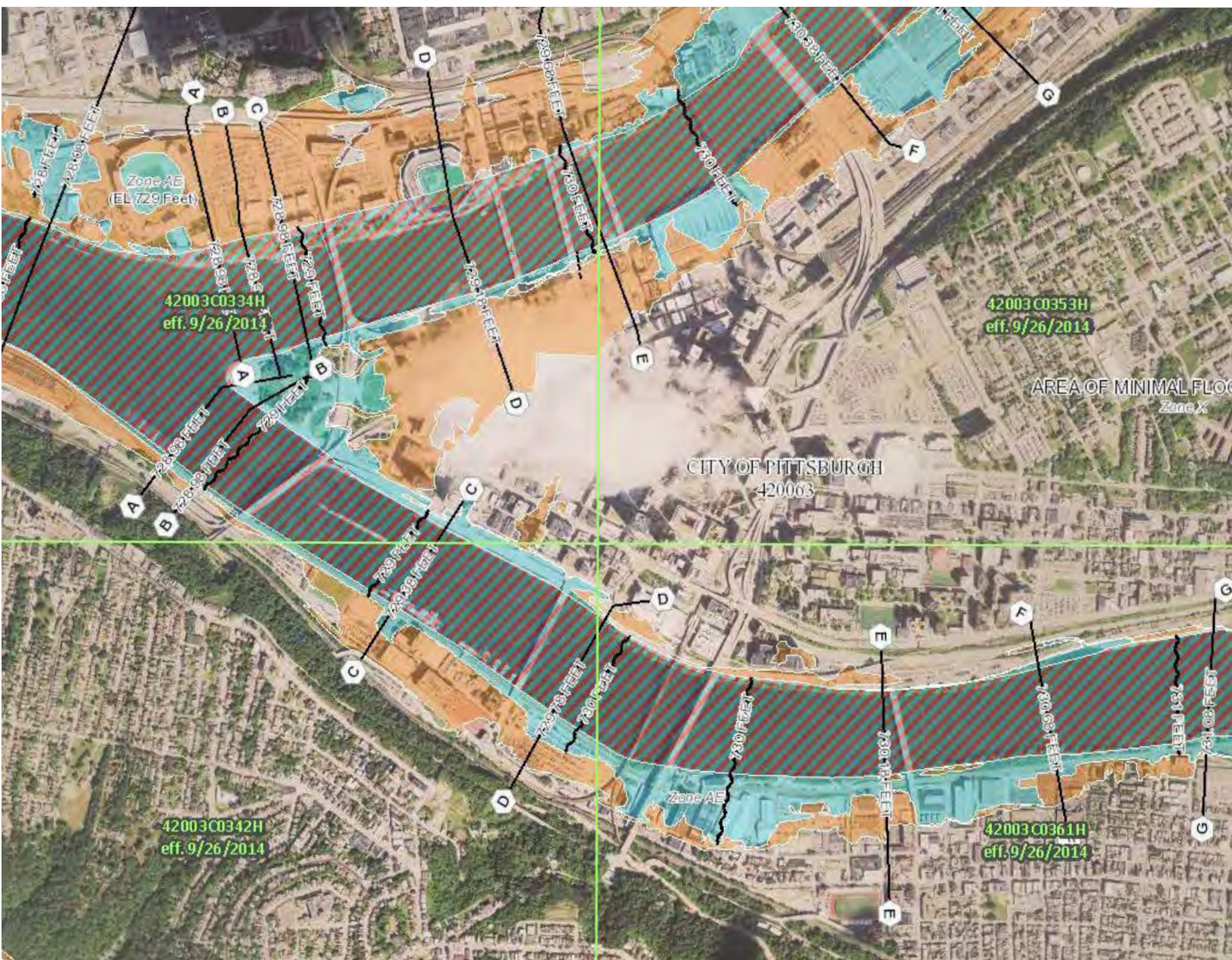


Developing a Community Engagement Program for Flood Resiliency



The Southwestern Pennsylvania Commission’s Water Resource Center developed the following educational framework as a result of the work completed from a Department of Community and Economic Development Keystone Communities Grant on flood resiliency. The project acted as a pilot to develop resources to help municipalities with building more resilient communities through actively raising awareness of the short and long term public and private impacts that flood insurance reform are having on municipalities and their residents. The framework acts as an easily adaptable guidance tool for communities to create a flood resiliency education and engagement program in their own community.

Table of Contents

Step 1. Identify Drivers for Resiliency Education _____	1	Step 6. Flood Task Force _____	3
Step 2. Data Collection _____	1	Step 7. Additional Considerations for Task Force _____	4
Step 3. Survey _____	2	References _____	4
Step 4. Public Meeting _____	2	Appendices _____	4
Step 5. Working Groups _____	3		

Disclaimer: This guide is provided exclusively for general educational and informational purposes. This guide does not in any way replace or supersede any municipal, county, state, or federal requirements or regulations. June 2020.

Cover Photo: Downtown Pittsburgh flood map from FEMA Map Service Center, 2019

Step 1. Identify Drivers for a Resiliency Program

Purpose: Every community has different priorities and needs for pursuing a community engagement and flood resiliency education program. To help determine if developing a program is right for your community, consider some of the common drivers and guiding questions below.

Drivers for a resiliency program can include but are not limited to:

- High risk of flooding hazard
- Concern from elected officials
- Municipal government interest
- Concern from residents
- Federal or state regulation

Guiding questions for determining need:

- Is your community participating in the [National Flood Insurance Program](#) (NFIP)?
- Has your community experienced flooding?
- What percent of your community is located in the floodplain? Search your municipality in FEMA's [Map Service Center](#) (MSC) to see your community flood map.
- Do you have many flood insurance policies or claims in your community? Find out by searching in FEMA's [Policy and Statistics database](#).
- Do you have many repetitive loss properties in your community?
- Are you interested in lowering flood insurance premiums for residents and businesses in the floodplain?
- Is your community interested in enrolling in the [Community Rating System](#) (CRS)?

Once the need for a program has been identified, support from the council or board of supervisors is needed. It is essential that community leaders are on board before pursuing this project, as the resulting flood task force will be an ad hoc committee that will help them move forward with decisions related to flooding and education.

In order to justify community needs, data collection (see Step 2) may be necessary. Results of data collection can illustrate the percentage of the community in the floodplain, critical facilities at risk, or division of land use in the floodplain (i.e. industrial, commercial, residential, etc.).

Step 2. Data Collection

Purpose: Data collection is used to understand your community and justify the need for creating a flood resiliency program (see Step 1). Identify Drivers for a Resiliency Program. Data from Federal Emergency Management Agency (FEMA) and your county tax assessor is compiled to depict the floodplains of the community and prepare data for survey.

Items Needed: There are several locations for acquiring data. Floodplain data can be downloaded from FEMA's Map Service Center (MSC) at <https://msc.fema.gov/>. Parcel data can be received from your county tax assessor's office or county GIS department. Other GIS data needed include: community boundary, county boundary (optional, for spatial reference), roads, streams/rivers/lakes, aerial imagery (optional, for basemap). You will need ArcGIS and Microsoft Excel capabilities for this step.

Process: Combine this data into one ArcGIS map. FEMA's floodplain data may contain layers you may not need. The most important layers from this file include:

- S_GEN_STRUCT (structures such as bridges, dams, etc.)
- S_BFE (base flood elevation markers)
- S_XS (numbered cross-sections)
- S_FLD_HAZ_AR (flood zones)
- S_WTR_LN (stream centerline)

Symbolize data to mimic floodplain map on [National Flood Hazard Layer Viewer](#). Save this map as PDF that is easily read and understood with legend. (See sample floodplain map in Appendix I).

Using the FEMA data and parcel data, find the addresses in the 100-year floodplain (Zone AE) by using ArcMap's "Select by Location" tool. Save this data as an Excel sheet. In the Excel sheet, clean up the data by deleting duplicate addresses (you only want to send one letter to each address, even if they own multiple properties). Create a mailer list with first name, last name, and address.

*If your community does not have GIS capabilities, SPC's Water Resource Center can potentially help with this step. Please contact us with inquires: (412) 391-5590.

Step 3. Survey

Purpose: Conducting a survey of residents and businesses that are located within the floodplain is meant to assess the existing knowledge regarding flooding and future flood education interests. The general survey form can be changed for what information you would like to gather. This survey can be disseminated by mail, email, or by online link. Surveys being mailed should be accompanied by a letter (ideally on community letterhead) explaining the survey and a pre-addressed envelope for survey returns. Electronic surveys should also have a message from community leaders and information directing them where and how to take the survey. Ideally, electronic survey information should be posted on the community website.

Items Needed:

- Survey form - Appendix A
- Letter from Council - Appendix B
- Online survey
 - Survey platform such as Constant Contact, Survey Monkey, etc.
- Mailer
 - Postage, including return
 - Paper
 - Printing costs
 - Envelopes
 - Labels

Process: The sample survey in Appendix B was created by SEDA-COG and adapted for SPC's pilot program. This survey can be further adapted for your community and the type of data you want to collect from community members. The accompanying letter from council helps to personalize and explain the survey to the recipients. The letter and survey should include the return date for the survey, leaving enough time to tally the responses and compile for the public meeting (see Step 4. Public Meeting). The way in which you send out the survey and letter depends on the community - either as a physical mailed letter, a virtual survey on the municipal website and/or Facebook, or as a handout available at the library.

If you are sending out the survey through mail, use the list of addresses in the floodplain (created in Step 2) to prepare the letters and surveys for mailing. One easy way to do this is with the Mail Merge tool in Microsoft Excel. Prepare envelopes with labels, postage, return envelope inside (with postage), survey form, and letter from council to preface the survey. The number of letters mailed will vary on how many properties are in the floodplain. If it is too large, you could consider an online survey or mailing only to a high-prioritized area of the floodplain or community. Send survey and letter out approximately 2 months before the public meeting, in order to leave time to receive responses.

As surveys are returned, enter responses into a spreadsheet to summarize each answer. Compile all results to present at the public meeting. Choose parts of the survey that you would like to highlight at the public meeting. This may include number of owned vs. rented properties, number of properties with basements, percentage of properties that have flood insurance, etc. These answers can be used in the public meeting for discussion and to identify what topics to focus on.

Step 4. Public Meeting

Purpose: The public meeting is meant to educate residents broadly on federal flood regulations and flood insurance. It is a great way to start the conversation of flood resiliency in the community and gauge interest from residents. Survey results should be shared at the meeting to justify the need for topics covered at the meeting.

Items Needed:

- Flyer for advertising
- Text for print/online advertising
- PowerPoint presentation and accompanying equipment to project (computer, projector, stand, etc.) - see Appendix E for examples of what to include in presentation
- Sign-in sheets
- Survey result handouts
- Floodplain map handouts
- Working group questionnaire - Appendix C
- Any other relevant handouts

Process: Planning the public meeting can take place while the survey is being answered and returned. The planning involves setting a date and location for the meeting, then advertising. Advertising should begin one month before event and continue up to the day before. Venues for advertisement can include: newspapers (print and online), municipal social media accounts, municipal website, print flyer, TV, radio, etc.

The public meeting is an opportunity to educate residents generally on flood-related topics. Good topics to cover can include: overview of the community's floodplains, the basics of federal flooding regulations (the National Flood Insurance Program and Biggert-Waters Flood Reform Act of 2012), and flood insurance.

At the end of the public meeting, pass around a survey to gauge residents' interest in learning more about these topics in working groups or by being part of the flood task force.

Step 5. Working Groups

Purpose: Working groups are essentially small educational workshops on a specific flood-related topic, meant to build on concepts introduced at the public meeting. They provide an opportunity for a small group of community members to share ideas about a relevant flood-related topic. The surveys passed around at the public meeting will help determine topics for these events, who is interested in attending, and what time they should be held (daytime or evening).

Items Needed:

- Sign-in sheet
- Post-working group questionnaire - Appendix D
- Any handouts needed related to topic

Process: Contact community experts to come talk to the working group (no more than 15 people) at a particular time and location on selected topic. For example, if residents showed interest in learning more about flood insurance, find a local insurance broker to speak about private and public flood insurance. Because the workshop is small, attendees will have an opportunity to have a discussion and ask questions.

Hand out a questionnaire at the end of each working group to assess the effectiveness of the event. If there is another working group to follow, provide information on the upcoming meeting.

Step 6. Flood Task Force

Purpose: The Flood Resiliency Task Force is an ad hoc committee to council that will help create a flood resiliency education plan for the community, among other tasks that council finds appropriate. They can build on topics of concern discussed in the public meeting and working groups.

Items Needed:

- Agenda
- Binder for each task force member - see Appendix E for suggested content to include

Process:

Creating the Task Force: From the public meeting and working groups, identify who might be interested in joining a Flood Resiliency Task Force. Recommendations for task force makeup include:

- Around 5-10 members, so everyone in the group can participate
- At least half of the members should be from outside of the local government
- Example members:
 - Local insurance agent
 - Local business owner
 - Environmental group representative
 - Local resident/homeowner, preferably in the floodplain
 - Local industry representative
 - Real estate agent
 - Municipal secretary or manager
 - Contractor, Surveyor, Banker

Provide a recommendation of task force members to Council to approve. All potential task force members should be aware of their nomination and what their commitment would entail. They should be notified again when they are confirmed by Council as a task force member.

First Task Force Meeting: Schedule the date, time, and location for the first task force meeting. Some task force members prefer evening meetings, some prefer daytime. Pull together binders to provide each task force member with background on the flood concerns in the community (as expressed in the public meeting and working groups), contact information for each task force member, and ideas for task force action. This binder also serves as a place for members to keep all of their documents related to the task force. See Appendix E for a list of suggested binder materials. Create an agenda for the meeting to include a general introduction of the task force members, review of the binder and materials, and future goals. Initial deliverables should be created during the first meeting to help guide the task force forward. These deliverables can be refined in future meetings as needed.

Future Task Force Meetings: The task force should decide how often they would like to meet – weekly, biweekly, monthly, bimonthly, quarterly, etc. A secretary should be designated to plan future meetings and record minutes. See the next section for potential future task force projects.

Step 7. Additional Considerations for Task Force

The Flood Resiliency Task Force's main tasks are to support the municipality in developing flood resiliency. The task force can address various issues in a municipality including but not limited to:

- Outreach/education for community members
- Outreach/education for target groups such as realtors, low-income populations, homeowners in the [floodplain fringes](#), etc.
- Levee certification
- Elevation certificates
- Flood insurance options
- Mitigation measures
- Participate in the Community Rating System (CRS) program to provide discounts on flood insurance for the community

FEMA's Community Rating System (CRS) program is one way to help property owners reduce their flood insurance premiums. The CRS rewards communities who practice sound floodplain management with reductions in flood insurance premiums for their residents. It is a voluntary program, based on a point system. One way to gain points through the CRS is with a Program for Public Information (PPI), under Activity 330 Outreach Projects. A PPI can provide structure for an outreach program on flooding through the 7-step plan, even if your community is not enrolled in the CRS. See more information at [CRSresources.org](#).

References

- Community Status Book Report - Pennsylvania. Federal Emergency Management Agency, October 28, 2019. <https://www.fema.gov/cis/PA.pdf>.
- "Developing a Program for Public Information for Credit under the Community Rating System of the National Flood Insurance Program". CRS Resources, 2014. https://crsresources.org/files/300/developing_a_ppi_for_credit_under_the_crs.pdf.
- FEMA's National Flood Hazard Layer (NFHL) Viewer. ArcGIS Online, April 2019. <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd>.
- "National Flood Insurance Program Community Rating System." National Flood Insurance Program Community Rating System | FEMA.gov. Accessed October 28, 2019. <https://www.fema.gov/national-flood-insurance-program-community-rating-system>.

Appendices

- Appendix A. Survey Form Template
- Appendix B. Letter from Council Template
- Appendix C. Working Group Interest Survey Template
- Appendix D. Post-Working Group Questionnaire Template
- Appendix E. Suggested Content for Public Meeting Presentation and Flood Resiliency Task Force Binder Contents



**For more information
please contact:**

Water Resource Center
(412) 391-5590
WRC@spcregion.org
www.spcwater.org

Appendix A.

Survey Form Template

FLOODPLAIN SURVEY

MOVING TOWARD RESILIENCY AND MITIGATION

Street Address: _____

Mailing Address: _____

1. Is this a home or business?
 - Home
 - Business

2. Do you own or rent your home or business?
 - Own
 - Rent

3. What is the age of the building?
 - Older than 50 years old (built before 1968)
 - Less than 50 years old (built after 1968)
 - Not sure

4. Do you have a basement or crawl space?
 - Yes
 - No

5. Do you have a mortgage/lien on the structure?
 - Yes
 - No
 - Not sure

6. Do you live in the regulated floodplain? Search your address on msc.fema.gov to find out!
 - Floodway
 - 100-year Floodplain (1% annual chance of flooding)
 - 500-year Floodplain (0.2% annual chance of flooding)
 - Not sure

7. Have you experienced flooding in your home or other structures?
 - Yes, very severe
 - Yes, somewhat
 - No

8. How prepared do you consider yourself to deal with a flood event?
 - Well prepared
 - Somewhat prepared
 - Not at all prepared

9. Do you have a FEMA Elevation Certificate from a certified land surveyor or engineer?
 - Yes
 - No

10. Would you be interested in receiving a FEMA Elevation Certificate?

- Yes
- No
- Not sure
- N/A (already have Certificate)

11. Do you have flood insurance?

- Yes —→ National Flood Insurance Program (NFIP) Private
- No
- Not sure

12. Have you seen an increase in your flood insurance premium in the previous three years?

- Yes
- No
- Not sure
- N/A

13. Was your structure (home or business) insured with flood insurance when it flooded?

- Yes
- No
- Not sure
- Not applicable (never flooded)

14. Have you made any flood insurance claims?

- Yes How many claims? _____ Total dollar amount of all claims made: \$_____
- No
- Not sure

15. Do you have Increased Cost of Compliance Coverage (ICC)? Some flood insurance policyholders can get up to \$30,000 to help pay the costs to bring their home or business into compliance with their community's floodplain ordinance (effective June 20, 2017).

- Yes Total dollar amount of all claims made: \$_____
- No
- Unsure

16. Have you received Grant funds in association with living in the Floodplain?

- Yes
Dollar Amount of Grant: \$_____
- Source of Grant (i.e. FEMA, PEMA, State; etc): _____
- No
- Not sure

17. Taking cost out of the question, are you interested in making modifications to your home in the floodplain?

Check each box that applies.

- Elevation
- Flood Proofing
- Retrofitting
- Utility Relocation
- Relocation of your structure outside of the floodplain, in the same municipality
- Relocation of your structure outside of the floodplain, to a different municipality

Other (Please list): _____

No

Not sure

18. Are you familiar with the changes to the National Flood Insurance Program (NFIP), also referred to as the Biggert- Waters Flood Insurance Reform Act of 2012 (BW-12) and 2014 (BW-14)?

Yes

No

Not sure

19. Are you concerned with the cost of future flood insurance premiums?

Yes

No

Not Sure

20. Does the cost of flood insurance premiums impact your ability to remain in or maintain your structure?

Yes

No

N/A

21. Other than grants, which of the following incentives would encourage you to spend money to retrofit your home to protect against flood disasters? Check all that apply.

Insurance premium discount

Mortgage discount

Low interest loan

None

Not sure

Other: _____

22. Would you be willing to attend a public meeting to learn about what your community is doing to better assist its citizenry who live or work in the floodplain?

Yes

No

Not sure

23. Would you be interested in participating in or joining a flood resiliency task force?

Yes

If you are interested in joining a flood resiliency task force, please provide:

Name: _____ Phone No.: _____

Email: _____

No

Not sure

24. Other questions/concerns: _____

Appendix B.

Letter from Council Template

[CURRENT DATE]

[COMMUNITY NAME] Resident:

The [COMMUNITY NAME] is working to address flood resiliency in the community. This process involves assessing public knowledge on flood-related topics, holding educational workshops, and creating a Flood Resiliency Taskforce to carry on these efforts for the community.

Enclosed please find a survey targeted to properties located in the floodplain. The information being gathered is educational only – it will help us assess the needs of our residents. Please take a few minutes to complete the form and return it to the [BOROUGH, MUNICIPALITY, TOWN, CITY, ETC]. We are requesting the return of completed surveys by *[DATE TO RETURN SURVEY]*.

A public meeting will be held on *[DATE, TIME, AND LOCATION]* to address flood resiliency, develop a better understanding of the citizen needs, and to discuss preliminary survey results.

Thank you for taking the time to complete this form, which will provide critical information to move forward in the development of flood resiliency planning. Please feel free to contact the [BOROUGH, MUNICIPALITY, TOWN, CITY, ETC.] with any questions.

Sincerely,

[COMMUNITY NAME] Council President

Enclosure

Appendix C.

Working Group Interest Survey Template

Working Group Questionnaire

Name: _____

Phone Number: _____

Email: _____

Are you willing to participate in a flood resiliency working group?

A. To discuss (check one or more):

- Community Rating System
- Finance/Banking
- Flood Insurance – NFIP and Private
- Floodplain Mapping
- Local Preparedness
- Real Estate

B. Number of meetings in which you are willing to participate (please check one):

- One meeting
- Two meetings
- Three meeting

C. Time of meeting in which you are willing to participate (please check one):

- Day meeting
- Evening meeting

Appendix D.
Post-Working Group
Questionnaire Template

[TITLE] Working Group
[DATE AND TIME]

Disagree > Agree

I feel more knowledgeable and better equipped on...

NFIP coverage. [INSERT TOPICS] 1 2 3 4 5

Private Flood Insurance coverage. 1 2 3 4 5

What did you find most beneficial from the discussion?

What could have been done better?

What legislation or reform would you like to see introduced to help The Borough of Ford City better respond to the issues we have identified?

Other areas of interest that we did not cover that you would be interested in learning more about:

- | | |
|---|--|
| <input type="checkbox"/> Architectural Services | <input type="checkbox"/> PEMA/FEMA Discussion |
| <input type="checkbox"/> Community Rating System | <input type="checkbox"/> Real Estate |
| <input type="checkbox"/> Contractors (Elevation & infill) | <input type="checkbox"/> Planning/Emergency Management |
| <input type="checkbox"/> Higher Education | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Local Preparedness | _____ |

If you would like to RSVP for the Borough's next working group on [TOPIC] on **[DATE AND LOCATION]**, please provide the following information:

Name: _____

Phone Number: _____

Email Address: _____

Appendix E.
Suggested Content for
Public Meeting Presentation
and Flood Resiliency Task
Force Binder Contents

- I. Recommended topics for public meeting PowerPoint presentation:
 - a. What is resiliency and mitigation (definitions)
 - b. [Biggert-Waters Flood Insurance Reform Act of 2012](#) background (basis of flood insurance increases)
 - c. [Homeowners Flood Insurance Affordability Act of 2014](#) background (repeals on BW-12)
 - d. Impacts of [flood insurance reform](#) – short and long term
 - e. Describe what a [100-year floodplain](#) is
 - f. Walk through community's floodplain map
 - g. Community statistics (total population, median household income, total housing units, approx. population in floodplain)
 - h. What is the community's goal moving forward with a community engagement program for flood resiliency?
 - i. Share survey results (highlight more important questions such as percentage of respondents who are concerned with the increased cost of flood insurance, percentage who have seen an increase in their flood insurance premiums, percentage of respondents who are unfamiliar with the regulation changes)
 - j. Working Group details (how community can learn more and get engaged)
 - k. Ideas for resiliency initiatives (public vs. private roles)
 - l. Explanation of the [NFIP Community Rating System \(CRS\)](#) if that is of interest to the community

- II. Example contents for task force binder:
 - a. Cover page
 - b. Table of Contents
 - c. Task force member contact Information
 - d. Recommendations for flood-related initiatives in the community. Examples may include:
 - i. Become knowledgeable with survey results to better prioritize community needs and identify opportunities
 - ii. Collect elevation reference points and elevation certificates for interested properties
 - iii. Further education of task force members – research on regulations, grants, etc.
 - iv. Community education – local preparedness, private insurance options, grandfathering, elevation certificates, historical documentation of flooding, etc.
 - v. Target group education – educate realtors, insurance agents, low-income residents, contractors, etc.
 - vi. Outreach activities – create website content related to flooding for the municipality, create pamphlets/brochures for the public, create a newsletter

- vii. Grant funding opportunities – identify projects to be included in your county hazard mitigation plan, stormwater authority/fee, FEMA, US Army Corps of Engineers, USDA funding
- viii. Mitigation efforts – helping residents to raise utilities in basement, elevating structures, flood-proofing structures, etc.
- e. Community floodplain survey results
- f. Planning documents such as:
 - i. Community floodplain map – created in ArcGIS (see Step 2. Data Collection) or printed from [FEMA Map Service Center](#)
 - ii. County Hazard Mitigation Plan – find yours on SPC Water Resource Center’s [website](#)
 - iii. Community/county comprehensive plan if relevant to flooding – search on your municipality or county website
 - iv. Community floodplain ordinance – contact municipality office for a copy (may be on their website)
- g. Reference documents such as:
 - i. Relevant resources for task force such as: [FEMA Map Service Center](#), [National Flood Hazard Layer \(NFHL\) viewer](#), [FloodSmart](#), [FEMA Elevation Certificate](#), [PA Insurance Department](#)
 - ii. Funding opportunities – see SPC Water Resource Center [grant guidance](#)
 - iii. Education and outreach guidance
 - iv. [CRS guidance](#)

Contact SPC Water Resource Center with any questions or further guidance: wrc@spcregion.org, (412) 391-5590