# 350 FLOOD PROTECTION INFORMATION—Summary

Maximum credit: 125 points

#### 352 Elements

- a. **Flood protection <u>lib</u>rary (LIB):** 10 points for having nine Federal Emergency Management Agency publications on flood protection topics housed in the public library.
- b. <u>Locally pertinent documents</u> (LPD): Up to 10 points for having additional references on the community's flood problem or local or state floodplain management programs housed in the public library.
- c. Flood protection website (WEB): Up to 77 points for providing flood protection information via the community's website. An additional 28 points are provided if the website is part of a Program for Public Information (credited under Activity 330 (Outreach Projects)). There are three ways to receive credit under this element:

**WEB1:** for providing more information on the messages conveyed in the community's outreach projects credited under Activity 330 (Outreach Projects).

**WEB2:** for posting or linking real-time gage information so users can see current water levels and, where available, flood height predictions.

**WEB3**: for posting Elevation Certificates or the data from Elevation Certificates.

### **Credit Criteria**

Each element has a separate section discussing credit criteria.

## **Impact Adjustment**

There is no impact adjustment for this activity.

## **Documentation Provided by the Community**

Each element has a separate section describing needed documentation.

## 350 FLOOD PROTECTION INFORMATION

The OBJECTIVE of this activity is to provide the public with information about flood protection that is more detailed than that provided through outreach projects.

# 351 Background

As noted in Activity 330, research has shown that people become interested in a subject when they receive repeated messages from different sources. When they do become interested, they need more information than what usually is covered in brief outreach projects. This activity credits providing that more detailed information. It also credits supplying additional information, such as real-time gage data, that can be disseminated effectively via websites.

The community library and community websites are obvious places for residents to look for detailed information about flooding and flood protection. These locations can contain a great deal of information and they offer alternatives for people who are hesitant to go to City Hall or talk to a local regulatory official about their flood problem or flood concerns.

Libraries are best for providing guidebooks and handbooks to the public since they are typically costly to mail or are often too lengthy to be presented on a website. They are also a good source of materials for people who do not use the internet.

Websites have become the primary source of detailed information for more and more people. For some types of information, such as maps and current information on flooding, a website can be the most effective and efficient source. A website also allows links to other, more detailed information that is kept current by the agency or organization that is most familiar with it

# 351.a. Activity Description

The maximum credit for Activity 350 is 125 points.

This activity credits providing the public with more detailed information about flood protection measures. The flood protection information provided in this activity supports the messages presented under Activity 330's outreach projects. It also credits supplying community-specific documents and additional information, such as real-time gage data, that can be disseminated effectively via websites. The more detailed information is intended to help the public take steps to protect themselves and their property from the impact of flooding.

Two main sources of information are credited under this activity: libraries and websites.

**Library:** Two elements give credit for having references in the community's public library:

- Flood protection <u>library</u> (LIB) provides 10 points for the public library's having all nine Federal Emergency Management Agency (FEMA) publications on flood protection topics that are listed in Figure 350-1.
- <u>L</u>ocally pertinent <u>d</u>ocuments (LPD) provides up to 10 more points for the library's having additional references on the community's flood problem or local or state floodplain management programs.

**Website:** More points are provided under the flood protection website (WEB) element because more people use websites, more information can be provided quickly through that outlet, and the information can be accessed 24 hours a day. The maximum credit for WEB is 77 points. An additional 28 points are provided if the website is part of a Program for Public Information credited in element PPI under Activity 330 (Outreach Projects).

For both the library and the website, the material must be kept up to date. In both cases, the community can make use of other organizations' programs, such as a county library system or links to other agencies' websites, to provide the detailed information to its residents.

### 351.b. Impact Adjustment

There is no impact adjustment for Activity 350.

### 352 Elements

# 352.a. Flood protection <u>lib</u>rary (LIB)

The maximum credit for this element is 10 points.

LIB credit is provided for having the latest versions of the nine FEMA publications listed in Figure 350-1 cataloged and available in the community's library. If the state, region, community, or other entity has published documents that are more appropriate to the community's situation, then those may be substituted. References that are not relevant (e.g., the community has no coastal floodplain or manufactured homes) do not have to be included.

All of the publications are available free, singly or in quantity (see Appendix C or www.CRSresources.org). Although only one

- 1. Above the Flood: Elevating Your Floodprone House, FEMA-347 (2000)
- 2. Answers to Questions About the National Flood Insurance Program, F-084 (2011)
- 3. Coastal Construction Manual, FEMA-P-55, (2011)
- 4. Elevated Residential Structures, FEMA-54 (1984)
- 5. Protecting Manufactured Homes from Floods and Other Hazards, FEMA P-85 (2009)
- Mitigation of Flood and Erosion Damage to Residential Buildings in Coastal Areas, FEMA-257 (1994)
- 7. Protecting Building Utilities From Flood Damage, FEMA-P-348 (1999)
- 8. Protecting Floodplain Resources, FEMA-268 (1996)
- 9. Reducing Damage from Localized Flooding, FEMA 511 (2005)

Figure 350-1. Publications credited under element LIB.

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copy of each publication is required for credit, it is expected that the library will keep sufficient copies to meet the demand.

Note that there are many other appropriate and relevant national publications on flood protection from agencies and organizations like the U.S. Army Corps of Engineers and the American Red Cross. Communities are encouraged to include these references in their library for their citizens, but they are not required for LIB credit.

A library may receive credit for digital copies provided that they can be checked out or there is a computer terminal or other machine in the library that people may use to read them. Digital versions must be located in the library or the library's system and not be dependent on links to an outside source.

#### **Credit Criteria for LIB**

- (1) The nine publications listed in Figure 350-1 must be cataloged and maintained in the public library that is most accessible and most widely used by residents of the community.
  - In a community with branch libraries or where there is a multi-community library system, the publications must be available to all branches, although it is not necessary for each branch to maintain a full set.
  - If a small community does not have a library, but an adjacent large community does, the small community may receive credit for this activity if it documents that its residents have ready access to the library in the adjacent community.

No credit is provided for documents kept in an office that is not a local public library.

(2) The documents must be entered into the library's card catalog or similar system that allows patrons to find publications related to flooding and flood protection. Some libraries place these documents in a reference library that contains uncataloged items. In such cases, the card catalog still needs an entry under "flood," which could read, "See Reference Librarian for materials on flooding and flood protection."

### **Credit Points for LIB**

LIB = 10 points, if the publications are cataloged and maintained in the community's public library

### **Documentation for LIB Provided by the Community**

- (1) At each verification visit,
  - (a) A list of the publications that have been cataloged in the community's library or library system. The list may be digital or hard copy. If the catalog is available for review on line, the URL may be provided in lieu of a list.

## 352.b. Locally pertinent documents (LPD)

The maximum credit for this element is 10 points.

LPD credit is provided for having documents in the community's local public library that cover flood hazards, flood protection, and natural floodplain functions and also are keyed to local conditions or to the topics credited under Activity 330 (Outreach Projects). Examples of such documents are

- A city handbook on how to protect a building from flood damage,
- A state booklet on floodplain regulation requirements,
- The community's floodplain management ordinance,
- An environmental organization's guide to local aquatic and riparian habitats,
- The community's Flood Insurance Rate Map (FIRM),
- A reconnaissance report or flood control plan for a stream in the community, published by the U.S. Army Corps of Engineers,
- The community's Flood Insurance Study,
- The county's floodplain management or hazard mitigation plan, or
- Local resource management plans that are related to floodplains, such as a beach management plan or fish habitat restoration plan.

#### Credit Criteria for LPD

- (1) The community must receive credit for LIB in Section 352.a.
- (2) The documents must be entered into the library's card catalog or similar system that allows patrons to find publications related to flooding and flood protection. Some libraries place these documents in a reference library that contains uncataloged items. In such cases, the card catalog still needs an entry under "flood," with a reference to where the items can be found (e.g., "See Reference Librarian for local materials on flooding and flood protection").

#### **Credit Points for LPD**

LPD = 1 point for each locally pertinent document that is cataloged in the community's public library, up to a maximum of 10 points

### **Documentation for LPD Provided by the Community**

- (1) At each verification visit,
  - (a) A list of the publications that have been cataloged in the community's library or library system. This may be digital or hard copy. If the catalog is available for review on line, the URL may be provided in lieu of a list.

### 352.c. Flood protection website (WEB)

The maximum credit for this element is 77 points.

WEB credit is for providing flood protection information via the community's website. An additional 28 points are provided if the website is part of a Program for Public Information credited under Activity 330 (Outreach Projects).

A community can receive credit for a county or regional website, provided that there is a link from the community's website and that the information is locally pertinent (see Example 352.c-1).

There are three sub-elements for WEB:

- (1) WEB1—Providing detailed information on the flood protection messages conveyed in outreach projects that are credited under Activity 330 (Outreach Projects) (up to 47 points, and up to 75 points if the additional PPI messages are also covered in the website).
- (2) WEB2—Posting real-time gage information so users can see current water levels and, where available, flood height predictions (up to 10 points).
- (3) WEB3—Posting Elevation Certificates or data from Elevation Certificates (up to 20 points).

### **Credit Criteria for WEB**

To receive any WEB credit, the community's website must meet the following criteria.

- (1) There must be a flood information home page that is readily found by either (1) having it listed and linked on the community website's home page, or (2) using the website's search feature. When using the website's search feature, the flood information home page must be the first or second item listed when "flood" or a similar term is entered. There is no credit if the search engine lists numerous possible sites and the user must wade through them to find the flood information home page.
- (2) The flood information home page must have a directory of the flood protection information provided, along with links to the appropriate pages. There is no credit for items that are not connected to this flood information home page. Examples of creditable home pages can be found at www.CRSresources.org/300.
- (3) The links to the flood protection information pages may be to pages on the community's own website or on other websites. Other websites' links may include sites operated by FEMA; the state; the regional flood, water resources, or sewer district; universities; or any agency or organization with information related to the credited topics. However, the other sites must have information pertinent to the community's flood conditions (e.g., a riverine community should not refer users to a coastal website).

### **Example 352.c-1.**

One of the best sources of information about protecting a house from flooding is the Floods and Hurricanes site administered by the Louisiana Cooperative Extension Service (www.lsuagcenter.com/topics/family\_home). Communities with slab-ongrade foundations (even communities not in Louisiana) could refer web users to this site via a link.

- (4) There must be a link to FloodSmart (www.floodsmart.gov) or to FEMA's flood insurance page at www.fema.gov/business/nfip.
- (5) The community must check the website's links at least monthly, and fix those that are no longer accurate. (There is free or low-cost software that can identify broken links automatically.) At least annually, the community must review the content to ensure that it is still current and pertinent (e.g., make sure names, addresses, phone numbers, and other contact information are still correct; update any ordinance changes; etc.). For more information on how this can be done, see the Activity 350 website information at www.CRSresources.org/300.
- (6) Additional credit is provided for WEB1 if the website content is described in the community's PPI credited under Activity 330 (Outreach Projects).

#### **Credit Points for WEB**

WEB = the total of the points for the three sub-elements:

WEB = WEB1 + WEB2 + WEB3

(a) WEB1 =

up to 7 points per topic for detailed coverage of CRS priority topics 1, 2, 4, 5, and 6 credited under Activity 330 (Outreach Projects) and

up to 12 points for detailed coverage of CRS priority topic 3, Protect people from the hazard, credited under Activity 330 (Outreach Projects), and

up to 7 points per topic for detailed coverage of up to four additional messages in the community's Program for Public Information, credited under Activity 330 (Outreach Projects).

The maximum credit for WEB1 is 47 points for coverage of the six priority CRS topics, unless the community has additional messages in its Program for Public Information, in which case the maximum credit is 75 points.

- (a) The maximum credit for WEB1 is 47 points for coverage of the six priority CRS topics listed in Table 330-1, even if the community is not receiving credit under Activity 330.
- (b) If the community has a Program for Public Information, it may cover more than six topics, in which case it can receive up to an additional 7 points for more detailed information on each of those additional messages. The Program for Public Information document must include a discussion of the website and have recommendations on what should be included on the website. Continued credit for the additional topics is dependent upon receiving continued credit for the Program for Public Information in element PPI under Activity 330.
- (c) To receive the full 7 or 12 points for a topic, there must be thorough coverage of the topic. This can be provided with a detailed discussion on the community's website or via a link to a reference or other site that provides a detailed discussion. If the written portion of an outreach project is posted on the website without more detailed information, then credit will be up to 2 points. The objective is to provide more indepth information than that provided in the outreach projects.

### **Example 352.c-2.**

The University of New Orleans Center for Hazard Assessment, Reduction, and Technology maintains a website to help repetitive loss communities, <a href="http://floodhelp.uno.edu/Portal.aspx">http://floodhelp.uno.edu/Portal.aspx</a>. Note that portions of the website are not relevant for some flooding situations, such as coastal V Zones and mountainous flash flooding. A community that finds the information relevant to its situation may link to the website or to selected pages. Credit can be provided for the six topics as noted in the table below.

Topic	Coverage on UNO's Site	Points
Know your flood hazard	There is no credit because the University's site does not discuss local hazards	0
Insure your property for your flood hazard	Flood Insurance link on the home page	7
Protect people from the hazard	Protecting Yourself link on the home page	12
Protect your property from the hazard	Protecting Your Home link	7
5. Build responsibly	Protecting Your Home, Construction Rules	7
Protect natural floodplain functions	There is no credit because the site does not discuss local natural floodplain functions	0
	WEB1 =	33

(b) WEB2 = up to 10 points, for posting real-time gage information so users can observe current water levels and, where available, flood height predictions

WEB2 credit is provided for linking to real-time reporting gages. They can be the community's gages or gages managed by the National Weather Service, the U.S. Geological Survey, or a state or other agency. Full credit is dependent upon posting information for all available gages and an explanation of the site.

If a local gage-stage datum is used, the gage data must relate to sea level, NAVD, or NGVD, as appropriate locally; to recent flooding; or a local landmark (e.g., "one foot below the 2006 flood," "two feet over the Route 30 bridge," or "four feet deep at the Pettaway Park parking lot"). See also the example in Figure 350-2.

#### Little Calumet River Flood Levels Flood heights have been recorded since 1947 Stage Elevation Event on a river gage that is currently located at the 20.2 ----- 595.2 6/14/81 Cottage Grove Avenue bridge over the Little 20.1 ---- 595.1 7/14/57 20.0 ---- 595.0 7/20/96 Calumet River. Recorded flood heights can be 19.6 ---- 594.6 12/3/82 shown in stage or in elevation. Stage is -- 594.4 10-year flood 19.4 -measured in feet above an arbitrary starting -- 594.2 19.2 --19.1 ---- 594.1 2/21/97 point that was set when the gage was first 19.0 ---- 594.0 Water reaches buildings on Drexel installed. Elevations are in feet above sea level. Stage of zero on this gage is the same 18.6 --6/2/89 -- 593.6 as an elevation of 575.0 feet above sea level. 18.2 ---- 593.3 10/10/54 "Flood stage" is the elevation where the rising -- 593.0 Thorn Creek begins to cover 170th Street 18.0 ---17.9 ----- 592.9 2/24/85, Water covers Riverview and Drexel river starts to damage property. Yards and 12/27/65 17.7 ----- 592.7 parks are flooded when the river reaches an elevation of approximately 590 feet above sea level. Buildings are affected at approximately 17.0 ---- 592.0 Flood warning issued 593 feet. In 2005, the National Weather Service issued a new "flood stage" level - 16.5 feet or an elevation of 591.5. The Weather Service also 16.0 ---- 591.0 Flood watch starts provides real-time stage data for the upstream river gauges on the Little Calumet River at South Holland, and on Thorn Creek at Thornton. 15.0 ---- 590.0 Water enters Veterans Park

Figure 350-2. Example explanation of gage data. From www.southholland.org/.

(c) WEB3 = up to 20 points, for posting Elevation Certificates or the data from Elevation Certificates on the website

Either the Elevation Certificates must be posted on the website, or the site may provide a list of addresses for which the community has Elevation Certificates. If the addresses are posted, then the website must include information on how to obtain a copy of the Elevation Certificate

Full credit is provided for WEB3 if all the Elevation Certificates maintained by the community are posted (or all the addresses are posted) on the website. For example, if the community has 100 Elevation Certificates, but only 50% are posted on the website, then WEB3 =  $20 \times 0.5 = 10$  points.

### **Documentation for WEB Provided by the Community**

This element is verified by checking the community's website online. If the reviewer cannot find the website or the flood protection home page, there is no credit.

- (1) At each verification visit and with the annual recertification,
  - (a) A statement that the community has checked the website, fixed any broken links, and confirmed that the content is still current and pertinent (Section 352.c, credit criterion (6)).
  - (b) [Required only for the extra PPI credit] The annual report prepared by the Program for Public Information committee that evaluates the service. This is provided with the recertification documentation for Activity 330 (Outreach Projects).

The report must identify how the credited element worked, how effective it was estimated to be, and what changes were recommended for improving its effectiveness.

# 353 Impact Adjustment

There is no impact adjustment for this activity.

# 354 Credit Calculation

c350 = LIB + LPD + WEB

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### 355 For More Information

a. Additional information, reference materials, and examples can be found at www.CRSresources.org/300.

# 356 Related Activities under the Community Rating System

This credit is closely related to Activity 330 (Outreach Projects). The objective of outreach projects is to pique the reader's interest in a topic, such as flood insurance or property protection. Some readers will want to know more, so Activity 350 credits providing that additional information through the local library or the community's website. WEB1 is directly tied to the messages that are disseminated in the projects credited under Activity 330, and those credit points can be increased to a maximum of 60 if the messages also are part of the community's Program for Public Information (credited under Activity 330).

The flood protection website can also advise users of other community services, such as

- Providing copies of Elevation Certificates (credited under Activity 310),
- Reading maps for people (Activity 320),
- Providing technical assistance on property protection (Activity 360),
- Providing technical assistance on flood insurance (Activity 370),
- Administering the permit requirements for construction and development in the floodplain (Activity 430 and Activity 450), and
- Maintaining the drainage system and carrying out related procedures and responsibilities (Activity 540).

It should be noted that posting information about these services using a website does not fulfill the publicity prerequisite for these activities, unless website-based publicity is discussed in the Program for Public Information document and demonstrated to be the best medium to use.

The real-time gage information and flood warning information should be coordinated closely with the flood warning and response planning in the 600 series of CRS activities and with the outreach project prerequisites for those activities.