

JURISDICTIONAL ANNEX 1.2.15: TOWN OF OLIVE

| Please fill in the contact details for the person filling in this page: | | WORKSHEET 1 |
|---|--|-------------|
| Name: | Sylvia Rozzelle | |
| Title: | Supervisor | |
| Representing: | Olive, Town of | |
| Email: | olivesupervisor@hvc.rr.com | |
| Phone: | 845-657-8118 X 4 | |

| Local Jurisdiction Role/Position | Name | Email | Phone | Date Notified About Mitigation Plan Development Process | Agreed to participate? (Yes/No) |
|---|-----------------------------------|--|------------------|---|---------------------------------|
| Land Use/Community Planner | Drew Boggess | bogevalb@yahoo.com | 657-9735 | 1/1/2014 | yes |
| Emergency Manager | Sylvia Rozzelle, Supervisor | olivesupervisor@hvc.rr.com | 657-8118 | 11/2/2013 | yes |
| Floodplain Manager/ Floodplain Administrator | Dominick Covello & John Ingram | olivebuildingdept@gmail.com | 845-657-2015 | 11/13/2013 | yes |
| Public Works Director / City Engineer | Jimmy Fugel, Hwy Supt. | olivehighway@hvc.rr.com | 845-657-8809 x21 | 11/16/2013 | yes |
| Building Code Official | Dominick Covello | olivebuildingdept@gmail.com | 845-657-2015 | 11/13/2013 | yes |
| Fiscal/Budget Officer | Sylvia Rozzelle/Janice Lanzarotta | olivesupervisor@hvc.rr.com | 845-657-8118 | 11/2/2013 | yes |
| Manager/Administrator | Sylvia Rozzelle, Supervisor | olivesupervisor@hvc.rr.com | 845-657-8809 | 11/16/2013 | yes |
| Elected Officials | Peter Friedel | ptriedeltownofolive@gmail.com | 845-657-9395 | 1/1/2014 | yes |
| Other 1: | Scott Kelder | skeldertownofolive@gmail.com | 845-657-6727 | 1/1/2014 | yes |
| Other 2: | Jim Sofranko | jimsofrankotownofolive@gmail.com | 845-657-2099 | 1/1/2014 | yes |
| Other 3: | Donnie VanBuren | dvanburentownofolive@gmail.com | 845-657-8106 | 1/1/2014 | yes |

Name: Dom CouelloTitle: Floodplain Manager/Floodplain Administrator/NFIP CoordinatorRepresenting: Town of OliveEmail and Phone: 845-657-2015

Ulster County Multi-Jurisdictional Hazard Mitigation Plan Update - Worksheet #2

Note: This form should be filled out by your floodplain administrator. All communities participating in the National Flood Insurance Program (NFIP) provided FEMA with a floodplain management ordinance and a designated floodplain administrator as a prerequisite to enter the program. All communities are listed in FEMA's Community Status Book of participating communities (08/15/13).

| Adoption Date of your Current Floodplain Management Ordinance | Date of Entry into NFIP ¹ | Position or Title of Your Jurisdiction's Designated Floodplain Manager/Administrator (may also be called NFIP Coordinator) | Is this person is a Certified Floodplain Manager? | Is floodplain management an auxiliary function? | Is your community in good standing with the NFIP? |
|--|---|--|---|---|--|
| 1987 | 11/1/1984 | Building Inspector | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Provide an explanation of NFIP administration services (i.e., permit review, GIS, education or outreach, inspections, engineering capability, etc.): | | | | | |
| NYS Certified Building Inspector for 38 years. Building Inspector for Town of Olive since 1985. | | | | | |
| Describe barriers to running an effective NFIP program in the community (if applicable): | | | | | |
| Cost of implementing program is biggest challenge due to NYS 2% cap on local governments. | | | | | |
| When was most recent FEMA Community Assistance Visit (CAV) or Community Contact (CAC)?* | Is a CAV or CAC scheduled or needed? | Does the current floodplain management ordinance exceed FEMA or State minimum requirements? If so, describe how. | Is training of staff regarding NFIP issues planned? | Does your community intend to enforce the floodplain management requirements including regulating new construction in Special Flood Hazard Areas (SFHAs)? | Does your community intend to continue its participation in the CRS program, are you intending to initiate the process during the next planning cycle? |
| Pos + Irene | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| *Describe any outstanding compliance issues (i.e., current violations): | | | | | |

¹ Your date of entry into the NFIP can be found at: <http://www.fema.gov/cis/NY.html> (column "Reg-Emer Date").

Name: DOM COVELLO

Title: Floodplain Manager/Floodplain Administrator/NFIP Coordinator

Representing: TOWN OF OLIVE

Email and Phone: 845-657-2015



Provide an explanation of your local floodplain permitting process:

Zoning Permit, Building Permit, on site inspections, Certificate of Elevation, Review of Flood plain Maps.

| | | | | | | | | |
|---|---|---|---|---|---|---|--|---|
| Does your community intend to continue floodplain identification and mapping services including any local requests for map updates? | Does your community intend to continue floodplain identification and mapping services including any local requests for map updates? | Does your community intend to commit staff or resources to improve local mapping or code administration in the future? But, depends on funding. | Does your community intend to provide local outreach to promote the sale of flood insurance? | Does your community intend to participate in RiskMAP meetings and planning initiatives? | Does your community intend to continue to implement structural improvements to mitigate against flooding - culverts, drainage basins, etc.? | Does your community intend to continue to implement home improvement programs designed to minimize basement flooding? | Does your community intend to continue to implement improvements to reduce damage from future flooding events? | Does your community intend to implement plans and programs in coordination with a local or regional drainage/sewer authority? |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| Does your community intend to adopt the new FEMA Advisory Base Flood Elevations? | As Floodplain Manager, did you (or your predecessor at the time) actively participate in the development of the initial Hazard Mitigation Plan? | As Floodplain Manager, are you actively participating in the development of this Hazard Mitigation Plan Update? | Have there been any changes to your community's local floodplain management program since the last version of the plan in 2009? | | | | | |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | |

* If you answered "yes", that there have been changes to your local program since 2009, please describe:

Provide a description of your community assistance and monitoring activities:

Review around town checking for activity.

NFIP participating communities are required to update/revise their floodplain management ordinance to ensure that it complies with the latest FEMA regulations. Will your community continue to commit to this program requirement?

NFIP participating communities are also required to update/revise their floodplain management ordinance to be consistent with the latest FIRMs. Will your community continue to commit to this program requirement?

☒ Yes ☐ No

☒ Yes ☐ No

Note:

NFIP policy statistics by community are maintained at: <http://bsa.nfipstat.fema.gov/reports/1011.htm#NJ>
 NFIP claims data by community is maintained at: <http://bsa.nfipstat.fema.gov/reports/1040.htm#34>

Information about structures at risk of flooding can be found in Section 3 of the Hazard Mitigation Plan.

All NFIP participating communities should encourage local residents to purchase and maintain flood insurance.



Ulster County Multi-Jurisdictional Hazard Mitigation Plan Update
Worksheet #3

Performing an assessment of Land Uses and Development Trends is one step of a FEMA-approved hazard mitigation plan update. This look into the future is important because development in hazard areas could put more assets at risk and, in turn, could work to increase potential disaster-related damages at a time when the mitigation plan's purpose is to reduce the potential for damages emanating from natural disasters. Land uses and development trends are based on the construction of new buildings, demolition of old buildings, or the planning, zoning or subdivision of new areas for development. A stagnant or decreasing population alone is not reason for stating that no development has occurred unless backed up by a lack of development.

An evaluation of land uses and development trends was undertaken by each participating jurisdiction as part of the development of the initial plan. Excerpts from the 2009 Plan's Land Uses and Development Trends section are included in the pages to follow, documenting your community's prior feedback. Please review your community's feedback shown in the table on the pages to follow, and identify any changes that have occurred since that time. Feedback should be returned to URS Project Manager Anna Foley at anna.foley@urs.com. If you have questions or need help, please email Anna or give her a call at 973-883-8562.

Please check box A or B below.

- ☐ A) I certify that I have reviewed my community's feedback from the 2009 Land Uses and Development Trends assessment and that all information previously provided is still current. (If checking box A, then please return only this cover page.)
- ☐ B) I certify that I have reviewed my community's feedback from the 2009 Land Uses and Development Trends assessment and that any information that has changed since that time is clearly shown on the attached markup. Any supporting comments I would like to note are indicated in the lines below. (If checking box B, then please return this completed cover page and any pages with markups.)

☒ OTHER The Town of Olive did not provide feedback
in 2009.

Name: Dom Covello

Title: Building Inspector

Representing: Town of Olive

Email and Phone: 845-657-2015

Town of Olive
Ulster County Multi-Jurisdictional Hazard Mitigation Plan
Worksheet #3

3/19/2014

1. The Town of Olive is comprised of 40,000 acres of which the State of New York owns 8,172 acres and the City of New York owns 10,778. We have very little developable land as the City of New York under the 1997 Memorandum of Agreement has implemented their land acquisition program throughout the watershed—which comprises approximately 75% of the Town of Olive. Recent development has primarily been single family residences, alterations of single family homes, and/or garages and wood stove permits.
2. The Town of Olive adopted Subdivision Regulations in 1965, Zoning Laws in 1975, and entered into the NFIP in November of 1984 with the most current flood law being adopted in 1987.

The Town of Olive did not provide prior feedback in 2009.



Ulster County Multi-Jurisdictional Hazard Mitigation Plan Update

Worksheet #4

Performing a Capability Assessment is one step of a FEMA-approved hazard mitigation plan update. A mitigation planning Capability Assessment consists of taking an in-depth look at community mechanisms (such as plans, codes, ordinances, staffing, etc.) that can affect hazard mitigation activities. Performing the Capability Assessment helps communities identify the regulatory, administrative, technical, and fiscal capacities and capabilities of their jurisdiction and consider ways that these tools can be used to further hazard mitigation and disaster resiliency goals. Capability Assessments were undertaken by each participating jurisdiction as part of the development of the initial plan. Excerpts from the 2009 Plan's Capability Assessment section are included in the pages to follow, documenting your community's prior feedback.

First, review your community's feedback shown in the three tables attached, and clearly provide markups to identify any changes that have occurred since that time. Also, complete the highlighted columns which have been added since the plan was last prepared. Check box A or B. (Note: Municipalities whose rows are blank did not submit responses in 2009, and must do so now.)

- ☐ **A) I certify that I have reviewed my community's feedback from the 2009 Capability Assessment and that all information previously provided is still current. I have also completed new columns, as highlighted in yellow.**
- ☒ **B) I certify that I have reviewed my community's feedback from the 2009 Capability Assessment and that I have updated any information that has changed since that time (as shown on the attached markup). Any supporting comments I would like to note are indicated in the lines below. I have also completed new columns, as highlighted in yellow.**

A Flood Advisory Committee was formed in January 2014 and we are working on a Flood Mitigation Plan for the entire Town of Olive. Completion date approximately mid 2016.

Then, review and answer the supplemental questions on the last page, and check box C.

X C) I have completed responses to the supplemental questions on Page 6.

Completed worksheets should be returned to URS Project Manager Anna Foley at anna.foley@urs.com. If you have questions or need help, please email Anna or give her a call at 973-883-8562.

Name: Sylvia Rozzelle

Title: Supervisor

Representing: Town of Olive

Email and Phone: olivesupervisor@hvc.rr.com 8435-657-8118 X 4

Legal and Regulatory Capability

Table 4-1
Legal and Regulatory Capability Inventory

| Jurisdiction | Building Code | Zoning Ordinance | Subdivision Ordinance | Special Purposes Ordinance | Growth Management Ordinance | Site Plan Review Requirements | Comprehensive Plan | Capital Improvements Plan | Economic Development Plan | Emergency Response Plan | Post-Disaster Recovery Plan | Post-Disaster Recovery Ordinance | Real Estate Disclosure Ordinance | Evacuation Plan |
|------------------------|---------------|------------------|-----------------------|----------------------------|-----------------------------|-------------------------------|--------------------|---------------------------|---------------------------|-------------------------|-----------------------------|----------------------------------|----------------------------------|-----------------|
| Ulster County | | | | | | | √ | √ | √ | √ | | | | |
| Denning, Town of | | | | | | | | | | | | | | |
| Ellenville, Village of | | | | | | | | | | | | | | |
| Esopus, Town of | | | | | | | | | | | | | | |
| Gardiner, Town of | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | | |
| Hardenburgh, Town of | | | | | | | | | | | | | | |
| Hurley, Town of | √ | √ | √ | √ | | √ | √ | | | √ | √ | | | |
| Kingston, City of | √ | √ | √ | √ | | √ | √ | √ | √ | √ | √ | | | |
| Kingston, Town of | √ | √ | √ | √ | | √ | | | | | | | | |
| Lloyd, Town of | √ | √ | √ | √ | √ | √ | √ | | | √ | | | | |
| Marbletown, Town of | | | | | | | | | | | | | | |
| Marlborough, Town of | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | | |
| New Paltz, Town of | | | | | | | | | | | | | | |
| New Paltz, Village of | √ | √ | √ | | | √ | √ | | | √ | | | | |
| Olive, Town of | x | x | x | | | x | | | | | | | | |
| Plattekill, Town of | | | | | | | | | | | | | | |
| Rochester, Town of | | | | | | | | | | | | | | |
| Rosendale, Town of | | | | | | | | | | | | | | |
| Saugerties, Town of | | | | | | | | | | | | | | |
| Saugerties, Village of | | | | | | | | | | | | | | |
| Shandaken, Town of | √ | √ | √ | √ | | √ | √ | | | √ | | | | |
| Shawangunk, Town of | | | | | | | | | | | | | | |
| Ulster, Town of | √ | √ | √ | √ | | √ | √ | | | √ | | | | |
| Wawarsing, Town of | | | | | | | | | | | | | | |
| Woodstock, Town of | | | | | | | | | | | | | | |

Administrative and Technical Capacity

| Table 4-2 Administrative and Technical Capability Inventory | | | | | | | | | | | | | | |
|--|--|---|---|--|--------------------|-----------|--|---------------------------------------|---|-------------------|---------------|---------------------------|--|----------------------------------|
| Jurisdiction | Planner(s) with knowledge of land development and management practices | Engineer(s) with knowledge of land development and management practices | Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure | Planner(s) or Engineer(s) with an understanding of natural and/or human caused hazards | Floodplain manager | Surveyors | Staff with education or expertise to assess the community's vulnerability to hazards | Personnel skilled in GIS and/or HAZUS | Scientists familiar with the hazards of the community | Emergency Manager | Grant writers | Code Enforcement Official | Public Works or Highway Superintendent | Emergency Management Coordinator |
| Ulster County | | | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | | | |
| Denning, Town of | | | | | | | | | | | | | | |
| Ellenville, Village of | | | | | | | | | | | | | | |
| Esopus, Town of | | | | | | | | | | | | | | |
| Gardiner, Town of | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | | |
| Hardenburgh, Town of | | | | | | | | | | | | | | |
| Hurley, Town of | | | ✓ | ✓ | | | | | | | | | | |
| Kingston, City of | | | ✓ | ✓ | ✓ | | ✓ | | | ✓ | ✓ | | | |
| Kingston, Town of | | | ✓ | | ✓ | | | ✓ | | ✓ | ✓ | | | |
| Lloyd, Town of | | | | ✓ | ✓ | | ✓ | ✓ | | | | | | |
| Marbletown, Town of | | | | | | | | | | | | | | |
| Marlborough, Town of | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | | | |
| New Paltz, Town of | | | | | | | | | | | | | | |
| New Paltz, Village of | | | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Olive, Town of | | | | | × | | | | | | | × | × | × |
| Plattekill, Town of | | | | | | | | | | | | | | |
| Rochester, Town of | | | | | | | | | | | | | | |
| Rosendale, Town of | | | | | | | | | | | | | | |
| Saugerties, Town of | | | | | | | | | | | | | | |

Fiscal Capability

Table 4-3
Fiscal Capability Inventory

| Jurisdiction | Community Development Block Grants (CDBG) | Capital Improvements Project Funding | Authority to Levy Taxes for Specific Purposes | Fees for Water, Sewer, Gas, or Electric Service | Impact Fees for Homebuyers or Developers for New Developments/Homes | Incur Debt through General Obligation Funds | Incur Debt through Special Tax and Revenue Bonds | Incur Debt through Private Activity Bonds | Withhold Spending in Hazard-Prone Areas | Other (i.e., coastal, sustainability, or climate change initiatives; or Brownfield funds) |
|------------------------|---|--------------------------------------|---|---|---|---|--|---|---|---|
| Ulster County | √ | √ | | | | √ | √ | | | |
| Denning, Town of | | | | | | | | | | |
| Ellenville, Village of | | | | | | | | | | |
| Esopus, Town of | | | | | | | | | | |
| Gardiner, Town of | | √ | √ | √ | | √ | | | √ | |
| Hardenburgh, Town of | | | | | | | | | | |
| Hurley, Town of | | | √ | | | √ | √ | √ | | |
| Kingston, City of | √ | √ | √ | √ | √ | √ | | | | |
| Kingston, Town of | √ | √ | √ | √ | | √ | √ | | | |
| Lloyd, Town of | | | √ | √ | √ | √ | √ | | √ | |
| Marbletown, Town of | | | | | | | | | | |
| Marlborough, Town of | √ | √ | √ | √ | √ | √ | √ | | | |
| New Paltz, Town of | | | | | | | | | | |
| New Paltz, Village of | | √ | √ | √ | √ | √ | | | | |
| Olive, Town of | | | | x | | | | | | |
| Plattekill, Town of | | | | | | | | | | |
| Rochester, Town of | | | | | | | | | | |
| Rosendale, Town of | | | | | | | | | | |
| Saugerties, Town of | | | | | | | | | | |
| Saugerties, Village of | | | | | | | | | | |
| Shandaken, Town of | | | | √ | | | | | | |
| Shawangunk, Town of | | | | | | | | | | |
| Ulster, Town of | √ | √ | √ | √ | | √ | √ | | | |
| Wawarsing, Town of | | | | | | | | | | |
| Woodstock, Town of | | | | | | | | | | |

Municipality Olive

| Would you classify your community's <u>legal and regulatory</u> capability to implement hazard mitigation strategies as high, moderate, or low? | Would you classify your community's overall <u>technical</u> capability to implement hazard mitigation strategies as high, moderate, or low? | Would you classify your community's overall <u>fiscal</u> capability to implement hazard mitigation strategies as high, moderate, or low? | Would you classify your community's overall <u>administrative</u> capability to implement hazard mitigation strategies as high, moderate, or low? | Would you classify your political leadership's willingness to enact policies and programs that reduce hazard vulnerabilities in your community as high, moderate, or low - even if met with opposition? (i.e., guiding development away from identified hazard areas)? |
|---|--|---|---|--|
| Low | Low | Low | Moderate | Moderate |
| Discuss ways of bridging identified gaps in your local capabilities to ensure that they are in-line with your mitigation actions and goals. | | | | |
| <p>In January 2014 a Flood Advisory Committee was appointed by the Olive Town Board and we are currently applying for and receiving funding from the Ashokan Watershed Stream Management Program (AWSMP) to do Local Flood Analysis (LFA) on the portion of the Esopus Creek running within the Town of Olive as well as a portion of the Bushkill Stream. In addition, funds will be provided to do a Town wide Flood Mitigation Plan. A majority of the funding for the FMP will be coming from the AWSMP and a grant has been received from the Hudson River Valley Greenway for doing the FMP for the portion of the Town of Olive that is not in the Ashokan Watershed. We have received RFP's from six engineering firms for doing the LFA & the FMP and will be interviewing two of those firms on November 13, 2014. Once the LFA is completed we are hoping that the NY Community Rising funds will be available to implement proposed mitigation projects. Everyone in Olive is concerned about implementing hazard mitigation but funding at the local level is extremely limited, especially with the fiscal pressures from New York State. With outside funds we will be able to assess, plan, and implement mitigation. With proper funding anything is possible.</p> | | | | |

WORKSHEET 5 NOT APPLICABLE

(DID NOT PARTICIPATE IN 2009, SO
NO PAST PROJECTS TO TRACK)



Ulster County Multi-Jurisdictional Hazard Mitigation Plan Update

Worksheet #6

For a community to succeed in reducing risk in the long term, the information and recommendations of the hazard mitigation plan must be integrated into day-to-day local government operations. Throughout the planning process, partnerships are formed between departments and agencies, and sustained actions between these partners will increase the community's resilience to disasters. "Plan integration" can be thought of as the process whereby each local government will incorporate the mitigation plan findings and projects into other planning mechanisms (governance structures that are used to manage local land use development and community decision making).

For this Plan Update, FEMA requires:

- a summary of each jurisdiction's past progress in plan integration over the last planning cycle; and
- a description of plan integration activities that each jurisdiction expects to undertake over the course of the next planning cycle.

This worksheet has been set up, therefore, into two components with each portion focusing on one of the bullets above.

- Demonstration of Progress over the Last Planning Cycle – In the first component of this worksheet (shaded in blue), we have reiterated the targeted plan integration activities that were included in the last version of the plan (Section 9, beginning on Page 9-4) in a tabular form, and are asking each community to describe their respective accomplishments since the plan was adopted five years ago.
- Targeted Plan Integration Activities for the Next Planning Cycle – Similarly, in the second component of this worksheet (shaded in yellow), we have outlined a series of plan integration activities for the next five-year planning cycle. Please document to FEMA the manner in which your community will commit to integrate the hazard mitigation plan into your local government operations from this point forward.

Where integration activities are carried out by another jurisdiction through an intergovernmental agreement or by another layer of government (such as the county), please include a note on the bottom of this form and reference the section number on this form that the note is referring too.

Feedback should be returned to URS Project Manager Anna Foley at anna.foley@urs.com. If you have questions or need help, please email Anna or give her a call at 973-883-8562.

Name: _____ Sylvia Rozzelle

Title: _____ Supervisor

Representing: _____ Town of Olive

Email and Phone: _____ ollivesupervisor@hvc.rr.com 845-657-8118 X 4

DEMONSTRATION OF PAST PROGRESS OVER THE LAST PLANNING CYCLE

Please check all activities that your municipality has undertaken over the last five years.

| | |
|--|---|
| 1. Check here if you (or your predecessor on the CPG) issued a letter to each of your community's department heads to solicit their support and explore opportunities for integrating hazard mitigation planning objectives into their daily activities? | |
| 2. Check here if you (or your predecessor on the CPG) worked with your planning department to educate them on the Hazard Mitigation Plan and encourage that on the next update of your master plan, general or comprehensive plan, hazard mitigation for natural hazards is addressed. Please describe your coordination efforts in the space below. | |
| B. Check here if your municipality does not have a master, general, or comprehensive plan. | x |
| C. Check here if your master, general or comprehensive was updated since 2009. | |
| D. If you checked box 2C, please check here if natural hazard risk/mitigation was incorporated into the updated document, and describe how in the space below. | |
| E. If you checked box 2C, please check here if a specific hazard mitigation element was added to the document, and describe in the space below. | |
| 3. Check here if you (or your predecessor on the CPG) coordinated with your building department to ensure that they have adopted and are enforcing the minimum standards established in the current State-adopted IBC. Please describe your coordination efforts in the space below. | |
| 4. A. If your community participates in the NFIP and was only enforcing minimum requirements at the time of the first plan's adoption, check here if you (or your predecessor on the CPG) coordinated with your Floodplain Administrator to determine if enforcement beyond FEMA minimum requirements would be prudent for your community. Please describe your coordination efforts in the space below. | |

Community Name Town of Olive

| | |
|---|---|
| B. Check here if your community was already enforcing regulations beyond FEMA minimum requirements. | |
| C. Briefly explain here what is currently being enforced beyond FEMA minimum requirements. | |
| D. Check here if your community has maintained its participation in the NFIP's Community Rating System (CRS). | |
| E. Check here if your community has joined the CRS since 2009. | |
| F. Check here if your community has dropped out of the CRS since 2009. | |
| 5. A. Check here if your community has a local zoning ordinance. B. Check here if you (or your predecessor on the CPG) worked with your local zoning board to educate them on the Hazard Mitigation Plan and encourage consideration of low occupancy, low-density zoning in hazard areas, when practicable. Please describe your coordination efforts in the space below. | x |
| 6. A. Check here if any job descriptions were revised to include mitigation-related duties to further institutionalize mitigation. B. If so, describe. | |
| 7. A. Check here if capital or operating budgets were revised to include a line item for mitigation project funding. B. Check here if capital or operating budgets already included this when the plan was first adopted. | |
| 8. A. Check here if your Department of Public Works has adopted more rigorous procedures for inspecting and cleaning debris from streams and ditches (i.e., more frequently). B. If so, describe. | |
| 9. A. Check here if your Planning Department has added hazard vulnerability to subdivision and site plan review criteria. B. If so, describe. | |
| 10. (NOTE: A response to #10 is only required for UCECEM; all municipalities, please leave blank) Check here if UCECEM sought to identify a community conservation society or other interested voluntary organization to perform inventories of historic sites in hazard areas that might require special treatment to protect them from specific hazards. B. If so, describe. | |
| 11. Check here if your community has reached out to partner groups in the community (i.e., nonprofit organizations, businesses, etc.) to identify those who may be willing to donate goods or services and create a database of contact information and indicated goods/services. B. If so, describe. | x |

Community Name Town of Olive

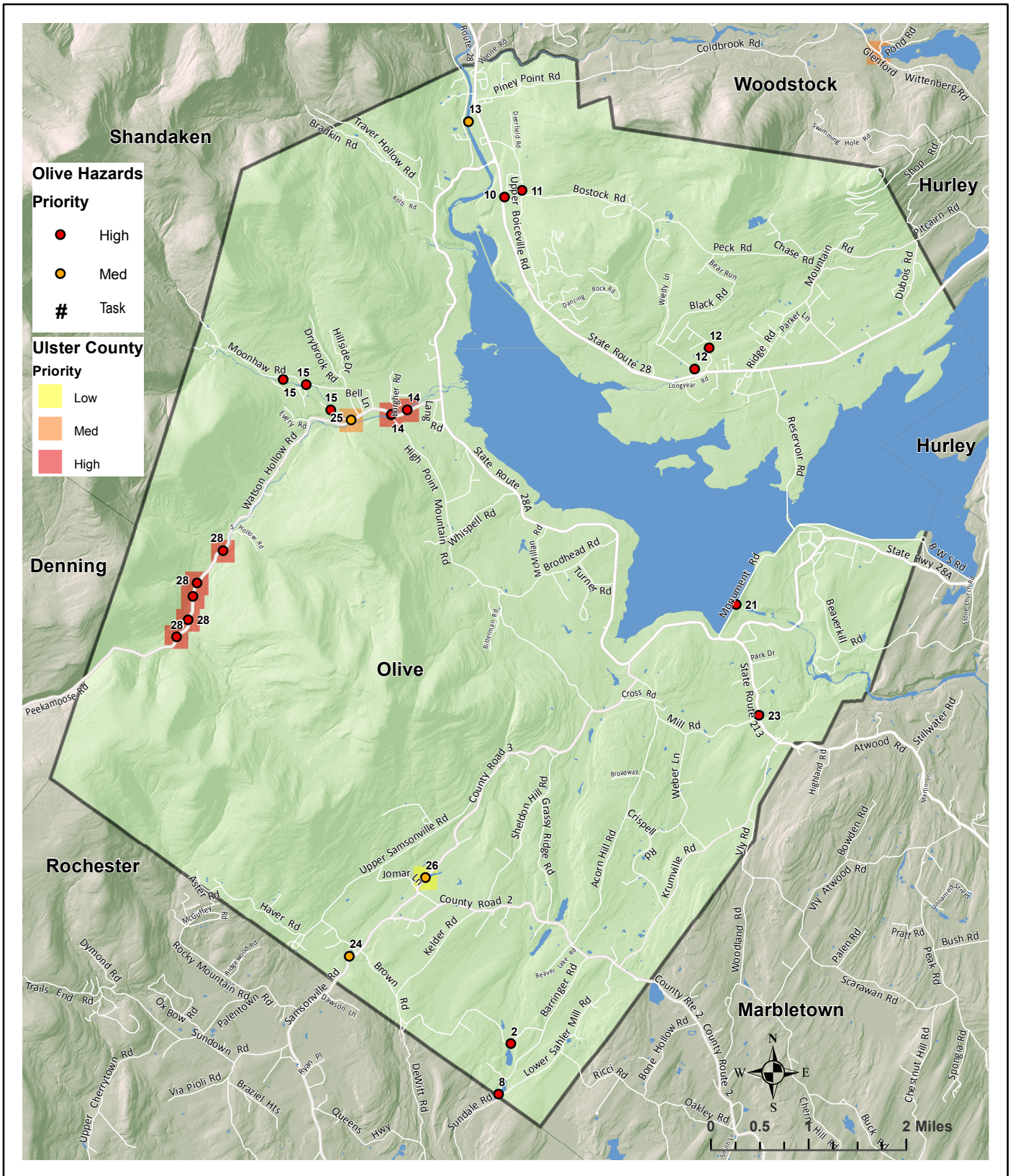
| | | |
|---|--|---|
| | | |
| 12. Check here if your community has actively sought citizen volunteers to help implement mitigation programs and activities. | | x |
| B. If so, please describe. Appointed Flood Advisory Committee January 2014 to develop a Flood Hazard Mitigation Plan for the entire Town of Olive. Funding is being sought from Ashokan Watershed Stream Management Program Grants and other grant sources. | | |
| 13. A. (NOTE: A response to #13A is only required for UCECEM; all municipalities, please leave blank) Check here if a list was compiled of state agencies that can lend their time, expertise and funds to the implementation of hazard mitigation projects. | | |
| B. (NOTE: A response to #13A is only required for UCECEM; all municipalities, please leave blank) Check here if assistance was provided to participating jurisdictions in reaching out to state agencies for support. | | |
| C. If A or B was checked, please describe. | | |
| 14. A. Check here if your community has reached out to colleges and universities for technical assistance with hazard mitigation activities. | | |
| B. If so, please describe. | | |
| 15. A. Check here if your community has met at least once with your local library staff members to discuss the mitigation plan so they are well-versed in its purpose and understand where to direct interested parties for more information, to provide feedback, or to become involved. | | x |
| B. If so, please describe. Olive Free Library is working with the American Red Cross to become a shelter in times of an emergency. | | |

TARGETED PLAN INTEGRATION ACTIVITIES FOR THE NEXT PLANNING CYCLE

Please check all activities that your municipality is committing to undertake over the next five years.

| | |
|--|---|
| 1. CPG member will issue a letter to each department head to solicit their support and explore opportunities for further integration of hazard mitigation into the daily activities of the community as a whole. | |
| 2. A. Incorporate hazard mitigation for natural hazards in the next update of your master, general or comprehensive plan. | |
| B. Add a specific hazard mitigation element to the next update of your master, general or comprehensive plan. | |
| 3. Adopt and enforce the minimum building standards established in the current State-adopted IBC | |
| 4. A. Maintain community participation in FEMA's National Flood Insurance Program. | x |
| B. Enforce codes and standards beyond FEMA minimum requirements. | |
| C. Join (or continue to maintain participation in) the NFIP's Community Rating System. | x |
| 5. Steer growth and development away from high risk locations by using the risk assessment from the hazard mitigation plan as a tool to monitor future updates of community land use plans, zoning and subdivision codes and the development review process. | |
| 6. Modify work plans, policies or procedures to include hazard mitigation concepts/activities. | |
| 7. Revise job descriptions to include mitigation-related duties to further institutionalize mitigation. | |
| 8. Revise capital or operating budgets to include a line item for mitigation project funding. | |
| 9. Issue directives to require departments/agencies in the community to carry out certain hazard mitigation activities. | x |
| 10. Require the Department of Public Works to inspect and clean debris from streams and ditches more frequently. | |
| 11. Add hazard vulnerability to subdivision and site plan review criteria. | x |
| 12. Perform inventories of historic sites in hazard areas in your community to identify where special treatment may be needed to protect them from specific natural hazards. | x |
| 13. Reach out to state agencies for assistance with natural hazard mitigation activities. | x |
| 14. Reach out to colleges and universities for technical assistance with natural hazard mitigation activities. | |
| 15. Adopt (or continue to enforce) a local stormwater management plan/ordinance. | |
| 16. Protect life and property in high hazard areas by limiting densities of new development. | |
| 17. Increase resilience by limiting the extension of public infrastructure in high hazard areas. | x |
| 18. Reduce the vulnerability of future development in high hazard areas by reviewing development regulations, and modifying where needed. | x |
| 19. Use the risk assessment to inform future updates of the community emergency operations plan, evacuation plan, and/or post disaster recovery plan. | |
| 20. Implement hazard mitigation activities through existing plans and policies. | x |
| 21. Sponsor training on best practices for hazard mitigation for local government staff. (Note: this may be accomplished with other local governments.) | x |

Olive Hazard Mitigation Actions



| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #1 - Boiceville Fire House (Co. 5) Relocation</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Firehouse is inundated from flooding and inaccessible during flood events. The new firehouse would be located outside of the floodplain eliminating its existing vulnerability, and ensuring the ability for the emergency service providers to access their equipment and vehicles during future flooding events.</i> |
| Describing the Action | |
| Action category | <i>Structural</i> |
| Action type | <i>Relocation</i> |
| Action description | <i>Relocation of structure outside of floodzone and outside of the 500 year recurrence interval storm area.</i> |
| Existing, future &/or NA | <i>Addresses existing structure</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Emergency service would be available during floods; potential reduction of water surface elevation in Boiceville;</i> |
| Cost estimate | <i>\$750,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Improve response to emergencies and during periods of disaster recovery and standard operations throughout the Town. Improve resiliency of Critical operations and accessibility for responders and public for multiple services necessary post-disaster. During project useful life, benefits will far outweigh costs, such as building damages and loss of services.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises Emergency Services will be solved long-term.</i> |
| Political | <i>Public, town, and fire department are supportive or relocating out of floodzone. Project was listed in NY Rising projects.</i> |
| Legal | <i>Town does not own the structure but would work with property owner</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town has no jurisdiction; however the Town knows the issue is severe and will work with FD to fix problem.</i> |
| Local champion | <i>Yes; Olive FD and Town</i> |
| Other community objectives | <i>Yes; It will likely help lower flood elevation in Boiceville; open space preservation in floodzone would result</i> |
| Implementing the Action | |
| Priority | <i>High</i> |

| | |
|----------------------------------|---|
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; Boiceville Local Flood Analysis</i> |
| Responsible party | <i>Olive Fire Dept Company No. 1 Inc, Board of Directors</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>two years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #2 - West Shokan Fire House (Co. 3) Relocation</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Construct a new firehouse for the West Shokan Firehouse Co. #3 that is outside of the floodplain so that the fire company can continue to provide emergency services during flooding events. During Hurricane Irene and Tropical Storm Lee, apparatus, equipment and personnel had to be relocated to higher ground, severely compromising the ability of emergency service providers to assist in the recovery effort. Relocating the firehouse out of the flood plain would eliminate its existing vulnerability, and ensure the ability for the emergency service providers to access their equipment and vehicles during future flooding events.</i> |
| Describing the Action | |
| Action category | <i>Structural</i> |
| Action type | <i>Relocation</i> |
| Action description | <i>Relocation of structure outside of regulatory floodzone and outside on the 500 year floodplain</i> |
| Existing, future &/or NA | <i>Addresses existing structure</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Emergency service would be available during floods; potential reduction of water surface elevation in West Shokan;</i> |
| Cost estimate | <i>\$750,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Improve response to emergencies and during periods of disaster recovery and standard operations throughout the Town. Improve resiliency of Critical operations and accessibility for responders and public for multiple services necessary post-disaster. During project useful life, benefits will far outweigh costs, such as building damages and loss of services.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises Emergency Services will be solved long-term.</i> |
| Political | <i>Public, town, and fire department are supportive or relocating out of floodzone. Project was listed in NY Rising projects.</i> |
| Legal | <i>Town does not own the structure but would work with property owner</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town has no jurisdiction, however the Town knows the issue is severe and will work with FD to fix problem.</i> |
| Local champion | <i>Yes; Olive FD and Town</i> |

| | |
|-----------------------------------|--|
| Other community objectives | <i>Yes; It will also allow the expansion of the facility to meet the needs of the community and residents; open space preservation in floodzone would result in a park</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan</i> |
| Responsible party | <i>Olive Fire Dept Company No. 3 Inc, Board of Directors</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>three years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #3 - Relocate Town Offices & Highway Complex out of Flood Plain</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>The town and highway offices (currently located in the 500 year floodplain) would be relocated. A new facility outside the floodplain would be built. The new facility would be constructed using green technology and infrastructure. The new location would enable the Town and Highway offices to serve as a Command Center during disasters to meet the FEMA'S National Incident Command System requirements.</i> |
| Describing the Action | |
| Action category | <i>Structural</i> |
| Action type | <i>Relocation and acquisition of land</i> |
| Action description | <i>Relocation of structure outside of regulatory (100-yr) floodzone as well as the 500-year floodplain.</i> |
| Existing, future &/or NA | <i>Addresses existing structures</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Emergency service, highway department, and town offices would be available to function during disasters.</i> |
| Cost estimate | <i>\$6,000,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Improve response to emergencies and during periods of disaster recovery and standard operations throughout the Town. Improve resiliency of Critical operations and accessibility for responders and public for multiple services necessary post-disaster. During project useful life, benefits will far outweigh costs, such as building damages and loss of services.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises Emergency Services, DPW, and town offices will be solved long-term.</i> |
| Political | <i>Public, town, and fire department are supportive of relocating out of floodzone. Project was listed in NY Rising projects.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none; additional benefit would be use of green building technology.</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board</i> |
| Other community objectives | <i>Yes; It will also allow the expansion of the facility to meet the needs of the community and residents; open space preservation in floodzone would result</i> |
| Implementing the Action | |
| Priority | <i>High</i> |

| | |
|----------------------------------|---|
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>five years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #4 - Boiceville Flood Mitigation and Prevention</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>During Hurricane Irene and Tropical Storm Lee (and in two other instances since 1950) the Esopus Creek has flooded the Rte 28 corridor and the Town's main business district, the hamlet of Boiceville. These events have resulted in 3-4' of water that has shut down businesses for months, isolated the fire house, and closed critical roads.</i> |
| Describing the Action | |
| Action category | <i>Structural; Planning mechanism; infrastructure, natural resource protection, education</i> |
| Action type | <i>Business district flood mitigation measures - relocation of structures outside of floodzone, floodproofing, elevations, floodplain re-grading/restoration</i> |
| Action description | <i>The actions implemented will be based upon the best recommendations that result from an on-going Local Flood Analysis (2015) to address issues that reduce watersurface elevations in the area. Some of the promising results are the removal and relocation of two vulnerable businesses, floodproofing of remaining at risk businesses, floodplain reclamation/excavation to allow for storage, and the construction of an earthen berm or floodwall that encircles the most at risk area from near upstream of the supermarket downstream to the WWTP and down to the Route 28A bridge. Location is Longitude: - 74.267996, Latitude: 42.006232</i> |
| Existing, future &/or NA | <i>Addresses existing structures and future development; encourages/enhances business development in future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Businesses would be available to function during and after disasters. After Irene, business losses in that area were in the millions of dollars.</i> |
| Cost estimate | <i>Approximately \$5M, although is dependant upon mitigation measures chosen</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits with multiple aspects over periods of years, such as this, are difficult to quantify, but anticipated to be in excess of project costs, for a cost-effective project over a 75-100 year lifespan of new infrastructure. The nearly completed flood analysis suggests this project has a BCR around 0.8</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises businesses, Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town are supportive of relocating out of floodzone. Project was listed in NY Rising projects. NFIP premiums could be reduced</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>could affect business communities help reduce their flood problem</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board and business community</i> |
| Other community objectives | <i>Yes; open space preservation in floodzone would likely result; economic development; capital improvements</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; Boiceville Local Flood Analysis</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>three to five years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #5 - Bushkill Flood Mitigation and/or Prevention</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Repetitive flooding in the Watson Hollow, County Route 42 area in West Shokan disrupts the community and is a threat to safety and well-being of Town residents. During Hurricane Irene and Tropical Storm Lee, the Bush Kill experienced extreme localized flooding. Above a County Rte 42 bridge there are 183 homes that could cutoff from services and food and fuel supplies.</i> |
| Describing the Action | |
| Action category | <i>Structural; infrastructure, natural resource protection, education</i> |
| Action type | <i>relocation of structures outside of floodzone, floodproofing, floodplain re-grading/restoration, streambank stabilization, channel restoration</i> |
| Action description | <i>Implementation from the on-going Local Flood Analysis (2015) will help alleviate flood risk in this area. The most vulnerable section of road currently is just upstream from the Town offices and DPW garage at location Longitude: -74.283845, Latitude: 41.967575. Additional locations and mitigation actions as yet to be determined. The LFA will identify implementable measures to mitigate flooding and look at the conveyance at bridges and culverts nearby. The mitigation measures can be implemented in phases.</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection and access will not be interrupted; emergency services available; protection of public and private infrastructure</i> |
| Cost estimate | <i>Approximately \$1M, however actual costs depend upon most beneficial actions.</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits with multiple aspects over periods of years, such as this, are difficult to quantify, but anticipated to be in excess of project costs, for a cost-effective project over a 75-100 year lifespan of new infrastructure. Final BCR will depend upon mitigation measures chosen</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive. Project was listed in NY Rising projects.</i> |
| Legal | <i>none</i> |
| Environmental | <i>NYSDEC Permit likely required</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, 183 homeowners very vocal</i> |

| | |
|-----------------------------------|--|
| Other community objectives | <i>Yes; prevents isolated properties/areas; capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; West Shokan Local Flood Analysis</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>'NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>5 years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #6 - Backup Generators for Highway Garage and Town Offices</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding; Winter Storm; Wind Storm</i> |
| Risk finding | <i>Action will keep town offices and equipment up and running during diasters by providing power during outages. Fuel would be available for equipment. Communications would be available, etc.</i> |
| Describing the Action | |
| Action category | <i>Disaster Preparedness</i> |
| Action type | <i>disaster preparedness</i> |
| Action description | <i>provide two generators for government facilities at Longitude: -74.280553, Latitude: 41.967720. Generators will be installed and protected to the 500 flood level or greater.</i> |
| Existing, future &/or NA | <i>n/a</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>emergency services, highway, and other services will be available during diasters;</i> |
| Cost estimate | <i>\$75,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits are difficult to quantify, however the low project cost will clearly result in a positive BCR over the project useful life.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, all residents</i> |
| Other community objectives | |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising</i> |
| Time line | <i>six months</i> |
| Reporting on Progress | |

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|------------------------|-------------------|
| Action progress status | <i>New action</i> |
|------------------------|-------------------|

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #7 - Replace 3 Culvert Pipes on Jomar Lane</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding/stormwater runoff</i> |
| Risk finding | <i>Replace three (3) Culvert Pipes on Jomar Lane that are too small to handle water runoff and causing road damage & private property damage as a result from heavy rains</i> |
| Describing the Action | |
| Action category | <i>structural</i> |
| Action type | <i>drainage improvement</i> |
| Action description | <i>Re-sizing and replacement of three culverts on Jomar Lane (town road) in Samsonville, and additional locations as yet to be determined.</i> |
| Existing, future &/or NA | <i>protects existing driveways and roads</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Reduced damages to existing infrastructure</i> |
| Cost estimate | <i>\$100,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the low project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Highway Dept would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, all residents</i> |
| Other community objectives | <i>capital improvement</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan</i> |
| Responsible party | <i>Olive Town Highway</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; NYSDEC Hudson River Estuary Habitat Connectivity/ Resiliency grants</i> |
| Time line | <i>one year</i> |
| Reporting on Progress | |

| | |
|------------------------|-------------------|
| Action progress status | <i>New action</i> |
|------------------------|-------------------|

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #8 - Sahler Mill Road Pond Bridge Replacement</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>The existing bridge over Beaver Dam Creek along Sahler Mill Rd is too small and frequently overtopped with floodwaters.</i> |
| Describing the Action | |
| Action category | <i>structural</i> |
| Action type | <i>flood mitigation</i> |
| Action description | <i>Re-sizing and replacement of bridge with larger less constrictive structure, Location is in Krumville- Longitude: -74.266728, Latitude: 41.866060</i> |
| Existing, future &/or NA | <i>protects existing roads and access to private properties</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduces damages to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$700,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes</i> |
| Legal | <i>none</i> |
| Environmental | <i>none; will enhance fish habitat by replacing culvert with bridge</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Highway Dept would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality (trout stream)</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Highway</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; NYSDEC Hudson River Estuary Habitat Connectivity/ Resiliency grants</i> |
| Time line | <i>three months</i> |
| Reporting on Progress | |

| | |
|------------------------|-------------------|
| Action progress status | <i>New action</i> |
|------------------------|-------------------|

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #9 - Upgrade Culvert to Bridge on Brown Road</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Upgrade small bridge on Brown Road: Existing Culvert Pipe on Brown Road over the Rochester Creek is too small to handle flood water. NYS DEC has recommended it be replaced with a small bridge.</i> |
| Describing the Action | |
| Action category | <i>structural</i> |
| Action type | <i>flood mitigation; habitat improvement</i> |
| Action description | <i>Re-sizing and replacement of bridge with larger less constrictive structure as requested by NYSDEC; Location is in Krumville- Longitude: -74.264204, Latitude: 41.873512</i> |
| Existing, future &/or NA | <i>protects existing roads and access to private properties</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damaged to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$700,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the low project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes; NYSDEC</i> |
| Legal | <i>none</i> |
| Environmental | <i>none; will enhance fish habitat by replacing culvert with bridge</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Highway Dept would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality (trout stream)</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Highway</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; NYSDEC Hudson River Estuary Habitat Connectivity/ Resiliency grants</i> |
| Time line | <i>two months</i> |

| Reporting on Progress | |
|------------------------|-------------------|
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #10 - Upgrade Culvert to Bridge on Desilva Road</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Bridge installed on Desilva Road: Large culvert pipe is too narrow and constrictive. Will be replaced with bridge of adequate size over the Trib 8 Stream. Causing flooding issues on roads and NYS Rte 28 and Desilva Road.</i> |
| Describing the Action | |
| Action category | <i>structural</i> |
| Action type | <i>flood mitigation; habitat improvement</i> |
| Action description | <i>Re-sizing and replacement of culvert with larger less constrictive structure; Location is in Boiceville</i> |
| Existing, future &/or NA | <i>protects existing and future development;</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damaged to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$700,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the low project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes;</i> |
| Legal | <i>none</i> |
| Environmental | <i>none; will enhance fish habitat by replacing culvert with bridge</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Highway Dept would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality (trout stream)</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Highway</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; NYSDEC Hudson River Estuary Habitat Connectivity/ Resiliency grants</i> |
| Time line | <i>six months</i> |
| Reporting on Progress | |

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| Action progress status | <i>New action</i> |
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| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #11 - Upper Boiceville Road Bridge Replacement</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>A small bridge/culvert on Upper Boiceville Road has been overtopped with floodwaters frequently. This is the only artery around the Town's largest hamlet, Boiceville, when Rte 28 floods the hamlet. This project should be done in conjunction with the DeSilva Road Bridge project</i> |
| Describing the Action | |
| Action category | <i>structural</i> |
| Action type | <i>flood mitigation; habitat improvement</i> |
| Action description | <i>A small bridge/culvert on Upper Boiceville Road is too narrow and constrictive & should be replaced with a larger structure , likely a box culvert. This bridge is located upstream & uphill from bridge on Desilva Road at Trib 8. Re-sizing and replacement of small bridge with larger less constrictive structure would allow better conveyance and allow uninterrupted emrgency response and ingress/egress during storms. Location is Longitude: -74.260431, Latitude: 42.000525.</i> |
| Existing, future &/or NA | <i>protects existing and future development;</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damaged to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$300,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Boiceville local flood analysis preliminary BCR of greater than 10.0.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes;</i> |
| Legal | <i>none</i> |
| Environmental | <i>none; will enhance fish habitat by upsizing structure</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Highway Dept would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality (trout stream)</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Highway</i> |

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| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>four months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #12 - Butternut Stream Restoration Project - Red Maple Rd</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Butternut Stream at Red Maple Road has filled in with sediment and accumulation of woody debris. Stream should be restored and redefined.</i> |
| Describing the Action | |
| Action category | <i>structural/stream resoration</i> |
| Action type | <i>flood mitigation</i> |
| Action description | <i>Restoration of Butternut Creek in a neighborhood that gets inundated in small rain events. Woody debris and sediment management are desperately needed. Location is in Shokan</i> |
| Existing, future &/or NA | <i>protects existing and future development;</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damaged to existing to homes and private property.</i> |
| Cost estimate | <i>\$<500,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the low project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes,</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town of Olive Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>six months</i> |
| Reporting on Progress | |

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| Action progress status | <i>New action</i> |
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| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #13 - Needs Assessment: Removal of Minor Hyatt Bridge from Esopus Creek</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>In Hurricane Irene the Bridge dislodged from its foundation and washed downstream and currently lies in the streambed of the Esopus Creek. A determination will be made as to whether or not the bridge should be removed from the stream bed as it lies upstream of the NY City Five Arch Bridge on Route 28A in Boiceville.</i> |
| Describing the Action | |
| Action category | <i>debris removal; assessment</i> |
| Action type | <i>flood mitigation</i> |
| Action description | <i>Assessment of whether or not bridge debris will be a potential hazard in next flood.</i> |
| Existing, future &/or NA | <i>protects existing and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>The benefits of this project include the removal of un-natural and un-stable material (flood debris) from the streambank immediately above the Town's most populated hamlet and</i> |
| Cost estimate | <i>\$<450,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits are unquantifiable since this is just a study.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected businesses</i> |
| Legal | <i>none</i> |
| Environmental | <i>tbd</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town of Olive Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>environmental quality; flood mitigation</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs; Boiceville Local Flood Analysis</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>CWC Flood Hazard Mitigation Implementation Program</i> |
| Time line | <i>three months</i> |

| Reporting on Progress | |
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| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #14 - West Shokan Bank Stabilization, Infrastructure Protection, and Debris Removal</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>183 homes and County and Town infrastructure are located above several susceptible bridge structures and a very unpredictable stream section. This road in this area is the only access/egress for 183 homes.</i> |
| Describing the Action | |
| Action category | <i>Structural; infrastructure, natural resource protection, education</i> |
| Action type | <i>stream remediation, infrastructure protection</i> |
| Action description | <i>This project would stabilize banks, remove gravel deposition, and remove woody debris along County Route 42 in West Shokan hamlet. This is roughly a mile from Ashokan Reservoir to Maltby Hollow. Two areas of highest importance are at Longitude: -74.283762/ Latitude: 41.967746 and Longitude: -74.286900/ Latitude: 41.966992.</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection and access will not be interrupted; emergency services available; protection of public and private infrastructure</i> |
| Cost estimate | <i>tbd; depends upon mitigation measures chosen</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits with multiple aspects over periods of years, such as this, are difficult to quantify, but anticipated to be in excess of project costs, for a cost-effective project over a 75-100 year lifespan of new infrastructure.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board and Ulster County would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, 183 homeowners very vocal</i> |
| Other community objectives | <i>Yes; prevents isolated properties/areas; capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>High</i> |

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|----------------------------------|---|
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; West Shokan Local Flood Analysis</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>three to four years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action - likely for 2016</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #15 - Maltby Hollow Flood Mitigation and/or Prevention</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Implementation from the the results of the planned stream feature identification (2015) to address issues of repetitive flooding in the Maltby Hollow, County Route 42 area in West Shokan. During Hurricane Irene and Tropical Storm Lee, the Maltby Hollow experienced extreme localized flooding, there are 50 homes on this dead end road that could be cutoff from services and food and fuel supplies.Flood mitigation measures would need to be implemented/addressed.</i> |
| Describing the Action | |
| Action category | <i>Structural; Planning mechanism; infrastructure, natural resource protection, education</i> |
| Action type | <i>Implementing flood mitigation measures; such as - a large woody debris locations at (Longitude: -74.308415, Latitude: 41.972167), (Longitude: -74.303748, Latitude: 41.971584); re-stabilization of chaotic and un-stable section of stream (Longitude: -74.298899, Latitude: 41.967807)</i> |
| Action description | <i>Stream feature ID results will determine what actions are needed; goal is protection of the 50 homes located above a susceptible structure and unpredictable stream section</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection and access will not be interrupted; emergency services available; protection of public and private infrastructure</i> |
| Cost estimate | <i>tbd; depends upon mitigation measures chosen</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits with multiple aspects over periods of years, such as this, are difficult to quantify, but anticipated to be in excess of project costs, for a cost-effective project over a 75-100 year lifespan of new infrastructure.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, 50 homeowners very vocal</i> |
| Other community objectives | <i>Yes; prevents isolated properties/areas; capital improvements to roads and bridges</i> |

| Implementing the Action | |
|---------------------------|---|
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes;</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>three years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action - likely for 2016</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #16 – Implementation of Identified Projects from the Town Flood Hazard Mitigation Plan</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Implementation of the high priority projects from the townwide flood hazard mitigation plan which will be completed in 2017.</i> |
| Describing the Action | |
| Action category | <i>Structural; Planning mechanism; infrastructure, natural resource protection, education</i> |
| Action type | <i>Implementing flood mitigation measures</i> |
| Action description | <i>TBD by the results of the flood hazard mitigation plan. The Plan is being developed with the assistance of Woidt Engineering & Consulting, and will included detailed "local flood</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>implementation of projects should/could reduce damage to property and infrastructure. Will also result in saving lives.</i> |
| Cost estimate | <i>tbd; depends upon mitigation measures chosen</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>cannot determine cost but will save community money in the long-term by implementing projects identified in the plan.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board would be lead; Olive Flood Advisory committee also involved</i> |
| Local champion | <i>Yes; Town of Olive town board</i> |
| Other community objectives | <i>Yes; prevents isolated properties/areas; capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes;</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>Any Local, State, or Federal mitigation funding that is available for identified priorityt projects (which are tbd).</i> |
| Time line | <i>over the next 5 years</i> |
| Reporting on Progress | |

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| Action progress status | New action |
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Action Worksheet:

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| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #17 – Town-wide Disaster Preparedness Education and Outreach</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flood, hurricane, fire, winter storms</i> |
| Risk finding | <i>Public understanding of hazard mitigation and its benefits is limited</i> |
| Describing the Action | |
| Action category | <i>Education and outreach</i> |
| Action type | <i>Public awareness and education program</i> |
| Action description | <i>Olive and County will take steps to develop an all-hazards public awareness and education program for hazard mitigation, including websites, stakeholder outreach, flyers, meetings, and/or media outreach.</i> |
| Existing, future &/or N/A | <i>N/A</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Public awareness will build support for mitigation, encourage homeowners to create a demand for better development practices and reduce avoidable injuries and emergencies</i> |
| Cost estimate | <i>\$5,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>The economic benefits of education-outreach make the benefits of this action outweigh the other minor costs. This is a low-cost action that can be easily implemented.</i> |
| Technical | <i>Technically feasible. Building public awareness has been proven to reduce risk</i> |
| Political | <i>No apparent political issues</i> |
| Legal | <i>Action is legal and educational efforts have been used previously for messages on public safety and welfare issues</i> |
| Environmental | <i>No adverse environmental effects from outreach efforts</i> |
| Social | <i>Does not adversely affect any particular social group. Provides education to all social groups</i> |
| Administrative capability | <i>Administrative costs of collecting and distributing data and coordination effort considered low.</i> |
| Local champion | <i>Possibly from public school system , library and volunteer FD.</i> |
| Other community objectives | <i>Some of these education activities may be eligible for credit under the Community Rating System and so they could lead to lower flood insurance premiums.</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>N/A</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>annual budget</i> |
| Time line | <i>ongoing</i> |

| Reporting on Progress | |
|------------------------|-------------------|
| Action progress status | <i>new action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #18 – Engaging in a Commercial Emergency Notification System</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>all hazards</i> |
| Risk finding | <i>no consistent communication throughout the rural area</i> |
| Describing the Action | |
| Action category | <i>public education</i> |
| Action type | <i>emergency notification</i> |
| Action description | <i>contract with a commercial firm that can provide emergency communications to town residents via Internet, wireless, land-lines.</i> |
| Existing, future &/or NA | <i>N/A - protects lives</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>can prevent injuries and results in saving lives.</i> |
| Cost estimate | <i>\$50,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits are unquantifiable for this type of planning/education project, however over the long term, benefits will be well in excess of the proportionally low project costs</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>benefits all</i> |
| Administrative capability | <i>Town Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board</i> |
| Other community objectives | <i>Yes; prevents injury and loss of life</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>n/a</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>FEMA and NYSDHSES grants</i> |
| Time line | <i>one year</i> |
| Reporting on Progress | |
| Action progress status | <i>new action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #19 - Butternut Stream Restoration Project - Bostock Rd</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>Butternut Stream at Bostock Road has filled in with sediment and accumulation of woody debris. Stream should be restored and redefined.</i> |
| Describing the Action | |
| Action category | <i>structural/stream restoration</i> |
| Action type | <i>flood mitigation</i> |
| Action description | <i>Restoration of Butternut Creek in a neighborhood that gets inundated in small rain events. Woody debris and sediment management are desperately needed. Location is in Shokan</i> |
| Existing, future &/or NA | <i>protects existing and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damaged to existing to homes and private property.</i> |
| Cost estimate | <i>\$<500,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive, as are affected homes</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town of Olive Board would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, residents</i> |
| Other community objectives | <i>capital improvement; environmental quality</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; NYSDEC regs</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>six months</i> |
| Reporting on Progress | |

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|------------------------|------------|
| Action progress status | New action |
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| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #20 -- Building Dept. Upgrade</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>multi-hazard</i> |
| Risk finding | <i>Elevation Certificates compilation and filing along with data acquisition to determine actual risk pre & post storm events</i> |
| Describing the Action | |
| Action category | <i>planning</i> |
| Action type | <i>emergency preparedness</i> |
| Action description | <i>Compile and properly file Elevation Certificates and implement digital upgrade for the building department. Provide GIS training for local officials to allow electronic post-storm building inspections and reports from the field and to increase the community CRS numbers.</i> |
| Existing, future &/or NA | <i>action will better protect existing as well as future development in Town</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Better data to adequately assess flooding and other risks for structures, areas, etc</i> |
| Cost estimate | <i>\$40,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits are unquantifiable, but anticipated to be in excess of project costs, for a cost-effective project</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>Public, town are supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town has ability and resources to administer</i> |
| Local champion | <i>Town</i> |
| Other community objectives | <i>Yes, elevation certificates are required for CRS entrance</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town codes</i> |
| Responsible party | <i>Town Board</i> |
| Potential funding sources | <i>annual budget</i> |
| Time line | <i>one year</i> |
| Reporting on Progress | |

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|------------------------|-------------------|
| Action progress status | <i>New action</i> |
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| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #21 -- NYC Bureau Water Supply's Olivebridge Dam and appurtenances</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>dam failure</i> |
| Risk finding | <i>The main dam of the Ashokan Reservoir (Olivebridge Dam) is now more than 100 years old (as are all of the other dikes and other infrastructure at this location. The town is in possession of safety reports and other material that are a cause for concern for the safety of its residents downstream.</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>rehabilitation</i> |
| Action description | <i>The Olivebridge Dam is located in the hamlet of Olivebridge. There are several other dikes, tunnels, and related infrastructure connected to the Ashokan Reservoir in the Town. Since construction of this reservoir, there has not been a full-scale rehabilitation of the infrastructure for safety purposes as there has been at other water supply reservoirs.</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>lives and property</i> |
| Cost estimate | <i>\$300-400 Million</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits are unquantifiable, but anticipated to be in excess of project costs, for a cost-effective project</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town are supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is New York City responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>NYC, NYS, Federal Gov</i> |
| Local champion | <i>Town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>NYC Capital Improvement program</i> |
| Responsible party | <i>NYC DEP Bureau of Water Supply</i> |
| Potential funding sources | <i>capital budget</i> |

| | |
|-------------------------------|--------------------------|
| Time line | <i>five to ten years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #22 -- UC Route 42 Bridge (Watson Hollow Bridge)</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flooding</i> |
| Risk finding | <i>Because of diminishing capacity to convey floodwaters effectively, water is scouring out eastern abutment as well as causing a backwatering effect upstream of the bridge, resulting in inundation and other erosion problems.</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>drainage improvement</i> |
| Action description | <i>The capacity of this bridge continues to decrease due to debris (gravel and trees) accumulating in front of one of the two openings of the structure. The bridge causes localized flooding upstream and contributes to severe streambank/road embankment failure downstream. By reducing constriction (debris management) and reinforcing the abutment, this project will substantially reduce future damage to existing infrastructure and to county property and surrounding private property. Additionally, science-based stream channel restoration will be done at this location to prevent headcuts from migrating through this stream reach above/below bridge, LOCATION is Longitude: - 74.286986, Latitude: 41.967102</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damage to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$750,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town is supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>NYSDEC permit required</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Ulster County</i> |
| Local champion | <i>county, town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>High</i> |

| | |
|----------------------------------|---|
| Local planning mechanism | <i>NY Rising Plan; West Shokan Local Flood Analysis;</i> |
| Responsible party | <i>Ulster County</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; Flood Hazard Mitigation Implementation Program (FHMIP); Stream Management Implementation Grants (SMIP); NY Rising Community Reconstruction Program; capital budget</i> |
| Time line | <i>six months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #23 -- UC Route 213 Bridge across Tongore Brook</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flooding</i> |
| Risk finding | <i>Aging & possibly undersized bridge with low condition rating will be lost to flooding</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>drainage improvement</i> |
| Action description | <i>Replacement of bridge (BIN # 875713.) with new structure that is adequately sized using H&H analysis. Location is Longitude: -74.214301, Latitude: 41.921899.</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>'Substantially reduce damage to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$1,000,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town are supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Ulster County, NYS</i> |
| Local champion | <i>county, town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NYSDEC regs</i> |
| Responsible party | <i>Ulster County</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; capital budget</i> |
| Time line | <i>nine months</i> |

| Reporting on Progress | |
|------------------------|-------------------|
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|---|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #24 -- UC Route 3 Bridge across Mettakahonts Stream</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flooding</i> |
| Risk finding | <i>Aging & potentially undersized bridge with low condition rating will be lost to flooding</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>drainage improvement</i> |
| Action description | <i>Replacement of bridge with new structure capable of passing at least the 50-year flood in Samsonville. LOCATION is Longitude: -74.296195, Latitude: 41.886716</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>'Substantially reduce damage to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$500,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town are supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Ulster County</i> |
| Local champion | <i>county, town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Town and state building codes; NYSDEC regs</i> |
| Responsible party | <i>Ulster County</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NY Rising Community Reconstruction Program; NYSDEC Hudson River Estuary Habitat Connectivity/ Resiliency grants</i> |

| | |
|-------------------------------|-------------------|
| Time line | <i>six months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #25 -- UC Route 42 Bridge across Maltby Hollow</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flooding</i> |
| Risk finding | <i>Debris-accumulating at bridge causes flooding up and downstream and erosional hazard to the road and bridge abutments. More than 100 homes upstream would be cut off from the rest of the town.</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>drainage improvement</i> |
| Action description | <i>By reducing constriction (debris management- large woody debris and gravel) coupled with science-based stream channel restoration to prevent headcuts from migrating through this stream reach above/below bridge, this project will substantially reduce future damage to existing infrastructure, county property, and surrounding private property. LOCATION is Longitude: -74.294853, Latitude: 41.966257</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>Substantially reduce damage to existing infrastructure and to neighboring private property.</i> |
| Cost estimate | <i>\$300,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town are supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Ulster County</i> |
| Local champion | <i>county, town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Town and state building codes; NYSDEC regs; West Shokan LFA</i> |
| Responsible party | <i>Ulster County</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; Flood Hazard Mitigation Implementation Program (FHMIP); Stream Management Implementation Grants (SMIP); NY Rising Community Reconstruction Program; capital budget</i> |
| Time line | <i>nine months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #26 -- UC Route 3 Road Flooding</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>flooding</i> |
| Risk finding | <i>Road routinely floods during small storms cutting of ingress/egress</i> |
| Describing the Action | |
| Action category | <i>Structure/Infrastructure project</i> |
| Action type | <i>road elevation and drainage improvement</i> |
| Action description | <i>This project would alleviate inundation of County Road 3 (750' of road) by conducting an initial engineering study/analysis to determine appropriate mitigation action (road-raising, upsizing culverts, bridge construction, etc necessary). LOCATION is Longitude: - 74.280826, Latitude: 41.898239 in Samsonville - just north of Jomar Lane</i> |
| Existing, future &/or NA | <i>existing and future</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>reduction of road flooding to allow access during storm events; emergency services</i> |
| Cost estimate | <i>\$500,000 - \$1M</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Over time, mitigation of repetitively inundated roadways (that sustain damage) will be cost effective. Benefits are difficult to quantify, but anticipated to be in excess of the low project cost.</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town are supportive although not under its jurisdiction.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>could involve wetlands?</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Ulster County</i> |
| Local champion | <i>county, town</i> |
| Other community objectives | <i>economics, housing, recreation, open space</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Town and state building codes; NYSDEC regs</i> |
| Responsible party | <i>Ulster County</i> |
| Potential funding sources | <i>Emergency Watershed Protection (EWP) program; NYSDOT Bridge NY; NY Rising Community Reconstruction Program; capital budget</i> |

| | |
|-------------------------------|--------------------|
| Time line | <i>nine months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #27 -- NYS Route 28 Hazardous Spills Response</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Hazardous Spills</i> |
| Risk finding | <i>Response to spill on Main artery through town- most highly traveled road.</i> |
| Describing the Action | |
| Action category | <i>Emergency response</i> |
| Action type | <i>education and training</i> |
| Action description | <i>NYS DOT Route 28 travels east/west through the Town of Olive and local education and costs associated with a potential hazardous spill, and how local responders need to handle and mitigate.</i> |
| Existing, future &/or NA | <i>existing and future; NYC Water Supply</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>environmental protection</i> |
| Cost estimate | <i>unknown</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>tbd</i> |
| Technical | <i>Technically feasible.</i> |
| Political | <i>town / state and local EMS volunteers</i> |
| Legal | <i>n/a</i> |
| Environmental | <i>faster more efficient cleanup.</i> |
| Social | <i>none</i> |
| Administrative capability | <i>NYS, Town</i> |
| Local champion | <i>town</i> |
| Other community objectives | <i>Emergency Management Plan</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Town board</i> |
| Responsible party | <i>State, Town</i> |
| Potential funding sources | <i>n/a</i> |
| Time line | <i>ongoing</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #28- Upper Bushkill Infrastructure Protection and Debris Removal</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>A critical mountainous road in a rural portion of the Town is extremely vulnerable to washouts during flash flooding events, resulting in loss of ingress/egress (County Rte 42) through remote areas located above a susceptible structure and unpredictable stream section</i> |
| Describing the Action | |
| Action category | <i>Structural; infrastructure, natural resource protection</i> |
| Action type | <i>stream remediation, infrastructure protection; drainage improvements</i> |
| Action description | <i>This project would stabilize failing hillslopes, protect infrastructure, and remove woody debris along County Route 42 in the following locations: 1) Near Kanape Brook, downstream of parking area. Road embankment is approximately 40 feet high and has 4-6 feet of bank left to erode before road is in danger of washing out. Post-Irene stream work by NYSDEC Operations buried wood on the inside of a meander bend, further pushing flow toward failing road embankment - Longitude: -74.327627 / Latitude: 41.936805; 2) Near Kanape Brook, downstream of parking area. This site is less hazardous but still cause for concern, as there is less than 10 feet of bank left to erode before the road washes out. Longitude: -74.326624 Latitude: 41.940285; 3) Upstream of the Kanape Brook Trail Head area along Watson Hollow road. This area is where sheet piling has been installed (many years ago) along one thread of the Bushkill and a metal culvert carries flow under the roadway. This area is full of large woody debris (LWD) and has an associated hillslope failure with fine sediments. The stream in the area is very tight and narrow and will continue to fill with debris and cause damage to the roadway in future smaller storms - Longitude: -74.329823/Latitude: 41.934230; 4) Upstream of Ashokan Realty building there is a County culvert that is undersized and accumulates sediment. Photograph of area (taken approximately 1 year after Tropical Storm Irene) shows the culvert almost completely filled by sediment - Longitude: -74.325784 / Latitude: 41.942263; 5) Along Watson Hollow Road near South Hollow there is revetment and a failing hillslope. There is a concern that this is a location of instability for the road and a potential erosion site - Longitude: -74.320516 / Latitude: 41.946999</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection and access to 183 homes will not be interrupted; emergency services available; protection of public and private infrastructure</i> |
| Cost estimate | <i>tbd; depends upon mitigation measures chosen</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Benefits with multiple aspects over periods of years, such as this, are difficult to quantify, but anticipated to be in excess of project costs, for a cost-effective project over a 75-100 year lifespan of new infrastructure.</i> |

| | |
|-----------------------------------|---|
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>In the town's jurisdiction, but structure is County responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board and Ulster County would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, homeowners very vocal</i> |
| Other community objectives | <i>Yes; prevents isolated properties/areas; capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>High</i> |
| Local planning mechanism | <i>Town and state building codes; NY Rising Plan; Bush Kill Stream Management Plan</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, NYCDEP-Funded Flood Buyout Program, Ashokan Stream Management Implementation Program grants</i> |
| Time line | <i>three years</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #29- Route 28 Culvert Replacement at Boiceville</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>During storm events a culvert underneath Route 28 in Boiceville causes backwatering into a low-lying area where several houses are located, causing flood damage.</i> |
| Describing the Action | |
| Action category | <i>Structural; infrastructure, natural resource protection</i> |
| Action type | <i>infrastructure protection; drainage improvements</i> |
| Action description | <i>This project would up-size an under-sized culvert on a small tributary stream (1 sq. mile drainage area) to the Esopus Creek. The culvert causes backwatering both from debris accumulation at the inlet as well as floodwaters on the Esopus Creek (at the outlet) that back up into the culvert. A "flapgate" culvert would be installed so as to prevent Esopus Creek water from entering during high flows. Additionally, stormwater from the watershed would be stored and pumped into the Esopus during flood flows. Location is Longitude: -74.265508, Latitude: 42.004128</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection, protection of public and private infrastructure</i> |
| Cost estimate | <i>\$750,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>In the town's jurisdiction, but structure is New York State responsibility, and Town supports the project.</i> |
| Environmental | <i>none</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board and New York State DOT would be lead</i> |
| Local champion | <i>Yes; Town of Olive town board, homeowners very vocal</i> |
| Other community objectives | <i>capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>Boiceville Local Flood Analysis</i> |

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|----------------------------------|---|
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants; NYSDOT Bridge NY</i> |
| Time line | <i>three months</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

| Action Worksheet | |
|---|--|
| Your plan name | <i>Ulster County Multi-jurisdictional Hazard Mitigation Plan</i> |
| Your community name | <i>Town of Olive</i> |
| Community action number | <i>Olive #30- Burgher Road Culvert Replacement</i> |
| Assessing the Risk | |
| Hazard(s) addressed | <i>Flooding</i> |
| Risk finding | <i>During storm events a culvert underneath Burgher Road in West Shaokan causes backwatering into a low-lying area where serveral houses are located, causing flooding and accessibility issues.</i> |
| Describing the Action | |
| Action category | <i>Structural project</i> |
| Action type | <i>drainage improvements</i> |
| Action description | <i>This project would up-size an under-sized culvert on a the Dry Brook stream. The culvert causes backwatering at the inlet because of it being very under-sized. The new culvert would also be desing to allow for better fish passage. Location is Longitude: -74.287014, Latitude: 41.971171</i> |
| Existing, future &/or NA | <i>protects existing structures and future development</i> |
| Evaluating the Action | |
| Losses avoided (i.e., benefits) | <i>property protection,protection of public and private infrastructure</i> |
| Cost estimate | <i>\$300,000</i> |
| Cost effectiveness (i.e., benefit/cost) | <i>Cannot determine cost/benefit fully at this time; Money will be saved in long term to proactively address on-going problem where routine maintenance and monitoring must occur. Over time this project will be cost effective.</i> |
| Technical | <i>Technically feasible. Flooding problem that compromises homes and roads/bridges, and Emergency Services, could be solved long-term.</i> |
| Political | <i>Public, town is supportive.</i> |
| Legal | <i>none</i> |
| Environmental | <i>NYSDEC permit required</i> |
| Social | <i>none</i> |
| Administrative capability | <i>Town Board and DPW</i> |
| Local champion | <i>Yes; Town of Olive town board, homeowners very vocal</i> |
| Other community objectives | <i>capital improvements to roads and bridges</i> |
| Implementing the Action | |
| Priority | <i>Medium</i> |
| Local planning mechanism | <i>West Shokan Local Flood Analysis</i> |
| Responsible party | <i>Olive Town Board</i> |
| Potential funding sources | <i>NY Rising, CWC Flood Hazard Mitigation Implementation Program, Ashokan Stream Management Implementation Program grants; NYSDOT Bridge NY</i> |

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|-------------------------------|-------------------|
| Time line | <i>one month</i> |
| Reporting on Progress | |
| Action progress status | <i>New action</i> |

PARTICIPATING JURISDICTION: Town of Olive, PO Box 180, West Shokan, NY 12494

OUTREACH LOG

| DATE OF ACTIVITY | TYPE OF ACTIVITY | ACTIVITY DETAILS | LEAD DEPARTMENT AND/OR STAFF TITLE WHO UNDERTOOK ACTIVITY |
|-------------------------|---|--|---|
| 6/10/14 | Olive Board Meeting | Olive Flood Advisory Committee (FAC) appointed at Town Board Meeting | Town of Olive Town Board |
| 7/10/14 | FAC Meeting | Introduction of 10 member committee with input from Ashokan Watershed Stream Management Program—outline details of Local Flood Analysis & Townwide Flood Mitigation Plan | Town Supervisor, FAC members, reps from NYC DEP, AWSMP, UC Soil & Water, Cornell Cooperative Extension of UC, UC Dept. of Environment, & public |
| 8/7/14 | FAC Meeting | Proceeded with information on LFA, Community Rating System, & Townwide Flood Mitigation Plan | Town Supervisor, FAC members, reps from NYC DEP, AWSMP, UC Soil & Water, Cornell Cooperative Extension of UC, UC Dept. of Environment & public |
| 8/12/14 | Olive Board Meeting | Board approves Res. #12 of 2014 supporting coordinated engineering services for local flood analysis | Town of Olive Town Board, FAC Committee, and public |
| 8/28/14 | FAC Meeting | Designated boundaries for Local Flood Analysis on Bushkill Stream and Esopus Creek | Town Supervisor, FAC members, reps from NYC DEP, AWSMP, UC Soil & Water, Cornell Cooperative Extension of UC, UC Dept. of Environment & public |
| 9/12/14 | Olive Board Meeting | Supervisor presented information on FAC updates and UCMJHMP | Town of Olive Town Board and public |
| 10/30/14 | FAC Meeting | Reviewed proposals from six engineering firms for LFA, CRS, and Townwide Flood Mitigation Plan | Town Supervisor, FAC members, reps from NYC DEP, AWSMP, UC Soil & Water, Cornell Cooperative Extension of UC, UC Dept. of Environment & public |
| 11/13/14 | FAC Meeting | Interviewed two engineering firms for LFA, CRS, and Townwide Flood Mitigation Plan | Town Supervisor, FAC members, reps from NYC DEP, AWSMP, UC Soil & Water, Cornell Cooperative Extension of UC, UC Dept. of Environment, Milone & McBroom, Woidt Engineering & public |
| 12/9/14 | Olive Board Meeting | Supervisor reviewed project lists for UCMJHMP requesting input -- hired engineering firm Woidt Engineering | Town of Olive Town Board and public |
| 12/17/14 | Ashokan Watershed Stream Management Program (AWSMP) Informational Meeting | Depth Grid Presentation | UC Dept. of Environment, NYC DEP reps, UC Soil & Water, Cornell Cooperative, Town Supervisors, Highway Superintendents |
| 1/12/15 | Olive Board Meeting | Supervisor discussed UCMJHMP & Project Lists | Town of Olive Town Board and public |

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| 3/12/15 | Flood Advisory Committee Mtg. | Discussed UCMJHMP Project Lists | FAC, AWSMP reps, and some Town Board members |
| 3/26/15 | AWSMP Stakeholders Council Meeting—Shokan | Discussed UCMJHMP Project Lists | AWSMP Reps, Stakeholder's Council |
| 4/14/15 | Flood Advisory Committee & Town Board | Mentioned UCMJHMP Project Lists at Kickoff meeting with Woitdt Engineering | Town Board, FAC, DEP reps, ASWMP reps, & Public |
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