

610 FLOOD WARNING PROGRAM (Max 395 Points)

CID: 120684

Community: Palm Coast County: Flagler State: FL

611 Credit Points:

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

a. Activity Credit Criteria:

- (a) Itemized flood hazard description, (yes or no) yes
- (b) List of development exposed to flooding submitted, (yes or no) yes
 - Number of buildings in Special Flood Hazard Area 862
 - Number of buildings that benefit from FTR 862
 - Number of buildings that benefit from EWD 862
 - Number of buildings that benefit from FRO 862
- (c) Expected impacts of flooding submitted, (yes or no) yes
- (d) Flood inundation map(s) with at least three different riverine flood or two storm surge levels depicted and correlated to the FTR system was submitted, (yes or no) yes
- (e) Flood warning and response plan submitted, (yes or no) yes
- (f) Did the above plan describe methods and warning devices used to disseminate emergency warnings to public, (yes or no) yes
- (g) Did the above plan include specific actions tied to different flood levels credited in FRO, (yes or no) yes
- (h) Was the above plan adopted by community's governing body or delegated approval office, (yes or no) yes
- (i) Implements one or more creditable outreach projects, (TBD) TBD
- (j) Conducted flood warning program exercise/activation, (yes or no) yes

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

- (a) Level 1: Manual FTR system (25 points): _____
- (b) Level 2: Automated flood alarm system (50 points): _____
- (c) Level 3: Automated flood warning system (75 points): 75

FTR = 75

c. Emergency Warning Dissemination (**EWD**): *(Up to 75 points)*

- (a) EWD 1: Scripted messages and staff guidance (10 points): _____

- (b) EWD 2: Public message content (10 points): _____
- (c) EWD 3: Outdoor voice system or siren system (10 points): _____
- (d) EWD 4: Either
 - a. Agencies responsible, or (5 points): 5
 - b. Routes, procedures, staff, and equipment (15 points): _____
- (e) EWD 5: EAS with pre-scripted messages (10 points): _____
- (f) EWD 6: Telephonic warning and notification (15 points): 15
- (g) EWD 7: Cable TV override system (10 points): 10
- (h) EWD 8: Other forms of warning (10 points): 10
- (i) EWD 9: NOAA weather radio & other flood warning (10 points): _____
- (j) EWD 10: Inundation map posted online (10 points): 10

EWD = the total of (a) through (j) above.

If the total is greater than 75, then EWD = 75: **EWD = 50**

d. Flood Response Operations (**FRO**): (*Up to 115 points*)

- (a) FRO 1: Scenarios for predicted flood levels (15 points): 15
- (b) FRO 2: Plan identifies tasks (2 points): 2
- (c) FRO 3: Specific actions keyed to different flood levels (28 points): 28
- (d) FRO 4: Special needs database and plan (10 points): 10
- (e) FRO 5: Sum of the following
 - a. Estimated staff (10 points): 10
 - b. Estimated time (5 points): _____
 - c. Estimated equipment and supplies (15 points): _____
- (f) FRO 6: Up to 15 points, if plan includes
 - a. Evacuee instructions (3.75 points): 3.75
 - b. Permit requirements (3.75 points): _____
 - c. Implementing mitigation on community property (3.75 pts.): _____
 - d. Promoting mitigation measures for private property (3.75 pts.): _____
- (g) FRO 7: Property protection during response and recovery (20 points): _____

FRO = the total of (a) through (g) above.

If the total is greater than 115, then FRO = 115: **FRO = 68.75**

e. Critical Facilities Planning (**CFP**): (*Up to 75 points*)

- (a) CFP1 (prerequisite for any CFP credit): Names and numbers (up to 25 points): 20
- (b) CFP2: Individual plans (up to 50 points): _____

CFP = the total of (a) through (b) above: **CFP = 20**

f. StormReady Community (25 points): **SRC = 25**

g. TsunamiReady Community (30 points): **TRC = N/A**

613 Impact Adjustment: (IA is based on number of buildings in SFHA and number of affected buildings.)

$$(1) rFTR = \frac{bFTR}{bSF} = \frac{862}{862} = 1.0$$

$$(2) rEWD = \frac{bEWD}{bSF} = \frac{862}{862} = 1.0$$

$$(3) rFRO = \frac{bFRO}{bSF} = \frac{862}{862} = 1.0$$

614 Credit Calculation:

a. cFTR = FTR <u>75</u> x rFTR <u>1.0</u>	cFTR = <u>75</u>
b. cEWD = EWD <u>50</u> x rEWD <u>1.0</u>	cEWD = <u>50</u>
c. cFRO = FRO <u>68.75</u> x rFRO <u>1.0</u>	cFRO = <u>68.75</u>
d. cCFP = CFP1 <u>20</u> + CFP2 _____	cCFP = <u>20</u>
e. SRC <u>25</u>	SRC = <u>25</u>
f. TRC _____	TRC = _____
g. Add lines a through f above =	<u>238.75</u>
c610 = value above rounded to the nearest whole number:	
Enter this value on AW-720-1.	c610 = <u>239*</u>



Al W. Goodman Jr., CFM
July 20, 2016

CID: 120684

Community: Palm Coast County: Flagler State: FL

Comments:

Flood Warning Program credit can be verified at 239 points. * There are 862 buildings within the community's SFHA. The same number of 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 city of Palm Coast (encompasses approximately 51.70 sq. miles) is subject to canal overbank flooding, ponding 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)** a flood inundation map(s) that must show at least three different riverine flood levels or two different storm surge levels, **(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 precaution outreach projects and **(7)** at least one exercise and evaluation of the flood warning and response plan is conducted each year.

*After it has been determined that outreach requirements are satisfied and EWD equipment testing is verified (it has been longer than 12 months since the county provided documentation), then the above score can be assigned. The ISO/CRS Specialist will assign credit for outreach, which can also be covered by PPI credits under Activity 330. **

Flood Threat Recognition (FTR) is 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 adopted plan.

Emergency Warning Dissemination (EWD) can be verified at 50 points based upon responsible agency identification for door-to-door notification, a telephonic warning system, cable TV override, the use of the CodeRED' emergency notification system for citizen subscribers and an online posting of the community's flood inundation map. Per CRS policy, the annual testing of specialized warning equipment and procedures must be verified prior to EWD 6 and EWD 8 points being assigned.

Flood Response Operations (FRO) is verified at 68.75 points of credit for developed flood scenarios, identified tasks, specific flood level keyed actions, a special needs database, estimated staff and evacuee instructions.

Critical Facilities Planning (CFP) is verified at 20 points for CFP1 documentation.

StormReady Community (SRC) status is verified at 25 points. Palm Coast is currently listed as a National Weather Service 'StormReady' designated community by the National Oceanic and Atmospheric Administration.

DOCUMENTATION REVIEWED FOR CREDIT (7/20/2016):

- Document: Page 1 of the August 2014 documentation checklist, with the impact adjustment section included.
- Map: Activity 610 2016 critical facilities (51 facilities depicted with addresses, phone numbers, type of facility and name of facilities). (Last modified on 4/28/2016.)
- Document: Page 29 of the Flagler County Flood HSP with the definition of critical facilities highlighted. (Dated 8/2014.)
- Document: Sign-in sheet for the Flagler County EM 2015 Hurricane Exercise. (Dated 5/20/2015.)

PREVIOUS DOCUMENTATION REVIEWED FOR CREDIT (3/14/2016):

- Copy of 2013 Activity 610 Documentation Checklist, submitted by Denise Bevan. (May 2013 edition.)
- Copy of Activity 610 Documentation Checklist, submitted by Laura Hite. (February 2014 edition.)
- City of Palm Coast Comprehensive Emergency Management Plan. (Revised 1/29/2012.)
- City of Palm Coast website. (Accessed 3/14/2016.)
- FEMA FIRM panels: 12035C0110D through 12035C0245D. (20 panels plus one index panel. All panels are dated 7/17/2006.)
- NWS 'StormReady' website. (Accessed 3/14/2016.)
- Flagler County Comprehensive Emergency Management Plan 2012.
- Flagler County Flood Hazard Specific Plan. (Dated 8/2014.)
- Flagler County Evacuation Zones map. (Dated 6/6/2014.)

PREVIOUS DOCUMENTATION REVIEWED (cited 10/3/2013 with a potential of 0 points):

- 610 Documentation Checklist. (May 2013 edition.)
- City of Palm Coast, FL CEMP. (Dated 2012.)
- Flagler County, FL CEMP. (Dated 2012.)
- Flagler County NWS StormReady recognition letter. (Dated 3/14/2013.)
- City of Palm Coast website. (Accessed on 10/3/2013.)
- FEMA FIRM panels: 12035C0110D through 12035C0245D. (20 panels plus one index panel. All panels are dated 7/17/2006.)
- NWS 'StormReady' website. (Accessed 10/3/2013.)

610 FLOOD WARNING PROGRAM

CID: _____

Community: _____ County: _____ State: _____

Date of Review: _____

DOCUMENTATION VERIFICATION OR STATUS (for ISO/CRS Specialist Use)

- 1. Documentation of one or more outreach projects that tells residents and businesses how they will be warned and the safety measures they should take during a flood. Activity 330 may credit the projects. It must be annotated to show where the Activity 610 outreach projects are covered.

Yes: _____ No: _____ Date Confirmed: _____

Documentation Used in Verification:

2. EWD

Documentation of the annual testing of credited specialized warning equipment and procedures.

Yes: _____ No: _____ Date Confirmed: _____

Documentation Used in Verification:

3. FRO

Documentation of or a description of the drill, exercise or an actual emergency response during the past year which meets Activity 610 credit criteria.

Yes: _____ No: _____ Date Confirmed: _____

Documentation Used in Verification:

4. CFP

A list of all public and private critical facilities affected by flooding or needed to be operational during a flood, with contact information and agreed upon warning needs.

Yes: _____ No: _____ Date Confirmed: _____

For CFP2: samples of the plans from 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.

Yes: _____ No: _____ Date Confirmed: _____

For CFP1: a page from the latest list of critical facilities that must be updated annually.

Yes: _____ No: _____ Date Confirmed: _____

Documentation Used in Verification:
