



## 9.18 Township of Oxford

This section presents the jurisdictional annex for the Township of Oxford.

### 9.18.1 Hazard Mitigation Plan Point of Contact

The following individuals have been identified as the hazard mitigation plan’s primary and alternate points of contact.

Primary Point of Contact	Alternate Point of Contact
Michael Finelli, Township Engineer 11 Green Street, Oxford, NJ 07863 (908) 835-9500 <a href="mailto:mikef@finellicon.com">mikef@finellicon.com</a>	Louis Accetturo, DPW Supervisor 11 Green Street, Oxford, NJ 07863 (908) 453-3303 <a href="mailto:dpw@oxfordtwpnj.org">dpw@oxfordtwpnj.org</a>

### 9.18.2 Municipal Profile

Oxford Township is located in central Warren County and covers an area of approximately 5.9 square miles. Oxford Furnace Lake is a recreational area in the Township that was once used for flood and erosion control. Oxford is an unincorporated community found within the Township. It is bordered to the north by White Township, to the south by Washington Township, to the east by Mansfield Township and to the west by White Township. According to the U.S. Census, the 2010 population for Township of Oxford was 2514.

### Growth/Development Trends

The following table summarizes recent residential/commercial development since 2010 to present and any known or anticipated major residential/commercial development and major infrastructure development that has been identified in the next five years within the municipality. Refer to the map in section 9.18.8 of this annex which illustrates the hazard areas along with the location of potential new development.

**Table 9.18-1. Growth and Development**

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
<b>Recent Development from 2010 to present</b>					
None identified.					
<b>Known or Anticipated Development in the Next Five (5) Years</b>					
Oxford Textile Mill	Res. & Comm.	325 / 40,000 SF	11 Foundry Street B-33, L-4, 4.02, 4.03	Portion of property in floodplain	Redevelopment agreements in place with Township

*\* Only location-specific hazard zones or vulnerabilities identified.*

### 9.18.3 Natural Hazard Event History Specific to the Municipality

Warren County has a history of natural and non-natural hazard events as detailed in Volume I, Section 5.0 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events that have affected the County and its municipalities. For the purpose of this plan update, events that have occurred in the County from 2008 to present were summarized to indicate the range and impact of hazard events in the community.



Information regarding specific damages at the municipal level, is presented in the table below. This summary is based on reference material or local sources. For further details on these and additional events, refer to Volume I, Section 5.0 of this plan.

**Table 9.18-1. Hazard Event History**

Date(s) of Event	Event Type	FEMA Declaration # (If Applicable)	County Designated?	Summary of Damages/Losses
February 12-13, 2008	Winter Storm	N/A	N/A	Snow removal, roadway salting & sanding; DPW overtime.
March 5, 2008	Strong Wind	N/A	N/A	Debris removal, roadway closures.
October 28, 2008	Heavy Snow and Strong Winds	N/A	N/A	Snow removal, debris removal, roadway salting & sanding; DPW overtime.
February 12, 2009	High Wind	N/A	N/A	Debris removal, roadway closures.
May 24, 2009	Lightning	N/A	N/A	Debris removal, roadway closures.
February 1-2, 2011	Winter Storm	N/A	N/A	Snow removal, roadway salting & sanding; DPW overtime.
March 11-12, 2011	Heavy Rain and Flooding	N/A	N/A	Catch basin cleanouts, washout repair; DPW overtime.
August 26 – September 5, 2011	Hurricane Irene	DR-4021	Yes	This storm downed trees in the Township, closing public thoroughfares and causing power outages. Roadways were damaged in the community and included Jonestown Road, Academy Street, Mine Hill Road, Port Colden Road, James Burns Drive, and Belvidere Avenue. The walkway along Academy Street was also damaged. Several residential properties were damaged as well. The DPW had overtime costs which included debris removal.
September 28 – October 6, 2011	Remnants of Tropical Storm Lee	DR-4039	Yes	Catch basin cleanouts, washout repair, debris removal; DPW overtime. The firehouse was opened to the public for warming and personal electronics charging. There were power outages in the Township.
October 29, 2011	Severe Storm	DR-4048	Yes	Snow removal, catch basin cleanouts, washout repair, debris removal; DPW overtime.
October 26 – November 8, 2012	Hurricane Sandy	DR-4086	Yes	Road closures up to 12 days, roadway and public access-way damage, snow & ice removal, salting & sanding, roadway closure & diversion; DPW overtime. Restoration projects costs. The Township opened the fire house to the public for warming and a place to recharge electronics. Power outages lasted up to 12 days.
September 12, 2013	Heavy Rain and Flash Flooding	N/A	N/A	Catch basin cleanouts, washout repair; DPW overtime.

### 9.18.4 Hazard Vulnerabilities and Ranking

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. The risk ranking methodology is presented in Section 5.3. However, each municipality had the opportunity to adjust the final ranking based on municipal feedback. The following summarizes the hazard vulnerabilities and their ranking in the Township of Oxford. For additional vulnerability information relevant to this jurisdiction, refer to Section 5.0.





### Hazard Risk/Vulnerability Risk Ranking

The table below summarizes the hazard risk/vulnerability rankings of potential hazards for the Township of Oxford.

**Table 9.23-1. Hazard Risk/Vulnerability Risk Ranking**

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard <sup>a, c</sup>	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking <sup>b</sup>
Dam Failure	Damage estimate not available	Occasional	24	Medium
Drought	Damage estimate not available	Frequent	30	Medium
Earthquake	100-Year GBS: \$0 500-Year GBS: \$93,083 2,500-Year GBS: \$1,477,724	Occasional	28	Medium
Flood	1% Annual Chance: \$6,795,230	Frequent	18	Medium
Geologic	RCV Exposed to Carbonate Rock Areas: \$112,268,040	Occasional	32	High
Hurricane	100-year MRP: \$81,506.00 500-year MRP: 575695 Annualized: \$6,207.00	Frequent	48	High
Nor'Easter	Damage estimate not available	Frequent	48	High
Severe Storm	100-Year MRP: \$81,506 500-year MRP: \$575,695 Annualized: \$6,207	Frequent	48	High
Severe Winter Storm	1% GBS: \$1,482,639 5% GBS: \$7,413,194	Frequent	51	High
Wildfire	Estimated Value in the Extreme, Very High, and High Hazard Areas: \$2,642,576	Frequent	24	Medium
Hazardous Materials	Damage estimate not available	Frequent	36	High

**Notes:**

GBS = General building stock; MRP = Mean return period.

- a. The general building stock valuation is based on the custom inventory generated for the municipality and based on improved value.
- b. High = Total hazard priority risk ranking score of 31 and above  
Medium = Total hazard priority risk ranking of 20-30+  
Low = Total hazard risk ranking below 20
- c. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the estimated value of contents. Loss estimates for the flood and earthquake hazards represent both structure and contents. Potential flood loss estimates were generated using Hazus-MH 2.2 and the 2011 FEMA DFIRM for the 1-percent annual chance event. For the geologic and wildfire hazards, the improved value and estimated contents of buildings located within the identified hazard zones is provided.



### National Flood Insurance Program (NFIP) Summary

The following table summarizes the NFIP statistics for the Township of Oxford.

Table 9.18-3. NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Flood Boundary (3)
Oxford, Township of	7	0	\$0	0	0	4

Source: FEMA Region 2, 2014

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, and are current as of 11/30/2014. Please note the total number of repetitive loss properties includes the severe repetitive loss properties. The number of claims represents claims closed by 11/30/14.
- (2) Total building and content losses from the claims file provided by FEMA Region 2.
- (3) The policies inside and outside of the flood zones is based on the latitude and longitude provided by FEMA Region 2 in the policy file.

Notes: FEMA noted that where there is more than one entry for a property, there may be more than one policy in force or more than one GIS possibility.  
 A zero percentage denotes less than 1/100th percentage and not zero damages or vulnerability as may be the case.  
 Number of policies and claims and claims total exclude properties located outside County boundary, based on provided latitude and longitude.

### Critical Facilities

There are no critical facilities located in the FEMA 1% or 0.2% annual chance boundary.

### Other Vulnerabilities Identified by Municipality

The hazard profiles in Section 5.0 of this plan have detailed information regarding each plan participant’s vulnerability to the identified hazards. Further, mitigation projects have been identified that may more specifically detail vulnerabilities in the community. There are no additional vulnerabilities identified at this time.



### 9.18.5 Capability Assessment

This section identifies the following capabilities of the local jurisdiction:

- Planning and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Education/Outreach and Community classification
- Self-Assessment of Capability
- National Flood Insurance Program
- Integration of Mitigation Planning into Existing and Future Planning Mechanisms

#### Planning and Regulatory Capability

The table below summarizes the regulatory tools that are available to the Township of Oxford.

**Table 9.18-4. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
<b>Planning Capability</b>				
Master Plan	Yes, 2000	Local	Land Use Board	Master Plan, Elements include Highlands
Capital Improvements Plan	Yes			Municipal Budget
Floodplain Management / Basin Plan	No			
Stormwater Management Plan	No			
Open Space Plan	Yes	Local	Land Use Board	
Stream Corridor Management Plan	No			
Watershed Management or Protection Plan	Yes	State		
Economic Development Plan	No			
Comprehensive Emergency Management Plan	No	County and Local	OEM	Emergency Operations Plan (EOP)
Emergency Response Plan	No	Local		Emergency Operations Plan (EOP)
Post-Disaster Recovery Plan	No			
Transportation Plan	No			
Strategic Recovery Planning Report	No			
Other Plans:				Master Plan Highlands Element
<b>Regulatory Capability</b>				
Building Code	Yes	State & Local		State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.)
Zoning Ordinance	Yes	Local	Zoning	Chapter 340 - Zoning
Subdivision Ordinance	Yes	Local	Zoning	Chapter 298 – Subdivision of Land
NFIP Flood Damage Prevention Ordinance	Yes	Federal, State, Local	Zoning	Chapter 188 – Flood Damage Prevention



**Table 9.18-4. Planning and Regulatory Tools**

Tool / Program (code, ordinance, plan)	Do you have this? (Yes/No) If Yes, date of adoption or update	Authority (local, county, state, federal)	Dept. /Agency Responsible	Code Citation and Comments (Code Chapter, name of plan, explanation of authority, etc.)
NFIP: Cumulative Substantial Damages	No			
NFIP: Freeboard	Yes	State, Local	Zoning	N.J.A.C 7:13 Flood Hazard Area Control Act
Growth Management Ordinances	Yes	Local	Land Use Board	
Site Plan Review Requirements	Yes	Local		Chapter 265 – Site Plan Review
Stormwater Management Ordinance	Yes	Local	DPW	Chapter 285 – Stormwater Management
Municipal Separate Storm Sewer System (MS4)	Yes			
Natural Hazard Ordinance	No			
Post-Disaster Recovery Ordinance	No			
Real Estate Disclosure Requirement	Yes	State	Division of Consumer Affairs	N.J.A.C. 13:45A-29.1
Other [Special Purpose Ordinances (i.e., sensitive areas, steep slope)]				Highland Area Land Use Ordinance

**Administrative and Technical Capability**

The table below summarizes potential staff and personnel resources available to the Township of Oxford.

**Table 9.18-5. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
<b>Administrative Capability</b>		
Planning Board	Yes	Land Use Board
Mitigation Planning Committee	No	
Environmental Board/Commission	No	
Open Space Board/Committee	No	
Economic Development Commission/Committee	Yes	Township Committee
Maintenance Programs to Reduce Risk	No	
Mutual Aid Agreements	No	
<b>Technical/Staffing Capability</b>		
Planner(s) or Engineer(s) with knowledge of land development and land management practices	Yes	Contractor, Finelli Consulting Engineers, Inc.
Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Contractor, Finelli Consulting Engineers, Inc.
Planners or engineers with an understanding of natural hazards	Yes	Contractor, Finelli Consulting Engineers, Inc.





**Table 9.18-5. Administrative and Technical Capabilities**

Resources	Is this in place? (Yes or No)	Department/ Agency/Position
NFIP Floodplain Administrator	Yes*	Zoning Officer as per Chapter 188 of Township Code
Surveyor(s)	Yes	Local
Personnel skilled or trained in GIS and/or Hazus-MH applications	Yes	Local
Scientist familiar with natural hazards	No	
Emergency Manager	Yes	Emergency Management Coordinator
Grant Writer(s)	Yes	Local
Staff with expertise or training in benefit/cost analysis	Yes	Local
Professionals trained in conducting damage assessments	Yes	Local

**Fiscal Capability**

The table below summarizes financial resources available to the Township of Oxford.

**Table 9.18-6. Fiscal Capabilities**

Financial Resources	Accessible or Eligible to Use (Yes/No/Don't Know)
Community development Block Grants (CDBG, CDBG-DR)	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for specific purposes	Yes
User fees for water, sewer, gas or electric service	No
Impact Fees for homebuyers or developers of new development/ homes	No
Stormwater Utility Fee	No
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activity bonds	No
Withhold public expenditures in hazard-prone areas	Yes
Other Federal or State Funding Programs	Yes
Open Space Acquisition Funding Programs	Yes
Other	

**Education/Outreach and Community Classifications**

The table below summarizes education/outreach programs the community participates in and the classifications for community program available to the Township of Oxford.

**Table 9.18-7. Education/Outreach and Community Classifications**

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Community Rating System (CRS)	No	NP	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No		
Public Protection (ISO Fire Protection Classes 1 to 10)	Yes		



**Table 9.18-7. Education/Outreach and Community Classifications**

Program	Do you have/participate in this? (Yes/No)	Classification (if applicable)	Date Classified (if applicable)
Storm Ready	No	NP	N/A
Firewise	No	NP	N/A
Disaster/Safety Programs in/for Schools	Yes		
Organizations with Mitigation Focus (advocacy group, non-government)	Yes	Preparedness, Recovery LEPC, Young At Hearts	
Public Education Program/Outreach (through website, social media)	Y		
Public-Private Partnerships	No		

N/A = Not applicable. NP = Not participating

The classifications listed above relate to the community’s ability to provide effective services to lessen its vulnerability to the hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class 1 being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

- The Community Rating System Coordinators Manual
- The Building Code Effectiveness Grading Schedule
- The ISO Mitigation online ISO’s Public Protection website at <http://www.isomitigation.com/ppc/0000/ppc0001.html>
- The National Weather Service Storm Ready website at <http://www.weather.gov/stormready/howto.htm>
- The National Firewise Communities website at <http://firewise.org/>

**Self-Assessment of Capability**

The table below provides an approximate measure of the Township of Oxford’s capability to work in a hazard-mitigation capacity and/or effectively implement hazard mitigation strategies to reduce hazard vulnerabilities.

**Table 9.18-8. Self-Assessment of Capability**

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Planning and Regulatory Capability			X
Administrative and Technical Capability		X	
Fiscal Capability		X	
Community Political Capability		X	
Community Resiliency Capability			X





Table 9.18-8. Self-Assessment of Capability

Area	Degree of Hazard Mitigation Capability		
	Limited (If limited, what are your obstacles?)	Moderate	High
Capability to Integrate Mitigation into Municipal Processes and Activities.		X	

National Flood Insurance Program

NFIP Floodplain Administrator (FPA)

Michael S. Finelli, P.E.

Flood Vulnerability Summary

The Township does not formally maintain lists/inventories of properties that have been damaged by floods. During Sandy and other recent events, structures within the community did not sustain damage. The FPA makes Substantial Damage estimates; however, there were none declared for Irene/Lee or Sandy. There is currently no interest in mitigation (acquisition or elevation) in the Township. If there was interest, funding would be provided by the property owner and/or flood insurance.

Resources

The FPA indicated that he is not the sole person assuming the roles and responsibilities of floodplain administration; there is balance of technical staff in the office. NFIP administration services and functions provided by the FPA and his department includes permit review, inspections, damage assessments and GIS. Education and outreach provided to the Township includes stormwater management brochures and public meeting presentations. The FPA stated that is currently no barriers to running an effective floodplain management program and that he feels adequately supported and trained to fulfill his role as the municipal floodplain administrator. The FPA would consider attending continuing education and/or certification training on floodplain management if it were offered in the County.

Compliance History

The Township is currently in good standing with the NFIP and the last compliance audit was conducted in spring 2015.

Regulatory

The Township's floodplain management regulations/ordinances meet the minimum requirements set by FEMA and the State of New Jersey. The Township also has local ordinances, plans and programs that support floodplain management within the community. The planning and zoning boards consider efforts to reduce flood risk when reviewing variances.

Community Rating System

The Township of Oxford does not participate in the Community Rating System (CRS) program; however, the Township has considered joining CRS and would attend a CRS seminar if offered locally.





## Integration of Hazard Mitigation into Existing and Future Planning Mechanisms

For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, each community was surveyed to obtain a better understanding of their community's progress in plan integration. A summary is provided below. In addition, the community identified specific integration activities that will be incorporated into municipal procedures.

### Planning

The 2000 Master Plan places a priority on the preservation and protection of natural systems and environmentally sensitive areas. Overall goals include recognizing environmentally sensitive areas and promote their preservation, expand and maintain local parks and recreational areas, and preserve, enhance and protect existing farmland properties. Conservation goals include protecting steep slopes and stream corridors, encouraging cluster development and use of conservation easements and establishing a farmland preservation advisory committee to create guideless for farmland preservation. Hazard risk/mitigation is incorporated into the Master Plan, as well as safe growth practices.

Oxford Township in Warren County has 2,206 acres in the Preservation Area and 1,672 in the Planning Area of the Highlands Region. The municipality submitted a Petition for Plan Conformance for both areas, which was approved by the Highlands Council on August 3, 2011. The goals of the 2011 Highlands Master Plan Element include to protect, restore and enhance the quality and quantity of surface and groundwater, to preserve extensive and contiguous areas of land in its natural state, to promote the conservation of water resource, and to promote brownfield remediation and redevelopment if possible. Many objectives are aimed to protect forest resources, open water and riparian areas, steep slopes, critical habitats, water resources and prime groundwater recharge areas. The Plan proposes to prohibit certain land uses in these areas, and in addition to land located above carbonate bedrock. The 2011 Highlands Environmentally Resource Inventory identifies the location and extent of these natural resources and environmentally sensitive areas within the Township.

### Regulatory and Enforcement (Ordinances)

The Township has multiple ordinances pertaining to the mitigation of hazards. These ordinances include the NFIP Flood Damage Prevention Ordinance, a stormwater management ordinance, a soil removal ordinance and a soil conservation and protection ordinance. When updating the ordinances for the Township, hazard mitigation is and will be a priority.

**Chapter 51, Article 4: Land Use Procedures:** Applications for Development in Highlands Region: No application for development (as defined pursuant to the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.) involving property located in the municipality, for which application submission requirements apply under this article, shall be deemed complete or considered for review by the Township Land Use Board until and unless the applicant has obtained and provided a copy of: (a) A consistency determination from the Highlands Council indicating that the application is consistent with the Highlands Regional Master Plan; or (b) A consistency determination from the Highlands Council indicating that the application is not consistent with the Highlands Regional Master Plan, accompanied by a certification, as detailed in § 51-24 below, by the applicant's professional(s) that the application has been revised since review by the Highlands Council to achieve consistency with the Highlands Regional Master Plan.

**Chapter 188: Flood Damage Prevention** - It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:



- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood-control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- F. Help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood-blight areas;
- G. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- H. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

Additionally, the Township encourages consideration of low occupancy, low-density zoning in hazard areas; limits development in high hazard areas; address hazards during the permit review process; incorporates hazard resistant construction standards into the design and location of projects; and recognizes hazard areas as limits on zoning changes during rezoning procedures. The Township also reviews the hazard mitigation plan prior to land use, zoning changes or development permitting to ensure consistent and compatible land use.

### Funding

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The Township's capital improvement budget does not currently include a line item for mitigation projects; however, the Township has provided protection to buildings/infrastructure in high hazard areas.

### Education and Outreach

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The Township has a public outreach program that informs citizens on hazards that may impact the community. The Township offers training on grant applications, hazard identification and other programs related to hazard mitigation.

The Township reaches out to colleges and universities for technical assistance with natural hazard mitigation activities. Additionally, the Township works closely with the local school district and assist with community service projects.



### 9.18.6 Mitigation Strategy and Prioritization

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This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and prioritization.

#### Past Mitigation Initiative Status

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The following table indicates progress on the community's mitigation strategy identified in the 2011 Plan. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and may also be found under 'Capability Assessment' presented previously in this annex.

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Table 9.18-9. Past Mitigation Initiative Status

2011 Mitigation Action	Responsible Agency	Status (In progress, No progress, Complete)	<u>Describe Status</u> 1. Please describe what was accomplished and indicate % complete. 2. If there was no progress, indicate what obstacles/delays encountered? 3. If there was progress, how is/was the action being funded (e.g., FEMA HMGP grant, local budget)?	<u>Next Step</u> (Include in 2016 HMP? or Discontinue)	<u>Describe Next Step</u> 1. If including action in the 2016 HMP, revise/reword to be more specific (as appropriate). 2. If discontinue, explain why
Back-up generator for Emergency Operations Center located at the Municipal Building/ EOC/ primary warming center	OEM Coordinator	No Progress	1. Engineering requirements identified 2. No direct funding currently exists for this project. 3. Alternative and grant funding being sought.	Include in 2016 HMP	1. Secure funding source 2. Bid project for implementation
Retrofit foundation pilings on Emergency Squad building located on Academy Street.	Twp Engineer	No Progress	Due to funding constraints, this project has not been completed.	Include in 2016 HMP	Retrofit foundation pilings on Emergency Squad building located on Academy Street.
Construction of an earth berm around the lift station to prevent flooding located on Pequest Road at Shippen Ridge.	Twp Engineer	No Progress	Due to funding constraints, this project has not been completed.	Include in 2016 HMP	Construct a diversionary berm around lift station to hold back flooding rain water to 100 year flood level.
Implement Fire Wise program throughout the Township.	OEM Coordinator	In Progress	1. Identify and monitor relevant project sites. 2. Establish agreements with partners	Include in 2016 HMP	1. Tailor outreach programs for clients 2. Establish protocols for delivery of program to subject clients
Conduct all hazards public education and outreach program for hazard mitigation and preparedness.	WCOEM, OEM Coordinator	In Progress	1. Identify and monitor relevant project sites. 2. Establish agreements with partners	Include in 2016 HMP	1. Tailor outreach programs 2. Establish protocols for delivery of program to subject clients
Back-up generator for Primary Evacuation Center located at the oxford Central School.	OEM, Oxford BOE	No Progress	0% Complete	Include in 2016 HMP	1. Establish project requirements 2. Secure funding
Back-up generator for Primary Evacuation Center located at the oxford Central School.	DPW, OEM	No Progress	Project requirements established	Include in 2016 HMP	1 Secure funding





### **Completed Mitigation Initiatives not Identified in the Previous Mitigation Strategy**

There are no additional mitigation projects/activities identified that have also been completed but were not identified in the previous mitigation strategy in the 2011 Plan.

### **Proposed Hazard Mitigation Initiatives for the Plan Update**

The County hosted a mitigation action workshop in March 2015 where the following FEMA publications were provided to all plan participants to use as a resource as part of the municipal comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 'Selecting Appropriate Mitigation Measures for Floodprone Structures' (March 2007) and FEMA 'Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards' (January 2013).

Table 9.18-10 summarizes the comprehensive-range of specific mitigation initiatives the Borough would like to pursue in the future to reduce the effects of hazards. Some of these initiatives may be previous actions carried forward for this plan update. These initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the four FEMA mitigation action categories and the six CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6, 14 evaluation/prioritization criteria are used to complete the prioritization of mitigation initiatives. For each new mitigation action, a numeric rank is assigned (-1, 0, or 1) for each of the 14 evaluation criteria to assist with prioritizing your actions as 'High', 'Medium', or 'Low.' Table 9.18-11 provides a summary of the prioritization of all proposed mitigation initiatives for the Plan update.



**Table 9.18-10. Proposed Hazard Mitigation Initiatives**

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category	CRS Category
Oxford Twp-1	Purchase and install generators at the following critical facilities in the Township: <ul style="list-style-type: none"> <li>Emergency Operations Center located at the Municipal Building/ EOC/ primary warming center</li> <li>Primary Evacuation Center located at the oxford Central School.</li> </ul>	Existing	All	1, 2, 5, 6	Township and OEM	Medium	Medium	HMGP with local cost share; municipal budget; corporate sponsorship	Short Term	High	SIP	PP
Oxford Twp-2	Retrofit foundation pilings on Emergency Squad building located on Academy Street.	Existing	Severe Weather, Flood	1, 2, 5, 6	Emergency Squad	Medium	High	Grant funding with local cost share; local budget	Long Term	Medium	SIP	PP
Oxford Twp-3	Construction of an earth berm around the lift station to prevent flooding located on Pequest Road at Shippen Ridge.	Existing	Flood, Severe Weather	1, 2, 3, 5, 6	DPW	High	Medium	Municipal Budget	Short Term	High	SIP	PP
Oxford Twp-4	Implement Fire Wise program throughout the Township.	New and Existing	Wildfire	All	Fire Department and OEM	High	Low	Municipal Budget; Grants where available	Ongoing	High	EAP	PI
Oxford Twp-5	Conduct all hazards public education and outreach program for hazard mitigation and preparedness. Continue and expand LEPC.	Existing	All	All	OEM	High	Low	Municipal Budget; Grants where available	Ongoing	High	EAP	PI
Oxford Twp-6	Incorporate a line item for hazard mitigation project funding in the municipal/operating budget and capital improvement budget. Providing funding for mitigation projects.	New and Existing	All	All	Township Administration	Medium	Low	Municipal Budget	Short Term / DOF	Medium	LPR	PR

**Notes:**

Not all acronyms and abbreviations defined below are included in the table.

\*Does this mitigation initiative reduce the effects of hazards on new and/or existing buildings and/or infrastructure? Not applicable (N/A) is inserted if this does not apply.

Acronyms and Abbreviations:





CRS Community Rating System  
 DPW Department of Public Works  
 FEMA Federal Emergency Management Agency  
 FPA Floodplain Administrator  
 HMA Hazard Mitigation Assistance

N/A Not applicable  
 NFIP National Flood Insurance Program  
 NJDEP New Jersey Department of Environmental Protection  
 NJOEM New Jersey Office of Emergency Management  
 OEM Office of Emergency Management

Potential FEMA HMA Funding Sources:

FMA Flood Mitigation Assistance Grant Program  
 HMGP Hazard Mitigation Grant Program  
 PDM Pre-Disaster Mitigation Grant Program  
 HMA Hazard Mitigation Assistance Program

Timeline:

Short 1 to 5 years  
 Long Term 5 years or greater  
 OG On-going program  
 DOF Depending on funding

Costs:

Where actual project costs have been reasonably estimated:

Low < \$10,000  
 Medium \$10,000 to \$100,000  
 High > \$100,000

Where actual project costs cannot reasonably be established at this time:

Low Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.  
 Medium Could budget for under existing work plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.  
 High Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

Where possible, an estimate of project benefits (per FEMA's benefit calculation methodology) has been evaluated against the project costs, and is presented as:

Low= < \$10,000  
 Medium \$10,000 to \$100,000  
 High > \$100,000

Where numerical project benefits cannot reasonably be established at this time:

Low Long-term benefits of the project are difficult to quantify in the short term.  
 Medium Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.  
 High Project will have an immediate impact on the reduction of risk exposure to life and property.

Mitigation Category:

- Local Plans and Regulations (LPR) – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- Structure and Infrastructure Project (SIP)- These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- Natural Systems Protection (NSP) – These are actions that minimize damage and losses, and also preserve or restore the functions of natural systems.
- Education and Awareness Programs (EAP) – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities

CRS Category:

- Preventative Measures (PR) - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- Property Protection (PP) - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- Public Information (PI) - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- Natural Resource Protection (NR) - Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- Structural Flood Control Projects (SP) - Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.





- *Emergency Services (ES) - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities*

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Table 9.18-11. Summary of Prioritization of Actions

Mitigation Action / Project Number	Mitigation Action/Initiative	Life Safety	Property Protection	Cost-Effectiveness	Technical	Political	Legal	Fiscal	Environmental	Social	Administrative	Multi-Hazard	Timeline	Agency Champion	Other Community Objectives	Total	High / Medium / Low
Oxford Twp-1	Support continuity of operations at critical facilities. The following projects are identified at this time: Purchase and install generators at the following critical facilities in the Township: <ul style="list-style-type: none"> <li>Emergency Operations Center located at the Municipal Building/ EOC/ primary warming center</li> <li>Primary Evacuation Center located at the oxford Central School.</li> </ul>	0	1	1	1	0	1	-1	0	0	1	1	1	1	1	8	High
Oxford Twp-2	Retrofit foundation pilings on Emergency Squad building located on Academy Street.	1	0	1	0	1	1	-1	0	0	1	0	0	0	0	4	Medium
Oxford Twp-3	Construction of an earth berm around the lift station to prevent flooding located on Pequest Road at Shippen Ridge.	0	1	1	1	1	1	1	0	0	1	0	1	1	1	10	High
Oxford Twp-4	Implement Fire Wise program throughout the Township.	1	1	1	1	1	1	1	1	1	1	1	1	1	0	13	High
Oxford Twp-5	Conduct all hazards public education and outreach program for hazard mitigation and preparedness. Continue and expand LEPC.	1	1	1	1	1	1	1	0	0	1	1	1	0	1	11	High
Oxford Twp-6	Incorporate a line item for hazard mitigation project funding in the municipal/operating budget and capital improvement budget. Providing funding for mitigation projects.	1	1	1	1	0	0	0	1	0	1	1	1	0	0	8	Medium

Note: Refer to Section 6 which contains the guidance on conducting the prioritization of mitigation actions.





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### **9.18.7 Future Needs To Better Understand Risk/Vulnerability**

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None at this time.

### **9.18.8 Hazard Area Extent and Location**

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Hazard area extent and location maps have been generated for the Township of Oxford that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the Township of Oxford has significant exposure. These maps are illustrated in the hazard profiles within Section 5.4, Volume I of this Plan.

### **9.18.9 Additional Comments**

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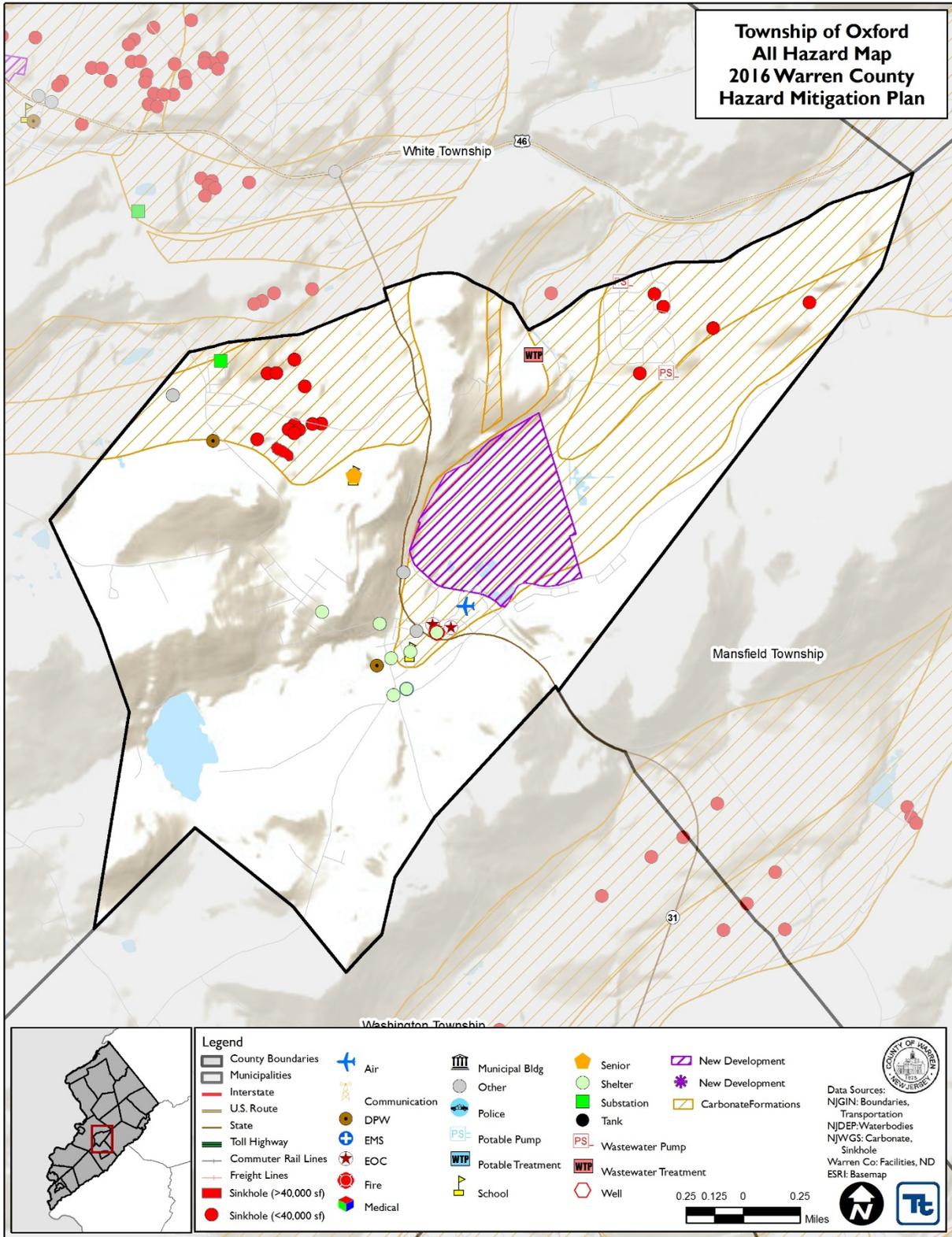
None at this time.

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Figure 9.18-2. Township of Oxford Hazard Area Extent and Location Map 2





<b>Action Number:</b>	Oxford Twp-1
<b>Mitigation Action/Initiative:</b>	Support continuity of operations at critical facilities – purchase a back-up generator for critical facilities in the Township

Assessing the Risk	
<b>Hazard(s) addressed:</b>	All hazards
<b>Specific problem being mitigated:</b>	Loss of power to EOC, PWC and County-wide radio repeater. EOC, PWC and Radio tower have no secondary source of electrical power. The Oxford Central School is the primary evacuation center for the Township.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Install backup generator for electrical power
	2. Do nothing – current problem continues
	3. No other feasible options were identified
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Support continuity of operations at critical facilities – purchase and install backup generators for the EOC and the Oxford Central School.
<b>Action/Project Category</b>	SIP
<b>Goals Met</b>	1, 2, 5, 6
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Loss of function
<b>Estimated Cost</b>	Medium to High
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	Township, OEM and BOE
<b>Local Planning Mechanism</b>	Emergency Operations, Capital Improvement, School Budget
<b>Potential Funding Sources</b>	Municipal Budget; HMGP with local cost share
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 06/02/2015 Progress on Action/Project: 10% complete – seeking funding sources.



**Action Number:** Oxford Twp-1

**Mitigation Action/Initiative:** Support continuity of operations at critical facilities – purchase a back-up generator for critical facilities in the Township

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	1	Provide a shelter for those impacted by power outages
Property Protection	1	Allow Township buildings to function during power outages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	0	
Environmental	0	
Social	1	
Administrative	1	
Multi-Hazard	1	All hazards
Timeline	1	Short Term
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	11	
<b>Priority (High/Med/Low)</b>	High	



<b>Action Number:</b>	Oxford Twp-2
<b>Mitigation Action/Initiative:</b>	Retrofit foundation pilings on Emergency Squad building located on Academy Street.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	First Aid Squad building foundation deterioration.
<b>Specific problem being mitigated:</b>	Structural integrity of the building foundation is insufficient to bear the weight of heavier modern ambulances Foundation has been damaged due to excessive strain.
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Shore up foundation to withstand heavier loads.
	2. Re-locate First Aid Squad elsewhere in the Twp.
	3. Do nothing – current problem continues
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Shore up foundation to withstand heavier loads.
<b>Action/Project Category</b>	SIP
<b>Goals Met</b>	1, 2, 5, 6
<b>Applies to existing and or new development, or not applicable</b>	Existing
<b>Benefits (losses avoided)</b>	Loss of function
<b>Estimated Cost</b>	High
<b>Priority*</b>	Medium
Plan for Implementation	
<b>Responsible Organization</b>	Oxford Emergency Squad
<b>Local Planning Mechanism</b>	Capital Improvement
<b>Potential Funding Sources</b>	Internal; Grant funding with self-share; local
<b>Timeline for Completion</b>	Long Term
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 06/02/2015 Progress on Action/Project: 0% Complete



**Action Number:** Oxford Twp-2  
**Mitigation Action/Initiative:** Retrofit foundation pilings on Emergency Squad building located on Academy Street.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Be able to withstand heavier loads
Cost-Effectiveness	1	
Technical	0	
Political	1	
Legal	1	
Fiscal	-1	
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	0	
Agency Champion	0	
Other Community Objectives	0	
<b>Total</b>	4	
<b>Priority (High/Med/Low)</b>	Med	



<b>Action Number:</b>	Oxford Twp-3
<b>Mitigation Action/Initiative:</b>	Construction of an earth berm around the lift station to prevent flooding located on Pequest Road at Shippen Ridge.

Assessing the Risk	
<b>Hazard(s) addressed:</b>	Flood, Severe Weather
<b>Specific problem being mitigated:</b>	Flooding of pump station due to weather events. Prevent water intrusion to sanitary pump station
Evaluation of Potential Actions/Projects	
<b>Actions/Projects Considered (name of project and reason for not selecting):</b>	1. Construct diversionary berm
	2. Waterproof existing facility
	3. Shut down lift station during rain events
Action/Project Intended for Implementation	
<b>Description of Selected Action/Project</b>	Construct a diversionary berm around lift station to hold back flooding rain water to 100 year flood level.
<b>Action/Project Category</b>	SIP
<b>Goals Met</b>	1, 2, 3, 5, 6
<b>Applies to existing and or new development, or not applicable</b>	New
<b>Benefits (losses avoided)</b>	Loss of function; Cost of throughput
<b>Estimated Cost</b>	Medium
<b>Priority*</b>	High
Plan for Implementation	
<b>Responsible Organization</b>	DPW / Engineer
<b>Local Planning Mechanism</b>	Stormwater Management; Capital Improvement
<b>Potential Funding Sources</b>	Local
<b>Timeline for Completion</b>	Short
Reporting on Progress	
<b>Date of Status Report/ Report of Progress</b>	Date: 06/02/2015 Progress on Action/Project: 10% Complete



**Action Number:** Oxford Twp-3

**Mitigation Action/Initiative:** Construction of an earth berm around the lift station to prevent flooding located on Pequest Road at Shippen Ridge.

Criteria	Numeric Rank (-1, 0, 1)	Provide brief rationale for numeric rank when appropriate
Life Safety	0	
Property Protection	1	Protect lift station from flooding and damages
Cost-Effectiveness	1	
Technical	1	
Political	1	
Legal	1	
Fiscal	1	Township will fund with municipal budget
Environmental	0	
Social	0	
Administrative	1	
Multi-Hazard	0	
Timeline	1	
Agency Champion	1	
Other Community Objectives	1	
<b>Total</b>	10	
<b>Priority (High/Med/Low)</b>	High	