

**FEDERAL EMERGENCY MANAGEMENT AGENCY
NATIONAL FLOOD INSURANCE PROGRAM
COMMUNITY ASSISTANCE VISIT (CAV)
REPORT**

SECTION I

1. NAME OF COMMUNITY Londonderry Township	2. STATE PA	3. COMMUNITY ID # 420383	4. COUNTY Dauphin County
5. VISIT CONDUCTED BY Katie Lipiecki	6. AGENCY FEMA	CIS UPDATED 2/24/2015	7. DATE OF VISIT 08/26/2014

SECTION II

8. NAME OF LOCAL OFFICIAL Jeff Burkhart	9. TELEPHONE NO. (717) 944-1803	FOR A LIST OF THE ATTENDEES SEE SECTION V.
10. TITLE: Zoning Officer	11. ADDRESS OF LOCAL OFFICIAL Londonderry Township Municipal Building 783 South Geyers Church Road Middletown, Pennsylvania 17057	

SECTION III – FINDINGS

PART A: Check appropriate response.	Level of Findings
1. Are there problems with the community's floodplain management regulations?	None
2. Are there problems with the community's administrative and enforcement procedures?	Serious
3. Are there engineering or other problems with the maps or flood insurance study?	None
4. Are there any other problems in the community's floodplain management program?	None
5. Are there any programmatic issues or problems identified? <i>(Programmatic problems may relate to the nation or region as a whole, not merely to an individual community)</i>	No
6. Are there any potential violations of the community's floodplain management regulations? <i>(Check appropriate category)</i>	
<u>A potential violation(s) has/have been identified</u>	

SECTION IV – FINDINGS (CONT)**1. Floodplain Management Regulations:**

FEMA reviewed the Township of Londonderry's floodplain management ordinance number 2012-1, dated July 17, 2012 with an effective date of August 2, 2012, which they adopted in conjunction with the updated countywide Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) for Dauphin County.

The review found that the Township incorporated a number of higher standards into their ordinance. Some examples of higher standards include a freeboard safety factor of 18 inches and the inclusion of a repetitive loss provision where the community will consider a structure substantially damaged if it sustains two instances of damage in a 10-year period that equal or exceed 25% of the market value of the structure. The Township recognizes that higher standards will provide for a safer community, and is commended for incorporating such language in the ordinance.

After a discussion of the minor repairs language, the Township should consider removing or refining this definition to clarify that all development in a floodplain is required to have a permit obtained.

The Township may want to consider including specific language to address accessory structures as there are a number of such small, accessory structures found in the community and on the islands. This language is found in the PA Suggested Provisions, section 5.02(B) and is pasted below. If a community chooses not to include language related to accessory structures, then all structures located in the Identified Floodplain Area, including accessory structures will have to be elevated or floodproofed.

A. Accessory structures

Structures accessory to a principal building need not be elevated or floodproofed to remain dry, but shall comply, at a minimum, with the following requirements:

1. the structure shall not be designed or used for human habitation, but shall be limited to the parking of vehicles, or to the storage of tools, material, and equipment related to the principal use or activity.
2. floor area shall not exceed 200 square feet.
3. The structure will have a low damage potential.
4. the structure will be located on the site so as to cause the least obstruction to the flow of flood waters.
5. power lines, wiring, and outlets will be elevated to the regulatory flood elevation.
6. permanently affixed utility equipment and appliances such as furnaces, heaters, washers, dryers, etc. are prohibited.
7. sanitary facilities are prohibited.

8. the structure shall be adequately anchored to prevent flotation, collapse, and lateral movement and shall be designed to automatically provide for the entry and exit of floodwater for the purpose of equalizing hydrostatic forces on the walls. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:
 - a. a minimum of two openings having a net total area of not less than one (1) square inch for every square foot of enclosed space.
 - b. the bottom of all openings shall be no higher than one (1) foot above grade.
 - c. openings may be equipped with screens, louvers, etc. or other coverings or devices provided that they permit the automatic entry and exit of flood waters.

2. Administrative and Enforcement Procedures:

During the course of the visit FEMA found the Township consistently professional, and was extremely impressed by their willingness to learn about the requirements of the National Flood Insurance Program (NFIP) and to proactively implement systems to correct what they realized to be administrative deficiencies that have resulted in building and development violations, largely on the islands. These islands are relatively isolated and are difficult for the Township staff to have regular visibility of development that is occurring, and subsequently there are potentially numerous floodway and development violations that have been occurring over many years.

It was discussed that the community needs to establish a process for capturing the other types of development that require permits in the Special Flood Hazard Area, including but not limited to paving, grading, storage of materials, dredging, mining, etc.

FEMA reviewed the permit application form with the Township and provided suggestions for improvements and recommended that the Township update the form to capture additional pieces of information. This information included the following:

- **Official Floodplain Determination:** It is recommended that the permit application be modified to clearly state the Base Flood Elevation and Lowest Floor Elevation.
- **Openings:** FEMA encourages the community to update the permit application to reflect that flood openings are required if there is enclosed space below the lowest floor, and that space below the lowest floor is restricted for use as parking, storage and access.
- **Substantial Improvement Determinations:** A discussion of substantial damage and substantial improvement revealed that the Township had not been making substantial improvement determinations, and that the appropriate information needed to make this determination was not captured on the old permit application. FEMA shared with the community that they could use assessed value, assessed value times a County multiplier if appropriate or an appraisal to determine market value. The community was already collecting estimated cost of improvement/repair on the permit application, and it was recommended that market value and substantial damage/improvement determinations and calculations be documented on the permit applications.

During the permit file review it was revealed that the Township had difficulty pulling finished construction elevation documentation for all development in the Special Flood Hazard Area. The community needs to create

a process to ensure that all as built compliance documents are obtained and filed prior to issuing a Certificate of Occupancy. This compliance documentation includes but is not limited to floodproofing certificates for structures that may have been dry floodproofed, hydraulic and hydrologic (H&H) studies indicating no rise in the BFE for encroachments into the floodway, and openings information.

FEMA highly recommends that the Township start requiring the submission of a finished construction Elevation Certificate for all development in the Special Flood Hazard Area. Not only does the Elevation Certificate collect all of the elevation, utilities and openings data required by their floodplain ordinance for compliance, the Elevation Certificate is also a minimum requirement for membership in the voluntary, incentive program called the Community Rating System (CRS) that could earn citizens in the community discounts on their flood insurance. As the Township is interested in joining the CRS, they may want to start collecting this documentation now.

Please note that financial assistance is available from the Pennsylvania Department of Community & Economic Development (PADCED) to reimburse municipalities for 50% of the cost incurred in preparing, enacting, administrating and enforcing floodplain management regulations. Application can be made through DCED's Single Application for Assistance process under the Municipal Assistance Program. For more information visit http://www.newpa.com/sites/default/files/MunicipalAssistanceProgram_Guidelines-2012.pdf or contact Dan Fitzpatrick at 1-888-223-6837.

3. Engineering, Flood Maps and the Flood Insurance Study:

The current effective maps date to August 2, 2012. There are no identified issues with the new floodplain maps. The Pennsylvania Map Tool can be a useful tool for the Floodplain Administrator to supplement the FIRM and FIS when making floodplain determinations, which can be viewed at www.pafloodmaps.com.

The flooding caused by Tropical Storm Lee in September 2011 met or exceeded a 500-year event for the Township, and is considered the flood of record for this community.

4. Other Community Floodplain Management Program Problems:

None identified.

5. Programmatic Issues:

None identified.

SECTION V –NARRATIVE

1. Community Background:

Londonderry Township is located in Dauphin County, Pennsylvania, which is about 15 miles from the state capital of Harrisburg. The township is about 26 square miles in size and has a population of 5,235 as of the 2010 US Census. The Township is experiencing some growth, having added 5.3 percent to the population since the last biennial census. The Township is primarily rural in nature, with farming and agricultural businesses occupying a large portion of the land in the community.

The Township has a large floodplain, and the main flooding sources are from the Swatara River and Conewago Creeks and the Susquehanna River. There are a few islands in the Swatara River that are a part of the Township, and the Three Mile Island nuclear power plant is located on one of the islands within the Township. There seems to be a good relationship between the Township and the owners of the power plant

Londonderry Township was selected for a CAV as it is a Tier-1 community (using the risk-based criteria in the CAV Risk Prioritization Tool), which identified the Township as having a higher risk of experiencing losses due to the development in the Special Flood Hazard Area that currently exists, or is projected to occur. Additionally, Londonderry was severely affected by Hurricane Irene and Tropical Storm Lee in the fall of 2011, which also had a large impact on other communities in Dauphin County and throughout the Susquehanna River Valley.

2. General CAV Notes / Meeting Participants:

NAME	TITLE	PHONE	EMAIL
Katie Lipiecki	Senior Mitigation Planner	(215) 931-5655	Kathryn.lipiecki@dhs.gov
Jeff Burkhart	Codes and Zoning Officer	(717) 944-1803	zoning@londonderrypa.org
Steve Letavic	Londonderry Supervisor	(717) 944-3973	sletavic@londonderrypa.org

3. Mitigation Grants:

There were several structures from DR 4030 (Tropical Storm Lee) that submitted applications for HMGP acquisition (listed below). The Township understands that should any of these substantially damaged structures fail to be acquired through this process, they are required to have all renovation and reconstruction completed in full compliance with the Township floodplain ordinance's requirements for elevation. Should any property owners withdraw from the program it is recommended that the Township send a letter to the current property owners of the structures to make sure they are aware of the floodplain ordinance requirements.

- 1630 Swatara Creek Road
- 1700 Swatara Creek Road
- 1750 Swatara Creek Road
- 1770 Swatara Creek Road
- 1780 Swatara Creek Road

4. Other Community Floodplain Management Program Problems:

None identified.

5. Potential Violations:

Many potential violations were discovered during the course of the floodplain tour. The Township must provide or produce compliance documentation for each of these potential violations to determine if in fact a violation. For those that are found to be violations, the Township must mitigate to the maximum extent possible.

Please note that due to the difficulty of determining addresses on the islands while on the tour, specific addresses are not listed but the photographs/descriptions are indicative of the issues we identified during the tour and do not represent a comprehensive listing of all of the structures that may have compliance issues in the SFHA. These are merely a sampling of the types of issues identified during the floodplain tour. FEMA and the Township will work together to establish a comprehensive spreadsheet that lists addresses and/or parcel level information and a description of the potential violations that were identified and we will continue to use the coordination spreadsheet for compliance tracking purposes. The below is an attempt to summarize the types of compliance issues that we identified and to address largely unpermitted development on the islands:

- Minus rated structure located at 836 Deodate Road, Middletown, PA. This indicates that for insurance purposes this structure has been identified as having its lowest floor elevated below the base flood elevation, potentially in violation of the Township's ordinance.

- Lack of compliance documentation for all development or structures in the floodplain.

- Lack of compliance documentation or detailed study (hydraulic and hydrologic study, or H&H study) proving a 0.00' rise in the base flood elevation in the floodway, or failure to submit for a Letter of Map Change (LOMC). For any post-FIRM structure or encroachment in the floodway the city must provide compliance documentation.



- Development without a permit – the majority of the development on the islands occurs without a permit. The below photograph shows the potentially unpermitted addition of a large deck in the floodway, that may have resulted in a watercourse alteration by the placement of large boulders in along the floodway.



- Unanchored residential and accessory structures, or structures which are not adequately elevated.



- Storage of equipment and materials in the floodway without a permit, H&H study proving no rise, or proper anchoring.



- Lack of making substantial improvement determinations and requiring full compliance for those structures considered to be substantially improved.

The main areas of concern within the Township where there could potentially be unpermitted development are on the various islands, which are a part of the municipality. The Township indicated that there is not a good way for staff to visit the islands as they do not have regular access to a boat, but they suggested teaming up with the County Tax Assessor's office to conduct visits, which FEMA supports.

The Township must visit the islands and inventory the development that exists to date to determine a baseline of existing structures and make substantial damage determinations for those structures that were damaged as a result of flooding in 2011. The Township must also permit all development within the SFHA moving forward and ensure its compliance with their floodplain ordinance requirements, and should any future development occur (including the placement of a manufactured home), they must ensure that a hydraulic and hydrologic study is submitted with the permit application that states that there will be no rise in the base flood elevation of the floodway as a result of the development.

6. Flood Insurance Statistics (Policies and Claims)

Policies in Force:	144
Insurance in Force:	\$12,901,900.00
No. of Paid Losses:	531
Total Losses Paid:	\$11,601,134.33
Sub. Damage Claims Since 1978:	246

The insurance statistics were reviewed with the Township during the course of the Community Assistance Visit. There are currently 144 policies in force in the community, with \$12.9 million in coverage. The majority of the insurance policies in the Township are for single-family residential structures located in an A or AE Zone (83%). About one third of the policies in force are for structures located outside of the SFHA. Most policies are for pre-FRIM structures (61%).

There is one post-FIRM, minus rated policy in the Township, and this structure is included in the potential violations section of this report for the Township to follow up and investigate the potential violation.

There have been 246 Substantial Damage losses in the Township, with 21 Increased Cost of Compliance closed paid losses.

7. Variances:

The Township had not issued any variances to their floodplain management ordinance.

8. Hazard Mitigation Planning Status:

FEMA confirmed that the Township adopted the County's plan, which was approved on 10/11/2011. Hazard Mitigation Plans are updated every five years, as they are intended to be dynamic documents that reflect not only the risks in a community but also the strategies the community will pursue to reduce their risks. Risk reduction actions must be identified in a community's Hazard Mitigation Plan in order to be eligible for post-disaster funding through the Hazard Mitigation Grant Program. As a result, it is important the community become familiar with what activities are identified within it for the Township and get involved in the update efforts to ensure the Township's risk and risk reduction strategies are reflected accurately.

9. Other Community Floodplain Management Problems

None identified

10. Other Findings:

a. Floodplain Tour:

FEMA (Katie Lipiecki) and the Township toured the floodplain during the course of the visit. The results of the tour are detailed in the Potential Violations section.

b. Capital Improvements:

The Township was not undergoing any capital improvements.

c. State & Federal Projects:

There were no state projects underway in the Township at the time of the visit. In accordance with Executive Order 11988, state and federal agencies are required to comply with the regulations. If future assistance is needed on this coordination the Township can contact the State NFIP Coordinator and FEMA Regional office.

11. Training Needs:

Floodplain management involves an ongoing awareness of the risk and the impact of other planning decisions on these areas of risk. FEMA strongly encourages the Township to send the floodplain administrator to a week-long L273 class (Managing Development through the National Flood Insurance Program) for a comprehensive training on floodplain management requirements and higher standards. L273 training will be offered at the Emergency Management Institute (EMI) in Emmittsburg, Maryland and the schedule and application can be found at the following site: <http://training.fema.gov/emcourses/>. Only two participants are allowed for each state (per class) so it is advisable to apply as soon as possible. The Commonwealth also hosts field-deployed versions of this course coordinated through the NFIP Coordinator. The next offering is occurring in Enola, PA on Mar

12. Community Rating System:

Londonderry Township was provided with the What If screen from CIS during the Community Assistance Visit, which helps them to quantify in dollars the amount of insurance premium savings that would remain in the community should they choose to join the program.

Prior to joining the Community Rating System the Township must mitigate all identified violations to the maximum extent possible and obtain a Letter of Good Standing from FEMA.

13. Follow up by FEMA Region III:

FEMA will provide some follow up assistance in documents on the following items:

1. Provided the Township with information on the 4 day Floodplain Manager Training Course at the Emergency Management Institute.
2. Links to sample floodplain permit checklists are provided below for the Township to consider incorporating into their existing permit and procedures.
 - https://www.rampp-team.com/fact_region3.htm - scroll down to the lower right portion of the webpage for **Sample Checklists and Templates**.
3. Sample compliance tracking spreadsheet to aid the community in identifying and tracking potential violations and mitigating those structures.
4. PA Suggested Provisions for new suggested language in the ordinance and the Ordinance Review Checklist.
5. CRS Ready Checklist and the CRS Quick Check spreadsheet as the Township expressed an interest in joining the Community Rating System.

14. Community Action Needed:

1. FEMA recommends that the Floodplain Administrator attend L273 training to get educated on the community's requirements to participate in the National Flood Insurance Program (NFIP).
2. The Township must update their permit application to include enough information for a floodplain determination, substantial improvement determination, floodway compliance, flood openings

compliance as well as to capture other types of development. FEMA also recommends that a market value determination be added to the application. Please update the permit application and send to FEMA for review.

3. The Township needs to develop written administrative process to ensure that ALL development, which includes modifications or improvements to structures, excavation, paving, drilling, driving of piles, land clearing, mining, dredging, fill, long term storage and grading goes through the permitting process. Please send to FEMA for review.
4. The Township must obtain as-built documentation for all potential violations in the floodplain to evaluate for compliance.
5. The Township must inventory development that exists to date on the islands to determine a baseline of existing structures, investigate if permits were issued for the development, and make substantial damage determinations.
6. The City must provide the documentation requested for the structures and development that are either known to be or are potentially in violation of the community's ordinance, and must use the enforcement mechanisms within their floodplain ordinance to mitigate any identified violations to the greatest extent possible.