFP1 is a prerequisite for any CFP credit. If your community doesn't have critical facilities within the Special Flood Hazard Area, you must submit such a statement on community letterhead and the definition of critical facility found within your adopted plan.
- (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 (Up to 25 points): The contact information such as email addresses, job titles, names and phone numbers of the operators of all public and private critical facilities affected by flooding. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]
- (5) Arrangements for special warnings or early notifications directly to those critical facilities that need advanced warning. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

- (6) CFP2 (up to 50 points): If critical facilities listed under CFP1 have their own flood warning and response plans have been developed, reviewed, or accepted by the community. The credit will be prorated based upon the percentage of affected critical facilities that have creditable plans. [See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

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.

**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.

**TsunamiReady Community (TRC):**

*The maximum credit for this element is 30 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 identified in the publication *CRS Credit for Mitigation of Tsunami Hazards*.

Compliance with the mapping requirements for special flood hazards credit, as described in *CRS Credit for Management of Tsunami Hazards*, section 410TS.

[See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

- (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.

A copy of the adopted tsunami hazard operations plan or annex that addresses actions to take after a tsunami warning.

[See Attachment \_\_\_\_\_ pages \_\_\_\_\_.]

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