

9.1 BROOME COUNTY

This section presents the jurisdictional annex for Broome County.

A.) HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact	Alternate Point of Contact
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B.) PROFILE

Population

200,600 (estimated 2010 U.S. Census)

Location

Broome County is located in south-central New York State directly north of the Pennsylvania border in the area known as the Southern Tier. The county has a total area of 715 square miles, and is located at the intersection of major north-south (I-81 and I-88) and east-west (I-86/Route 17) interstate highways. The City of Binghamton is the county seat. Broome County is home to Binghamton University (one of the SUNY schools), Broome Community College, and Davis College.

Geography / Climate

The majority of northern and western Broome County is part of the Susquehanna River Basin (which eventually drains into the Chesapeake Bay), and includes both the Susquehanna and Chenango Rivers which join near downtown Binghamton. A small eastern portion of the County is within the Delaware River Basin which drains east towards the Catskill Mountains and eventually into Delaware Bay. Broome County is predominantly formed by the major river valleys with rolling and hilly terrain as you move further away from the river basins. The furthest eastern area of the county encompasses the beginning of the Catskill Mountains.

Annual precipitation includes an average rainfall of 37-inches and an average snowfall of 58-inches. The average number of days with measureable precipitation is 149, with an average high temperature in July of 81°F, and an average low temperature in January of 16°F.

Brief History

Broome County was once part of the vast Albany County, created in 1683. After several County divisions the present day Broome County split off from Tioga County in 1806. Broome County was established and was named in honor of John Broome, who was the New York State Lieutenant Governor at the time.



Governing Body Format

The governing body of the County consists of a County Executive and a County Legislature with one representative from each of 15 districts. An elected Clerk also serves the County. Home rule is strong in New York State and thus, each town and village has its own governing body. Towns are made up of a Town Board and Supervisor. Villages generally have a Mayor, Clerk, and Board. The City of Binghamton consists of a Mayor and City Council, along with a City Clerk.

Along with town and village roads, public water and sewer systems are predominantly owned and operated by the local municipality, though they cooperate with County departments frequently. Through their municipal codes each municipality has control over its own planning and zoning laws, but many utilize County planning and engineering personnel as a resource.

The County, as a governing entity, does not enact planning and zoning ordinances or other local land use control regulations. However, the County does review development proposals that qualify under New York State General Municipal Law 239 which requires that certain types of municipal planning, zoning and subdivision projects be referred to the County prior to local action being taken.

Growth/Development Trends

The following table summarizes major residential/commercial development and major infrastructure development that are identified for the next five (5) years in the County. Those items listed with bold text are projects that the County (as an independent governing body) is planning. Other items listed are general growth/development trends expected within various municipalities. Refer to the map in section I.) of this annex which illustrates the hazard areas along with the location of potential new development.

New Development/Potential Development in Municipality						
Property Name	Type (Residential or Commercial)	Number of Structures	Address	Block and Lot	Known Hazard Zone	Description/ Status
Upper Front Street	Both		Town of Chenango			
Infill Development on Vestal Parkway	Commercial		Town of Vestal			
Downtown Binghamton	Both		City of Binghamton			
Suburban Development	Residential		Union, Vestal			
Otsiningo Park Farmer's Market	Commercial	1	Town of Dickinson		None	In planning / design – construction in 2013
High Tech Incubator						
CNG Facility @ County Transit			Town of Vestal			
Landfill / Airport Sewer Line	Major Infrastructure	N/A	Towns of Barker, Nanticoke, Maine & Union	Public ROW	None	Sewer line for landfill leachate &

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New Development/Potential Development in Municipality						
Property Name	Type (Residential or Commercial)	Number of Structures	Address	Block and Lot	Known Hazard Zone	Description/ Status
						airport development
Development of Airport outparcels	Commercial	various	Town of Maine	Airport / County owned parcels		In Master Plan for development once sewer line has been designed / constructed



C.) NATURAL HAZARD EVENT HISTORY SINCE 2006

Broome County has a history of natural hazard events as detailed in Volume I, Section 5 of this plan. A summary of historical events is provided in each of the hazard profiles and includes a chronology of events affecting the County and its municipalities. Below is presented a summary of events dating from the year 2006 to indicate the range and impact of natural hazard events in this community. Specific damages have been indicated if available from reference or local sources. For details of events prior to 2006, refer to Volume I, Section 5 of this plan.

Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Severe Storms and Flooding	DR 1650	Yes - IA, PA	June 26 — July 10, 2006	Damage occurred to numerous roads, public facilities, equipment, and infrastructure, and private residences. Multiple landfills reported over \$100 in damages. Significant repairs were needed at Edson Road and Trim Street. Public recreational facilities, including the golf course and Grippen Ice Rink, were severely impacted. The Conklin trailer park reported over \$100k in damages. In total, the County experienced approximately \$5,503,283 in damages.
Severe Storms and Flooding	DR 1670	Yes - IA, PA	November 16-17, 2006	
April Nor'easter	DR 1692	No	April 14 - 18, 2007	
Severe Storms and Flooding	DR 1710	No	June 19, 2007	
Severe Winter Storm	EM 3299 DR 1827	No	December 11-31, 2008	
Severe Storms and Flooding	DR 1857	No	August 8-10, 2009	
Severe Winter Storm and Snowstorm	DR 1957	No	December 26-27, 2011	
Severe Storms, Flooding, Tornado and Straight Line Winds	DR 1993	Yes - PA	April 26 — May 8, 2011	Damage occurred to numerous roads and public facilities. The most significant damage occurred at Brady Hill Road, Old Newark Valley Road, Oquaga Lake Road, and Trim/Kent Street. In total, the County reported \$333,082 in damages.
Hurricane Irene	EM 3328 DR 4020	Yes - IA, PA	August 26 — September 5, 2011	

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Type of Event	FEMA Disaster # (if applicable)	County Designated?	Date	Approximate Damage Assessment
Remnants of Tropical Storm Lee	EM 3341 DR 4031	Yes - IA, PA	September 7-11, 2011	Damage occurred to numerous roads, public facilities, equipment, and infrastructure. Major roadway repair and/or cleanup was required at Old Newark Valley Slope, South St Culvert, Shaw Road, and Old 17 (Grove St and Shed Road). Public facilities impacted included the Otsiningo Play Grounds & Ballpark. The Enjoie Golf Course also experienced significant damages. In total, the County was awarded \$1,891,199 in highway damages, and \$249,496 in park damages.

Note: N/A = Not applicable

D.) NATURAL HAZARD RISK/VULNERABILITY RISK RANKING

Hazard type	Estimate of Potential Dollar Losses to Structures Vulnerable to the Hazard ^{a, c}	Probability of Occurrence	Risk Ranking Score (Probability x Impact)	Hazard Ranking ^b
Flood	1% Annual Chance: \$1,355,932,058 0.2% Annual Chance: \$2,048,426,867	Frequent	42	High
Severe Storm	100-Year MRP: \$51,933 500-Year MRP: \$5,524,665 Annualized Loss: \$57,255	Frequent	39	High
Severe Winter Storm	1% of GBS: \$242,247,630 5% of GBS: \$1,211,238,149	Frequent	39	High
Drought	Not available	Frequent	21	Medium
Earthquake	500-Year MRP: \$15,736,929 2,500-Year MRP: \$167,771,982 Annualized Loss: \$209,529	Occasional	20	Medium
Extreme Temperature	Not available	Frequent	18	Low

- a. Building damage ratio estimates based on FEMA 386-2 (August 2001)
- b. High = Total hazard priority risk ranking score of 31 and above
Medium = Total hazard priority risk ranking of 20-30
Low = Total hazard risk ranking below 20
- c. The valuation of general building stock and loss estimates was based on custom inventory for Broome County.
- d. Loss estimates for the severe storm and severe winter storm hazards are structural values only and do not include the value of contents.
- e. Loss estimates for the flood and earthquake hazards represent both structure and contents.
- f. The HAZUS-MH earthquake model results are reported by Census Tract.

E.) CAPABILITY ASSESSMENT

This section identifies the following capabilities of the local jurisdiction:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability
- Community resiliency
- Community political capability
- Community classification.

The county indicates that it has high administrative, technical, and fiscal capability; moderate planning, regulatory, and community resiliency, and community political capability; with a moderately willing political capability to enact policies or programs to reduce hazard vulnerabilities in the community.

The County also notes that County Planning can assist municipalities, but is not able to enact ordinances to regulate outside its own County facilities and structures.

E.1) Legal and Regulatory Capability

Regulatory Tools (Codes, Ordinances., Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of adoption)
1) Building Code	N	Local	
2) Zoning Ordinance	N	Local	
3) Subdivision Ordinance	N	Local	
4) NFIP Flood Damage Prevention Ordinance	N	Local	
4a) Cumulative Substantial Damages	N	Local	
4b) Freeboard	N	Local	
5) Growth Management	N	Local	
6) Floodplain Management / Basin Plan	N	Local or Watershed	
7) Stormwater Management Plan/Ordinance	Under development	Local: DPW - Engineering	MS4 Program Implemented – written plan in progress
8) Comprehensive Plan / Master Plan/ General Plan	Under development	Local: Planning	Currently developing county comp plan. Est completion July 2013
9) Capital Improvements Plan	Y	Local or County: Legislature with input from Depts: Public Works, Planning, etc.	Adopted annually as part of County budget process
10) Site Plan Review Requirements	N	Local	
11) Open Space Plan	Under development	Local or County: Environmental Management Council	EMC has been working on it for several years. Uncertain of when it will be complete.
12) Stream Corridor Management Plan	N	Local or Watershed	
13) Watershed Management or Protection Plan	Y - Regional	Local or Watershed: Southern Tier East Regional Planning and Development Board	Have a regional plan, Susquehanna Chemung Action Plan. Not at county level but do have an inspection/ maintenance plan for County flood control structures.
14) Economic Development Plan	Y	County: Planning	Will be updated as part of County Comp Plan
15) Comprehensive Emergency Management Plan	Under development	Local or County: Office of Emergency Services	Under active development
16) Emergency Response Plan	Y	Local or County: Office	

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Regulatory Tools (Codes, Ordinances., Plans)	Do you have this? (Y or N)	Enforcement Authority	Code Citation (Section, Paragraph, Page Number, Date of adoption)
		of Emergency Services	
17) Post Disaster Recovery Plan	N	Local	
18) Post Disaster Recovery Ordinance	N	Local	
19) Real Estate Disclosure Requirement	N	State	State Requirement
20) Other [Special Purpose Ordinances (i.e., critical or sensitive areas)]	N	Local or County	

E.2) Administrative and Technical Capability

Staff/ Personnel Resources	Available (Y or N)	Department/ Agency/ Position
1) Planner(s) or Engineer(s) with knowledge of land development and land management practices	Y	DPW-Engineering and Planning
2) Engineer(s) or Professional(s) trained in construction practices related to buildings and/or infrastructure	Y	DPW-Engineering
3) Planners or engineers with an understanding of natural hazards	Y	DPW-Engineering and Planning
4) NFIP Floodplain Administrator	N	Local municipalities have authority
5) Surveyor(s)	N	County contracts with consultants
6) Personnel skilled or trained in "GIS" applications	Y	Planning
7) Scientist familiar with natural hazards	N	
8) Emergency Manager	Y	Emergency Services
9) Grant Writer(s)	Y	Planning
10) Staff with expertise or training in benefit/cost analysis	N	Some staff has a general understanding but not expertise.

E.3) Fiscal Capability

Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
1) Community Development Block Grants (CDBG)	Y
2) Capital Improvements Project Funding	Y
3) Authority to Levy Taxes for specific purposes	Y
4) User fees for water, sewer, gas or electric service	Y
5) Impact Fees for homebuyers or developers of new development/homes	N
6) Incur debt through general obligation bonds	Y
7) Incur debt through special tax bonds	Y – But not generally used by County [If Private activity is very minimal as a part of a multipurpose issuance the County could issue private activity bonds for capitalizing a County owned asset. (County Finance, not to be included in text but just as an FYI)]
8) Incur debt through private activity bonds	Y – But not generally used by County [Counsel was unsure what special tax bonds were meant but thought what they understood the concept to be as unfeasible in New York State (County Finance, not to be included in text but just as an FYI)]

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Financial Resources	Accessible or Eligible to use (Yes/No/Don't know)
9) Withhold public expenditures in hazard-prone areas	Y
10) State mitigation grant programs (e.g. NYSDEC, NYCDEP)	Y
11) Other	



E.4) Community Classifications

Program	Classification	Date Classified
Community Rating System (CRS)	N/A	
Building Code Effectiveness Grading Schedule (BCEGS)	N/A	
Public Protection	N/A	
Storm Ready	Y	9/2005
Firewise	NP	

N/A = Not applicable. NP = Not participating. - = Unavailable.

The classifications listed above relate to the community’s effectiveness in providing services that may impact it’s vulnerability to the natural hazards identified. These classifications can be viewed as a gauge of the community’s capabilities in all phases of emergency management (preparedness, response, recovery and mitigation) and are used as an underwriting parameter for determining the costs of various forms of insurance. The CRS class applies to flood insurance while the BCEGS and Public Protection classifications apply to standard property insurance. CRS classifications range on a scale of 1 to 10 with class one (1) being the best possible classification, and class 10 representing no classification benefit. Firewise classifications include a higher classification when the subject property is located beyond 1,000 feet of a creditable fire hydrant and is within 5 road miles of a recognized Fire Station.

Criteria for classification credits are outlined in the following documents:

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

F. MITIGATION STRATEGY

F.1) Past Mitigation Actions/Status

The County noted that the 2007 Hazard Mitigation Plan is referenced in all plans that are developed by the County Planning Department. The 2007 HMP will also be incorporated in the County Comprehensive Plan, currently in development.

Other mitigation projects/activities that have been completed in Broome County include flood mitigation projects on many road and structure components, including mitigation as well as repair. For example:

- At structures (bridges and culverts) where stone scour protection exists, we have repaired any dislocated stone, but also added drilling and pinning with rebar to keep the rock in place during the next event.
- At structures where no rock existed prior to the flooding and where erosion occurred, the County has added drilled and pinned extra-heavy rock as a repair and as future protection against erosion and scour.



- Where scour and erosion has created plunge pool at outlets – which threaten to undermine culverts or wingwalls, we have repaired these with dumped rock (riprap) or in some cases extra-heavy stone to minimize chances of future damage.
- Where structure integrity is compromised due to scour and embankment loss behind wingwalls, extra-large stone repairs with drilling and pinning have been completed to protect the structure against future flooding.
- In areas of significant embankment loss, we have put in armored slope protection, or constructed rock walls to provide permanent stabilization instead of simple earthen slopes which could potentially fail during another flood event.
- Flood stage maps acquired for GIS.
- Secure updates of topographic mapping by LIDAR.
- Completed stormwater outfall mapping for all MS4 municipalities.
- Participated in the Floodplain Remapping process with FEMA and NYSDEC by assisting and organizing outreach efforts to affected residents and municipal representatives. Maps were put on hold while FEMA updates its methodology. Will continue to assist when the process is resumed.

Other mitigation projects/activities that are planned or ongoing in Broome County include:

- Flood extents for 2006 and 2011 were acquired for GIS.
- All flood mapping has been made available to the public via online GIS.
- Initiate and complete an inventory of localized flooding and drainage issues, along with developing mitigation strategies for three key areas through a grant received through the NYS Department of State Local Waterfront Redevelopment Program.
- Increasing communication and cooperation between county and local public works and highway departments so emergency response is more efficient and coordinated. Communication between municipalities through groups such as the Flood Task Force, Local Emergency Planning Committee and the Broome-Tioga Stormwater Coalition. Efforts have been made to start a DPW or Highway Superintendents roundtable meeting every few months to increase communication but this has not started yet.
- Utilization of early warning and evacuations systems, including NY Alert and reverse 911, for reducing loss to life and property by giving people time to move personnel property and possessions to safety or to evacuate to safe areas.
- Maintain database of ARC shelters and provide to public via GIS.
- Maintain and encourage working relationships with ARC. Participate in table top exercises dealing with human needs such as sheltering and evacuations.
- Continue training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).
- Continue support of the Local Emergency Planning Committee (LEPC) and coordinate the hazard mitigation plan update with efforts of the LEPC.
- Review existing local plans and efforts to ensure consistency with this plan's goals and objectives, and integrate the goals, objectives, and activities from this plan into existing regulatory documents and programs, where appropriate (including zoning ordinances, building codes, and land use policies).

- Develop an emergency management website that would provide information for public officials, emergency responders, and residents.
- Continue review of water level data during critical periods (spring, major storm events).
- Discourage development in hazard prone areas through 239 review process.
- Encourage the reduction of impervious surfaces through the comprehensive plan technical assistance process.
- Continue the annual River Bank clean-up.
- Encourage adoption of zoning ordinances at the local level that ensure developments served by private wells have adequate well recharge area.
- Review development plans through the 239 review process to ensure adequate water resources are available.

A summary matrix of the status of mitigation actions in the 2007 plan is provided below.

Description	Status					Review Comments (Funds Available, Grant Eligible, Sufficient resources available?)
	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	
1. Increase communication and cooperation to improve relationship between county and local public works and highway departments so emergency response is more efficient and coordinated.			X			Communication between municipalities through groups such as the Flood Task Force, Local Emergency Planning Committee and the Broome-Tioga Stormwater Coalition. Efforts have been made to start a DPW or Highway Superintendents roundtable meeting ever few months to increase communication but this has not started yet.
2. Understand the IT Contingency Planning Process and its place within the overall Broome County Government Continuity of Operations Plan and Business Continuity Plan process.	X					
3. Develop or reexamine Broome County Government's contingency policy and planning process and apply the elements of the planning cycle, including preliminary planning, business impact analysis, alternate site selection, and recovery strategies.	X					

Description	Status					Review Comments (Funds Available, Grant Eligible, Sufficient resources available?)
	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	
4. Develop or reexamine Broome County Government's IT contingency planning policies and plans with emphasis on maintenance, training, and exercising the contingency plan.	X					
5. Utilization of early warning and evacuations systems, including reverse 911, for reducing the loss to life and property by giving people time to move personnel property and possessions to safety or to evacuate to safe areas.			X	X		Instituted NY-Alert program locally continued use of reverse 911 during events. Utilized by OES on a regular basis.
6. Maintain database of ARC shelters and provide to public via GIS.			X			Maintained by ARC, have copy at OES
7. Maintain and encourage working relationships with ARC. Participate in table top exercises dealing with human needs such as sheltering and evacuations.			X			OES works with ARC on a fairly regular basis
8. Continue training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).			X			OES conducts regular training and exercises throughout the county to support NIMS/ICS
9. Update GIS data, including flood plains (including revisions), planimetrics (buildings and roads), and inundation mapping after actual events.		X				GIS staff have kept these current, have existing and preliminary floodplain available as well as inundation mapping.
10. Continue support of the Local Emergency Planning Committee (LEPC) and coordinate			X			Staff of emergency services and planning attend meetings regularly which are held monthly.

Description	Status					Review Comments (Funds Available, Grant Eligible, Sufficient resources available?)
	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	
the hazard mitigation plan update with efforts of the LEPC.						
11. Review existing local plans and efforts to ensure consistency with this plan's goals and objectives, and integrate the goals, objectives, and activities from this plan into existing regulatory documents and programs, where appropriate (including zoning ordinances, building codes, and land use policies).			X			As County plans are developed or updated, the Hazard Mitigation Plan goals are incorporated as applicable. County Planning offers technical assistance to some municipalities for development of their comprehensive plans. Incorporate Hazard Mitigation Plan recommendations.
12. Develop an emergency management website that would provide information for public officials, emergency responders, and residents.			X	X		OES website on the county webpage, also utilizing social media for better dissemination of information.
13. Assist in the update of flood plain (FIRM) maps – Jurisdictional Level. Specific assistance can be provided in the area of attending map update meetings held by FEMA, NYDEC and USGS; and identification of flood-prone areas outside of currently designated areas		X				The Planning Department has provide administrative assistance to state and federal representatives during the mapping process and has acted as a liaison to local municipalities, offering them assistance as needed. Preliminary maps were issued but not finalized, and are currently on hold while methodology is updated.
14. Acquire flood stage maps for GIS.				X		Can be found at bcgis.com
15. Secure updated topographic mapping by LIDAR.				X		GIS
16. Complete stormwater outfall mapping for all MS4 municipalities			X	X		This was completed but a review of the data is needed.

Description	Status					Review Comments (Funds Available, Grant Eligible, Sufficient resources available?)
	No Progress / Unknown	In Progress / Not Yet Complete	Continuous	Completed	Discontinued	
17. Develop an open-space plan of which flood mitigation will be one component		X			X	The Environmental Management Council has been working on this for several years but due to membership/administrative changes the project has been stalled, with very little progress.
18. Continue to review water level data during critical periods (spring, major storm events).			X			
19. Through 239 review process, discourage development in hazard prone areas.			X			Done in an advisory capacity but have no regulatory authority. Make note of wetlands or floodplains impacted based on GIS mapping.
20. Through the comprehensive plan technical assistance process, encourage the reduction of impervious surfaces			X			
21. Continue annual River Bank clean up.			X			
22. Encourage adoption of zoning ordinances at the local level that ensure developments served by private wells have adequate well recharge area			X			
23. Review development plans through the 239 review process to ensure adequate water resources			X			All pertinent reviews forwarded to Environmental Health who comments on these issues.
24. Consider non-structural flood hazard mitigation alternatives for at risk County properties within the floodplain, including those that have been identified as repetitive loss properties, such as acquisition/relocation, or elevation depending on feasibility.		X				According to DPW the County has seen little flood damage to county facilities during recent events, so may not be applicable.

F.2) Hazard Vulnerabilities Identified

The County identified certain hazard problems and problem areas where it has suffered damages/losses due to natural hazards. These problems and problem areas include:

- A. County roads and infrastructure (bridges, culverts, closed drainage systems and road embankments).
- B. Infrastructure damages due to flooding:
 - 1. Embankment erosion and collapse
 - 2. Bridge and culvert scour along footers, around wingwalls, and at inlet/outlet structures.
 - 3. Structure and road collapse due to loss of fines in bedding materials.

It is estimated that in Broome County, 63,989 residents live within the 1% annual chance flood area (NFIP Special Flood Hazard Area). Of the County's total land area, 5.4% is located within the 1% annual chance flood area. \$4,778,613,278 (11.3%) of the County's general building stock replacement cost value (structure and contents) is located within the 1% annual chance flood area.

There are 3,040 NFIP policies in the County. There are 626 policies located within the 1% annual chance flood area (based on preliminary maps as noted in the methodology in Section 5.1 of this Plan). FEMA has identified 318 Repetitive Loss (RL) including 57 Severe Repetitive Loss (SRL) properties in the county'

Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, in April 2012. These statistics are current as of January 31, 2012. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.

Further information regarding the community's participation in the NFIP is provided in the table below.

NFIP Summary

Municipality	# Policies (1)	# Claims (Losses) (1)	Total Loss Payments (2)	# Rep. Loss Prop. (1)	# Severe Rep. Loss Prop. (1)	# Policies in 1% Boundary (3)	# Policies in 0.2% Boundary (3)	# Policies Outside the 0.2% Flood Hazard (3)
Broome County	3,040	2,741	\$128,154,915	318	57	626	370	2,044

Source:

- (1) Policies, claims, repetitive loss and severe repetitive loss statistics provided by FEMA Region 2, in April 2012 using the “Comm_Name”. These statistics are current as of January 31, 2012. Please note the total number of repetitive loss properties includes the severe repetitive loss properties.
- (2) Total building and content losses from the claims file provided by FEMA Region 2 (current as of January 31, 2012).
- (3) The policy locations used are based on the latitude and longitude provided by FEMA Region 2.

HAZUS-MH estimates that for a 1% annual chance flood, \$1,355,932,058 (3.2%) of the municipality's general building stock replacement cost value (structure and contents) will be damaged, 20,615 people may be displaced, 16,840 people may seek short-term sheltering, and an estimated 236,615 tons of debris could be generated.

Please refer to the Hazard Profiles for additional vulnerability information relevant to this jurisdiction.

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F.3) PROPOSED HAZARD MITIGATION INITIATIVES

Note some of the identified mitigation initiatives are dependent upon available funding (grants and local match availability) and may be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities.

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
1.	Continue to improve communication and cooperation between county and local public works and highway departments for more efficient and coordinated emergency response.	N/A	All Hazards	3-1 4-5	Flood Task Force, Local Emergency Planning Committee, Broome-Tioga Stormwater Coalition	High	Low	County Budget (Staff Time)	On-going	Medium	ES
2.	Develop or assess a plan for the continuation of county services in the event of a disaster. This includes a plan for accommodating displaced departments due to impacted facilities, planning for information technology needs, and any other measures to minimize disruption to public services during a disaster.	N/A	All Hazards	1-1 3-1	DPW (Buildings and Grounds and Solid Waste); IT; County Executive; OES	High	Low/Med	County Budget (Staff Time)	Short term	Medium	ES, PR
3.	Continue to utilize early warning and evacuation systems, including NY Alert and reverse 911, for reducing loss to life and property by giving people time to move personnel property and possessions to safety or to evacuate to safe	N/A	All Hazards	2-1 2-5	OES	High	Low/Med	County Budget (Staff Time)	On-going	Medium	ES



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
4.	Maintain database of ARC shelters and provide to public via GIS.	N/A	All Hazards	2-3 2-4	ARC, OES, County Planning (GIS); County Health	High	Low	County Budget (Staff Time)	On-going	Medium	ES
5.	Maintain and encourage working relationships with ARC. Participate in table top exercises dealing with human needs such as sheltering and evacuations.	N/A	All Hazards	3-1 3-2	ARC; OES; County Health	Medium	Low	County Budget (Staff Time)	On-going	Medium	ES
6.	Continue training in the National Incident Command System (ICS), under the National Incident Management System (NIMS).	N/A	All Hazards	4-1 4-3 4-8	OES	High	Low	County Budget (Staff Time)	On-going	High	ES
7.	Update GIS data, including flood plains (including revisions), planimetrics (buildings and roads), and inundation mapping after actual events.	New and Existing	All Hazards	2-3	County Planning (Divisions of GIS)	Medium	Low	County Budget (Staff Time)	On-going	Medium	ES, PR, PE
8.	Continue support of the Local Emergency Planning Committee (LEPC) and coordinate the hazard mitigation plan update with efforts of the LEPC.	N/A	All Hazards	3-1 4-2	OES; County Planning	Medium	Low	County Budget (Staff Time)	On-going	Medium	ES, PR, PE
9.	Review existing local plans and efforts to ensure consistency with this plan's goals and objectives, and integrate the goals, objectives, and activities from this plan	New and Existing	All Hazards	1-7 3-1	County Planning	Medium	Low	County Budget (Staff Time)	Short Term	Medium	PR



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	into existing regulatory documents and programs, where appropriate (including zoning ordinances, building codes, and land use policies).										
10.	Continue to Maintain the OES website on the county webpage to provide information for public officials, emergency responders, and residents. Also continue utilizing social media for better dissemination of information.	N/A	All Hazards	2-2 2-3 2-5 2-6	OES	Medium	Low	County Budget (Staff Time)	On-going	Medium	ES, PR, PE
11.	Continue to assist in the update of the floodplain (FIRM) maps – Jurisdictional Level. Specific assistance can be provided in the area of organization of municipal and public meetings and identification of flood-prone areas outside of currently designated areas	Yes	Flood	1-1 1-3 2-3	County Planning	High	Low	County Budget (Staff Time)	Short Term	Medium	PR
12.	Include flood mitigation as a component of the open-space plan in development.	N/A	Flood	1-1 1-7 3-1	Environmental Management Council	Medium	Low	County Budget (Staff Time)/ Volunteer (Board Members)	Short Term	Low	PR
13.	Continue to review water level data during critical periods (spring, major storm events).	N/A	Flood	1-1 1-3	County Planning (Division of GIS) & OES	Medium	Low	County Budget (Staff Time)	On-going	Medium	ES
14.	Continue to discourage	New	Flood	1-8	County	Low	Low	County	On-going	Medium	PR



SECTION 9.1: BROOME COUNTY

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	development in hazard prone areas through the 239 review process.			1-9	Planning			Budget (Staff Time)			
15.	Through providing technical assistance in the comprehensive plan process, encourage hazard mitigation practices including the reduction of impervious surfaces and use of green infrastructure practices.	N/A	All Hazards	1-1 1-2 1-8 2-3	County Planning	Medium	Low	County Budget (Staff Time)	On-going	Medium	PR
16.	Continue annual River Bank clean up.	N/A	Flood	1-1	Environmental Management Council & Broome-Tioga Stormwater Coalition	Low	Low	County Budget (Staff Time/Supplies)	On-going	Medium	NR
17.	Encourage local zoning ordinances to ensure adequate well recharge area for developments served by private wells	N/A	Flood/Drought	1-4 1-5	County Planning	Medium	Low	County Budget (Staff Time)	On-going	Medium	NR
18.	Review development plans through the 239 review process to ensure adequate water resources	New	Drought	1-4	County Planning & County Health	Medium	Low	County Budget (Staff Time)	On-going	Medium	PR
19.	Consider flood hazard mitigation alternatives for at risk County properties within the floodplain, including those that have been identified as repetitive loss properties. These include the following: <ul style="list-style-type: none"> • Broome County Office Building • Veterans Memorial Arena • Broome Community College In addition, the following County-owned or managed parks are flood vulnerable: Grippen, Otisingo, Dorchester and En-Joie.										
	Please see above.	Existing	Flood	1-1 1-4	County DPW & County Planning	Medium	Medium	FEMA mitigation grant opportunities	Short Term DOF (Implementation)	Medium	PP
20.	Develop a program to	Existing	Flood	1-1	County DPW	Medium	Medium	Federal.	On-going	Medium	SP



SECTION 9.1: BROOME COUNTY

Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	continue erosion and scour protection / mitigation of structures (bridges and culverts) using native stone material and drilling & pinning prior to flooding events...			1-8 1-11	Engineering			State, County grant opportunities			
21. a	County-owned flood control Watershed Program: Bathymetric surveys of all county-owned flood control watershed reservoirs for prioritization of dredging and cleaning.	Existing	Flood	1-1 1-3 1-11	County DPW Engineering	High	Medium	County CIP Funding	Short Term (survey phase)	Medium	SP, NR
21. b	County-owned flood control Watershed Program: Schedule & obtain funding for dredging and cleaning of the watershed reservoirs.	Existing	Flood	1-1 1-11	County DPW-Engineering	High	High	Federal, State, County grant opportunities	Long Term DOF(clean-up phase)/On-going (maintenance)	Medium	SP
22.	Work with local school districts and higher educational facilities to understand and mitigate flood vulnerabilities.	Existing	Flood, severe storm	1-1 1-2 2-1 2-2 3-2	County Planning Dept/school district superintendents	M	L	County Budget	Short	H	PR, PE
23.	Review the County infrastructure maintenance program – including roads and roadside ditch cleaning and repair, culvert inspections and repair, bridge inspections and maintenance – to determine if there is anything else that we could be doing that would make this effort more effective in protecting against damage after storm and flood events.										
	Please see above.	New and Existing	Flood	1-1 1-3 1-4	County DPW – Engineering & Highways	Medium	Medium	County Budget	On-going	Low	PR, NR
24. a.	County-owned flood control Watershed Program: <ul style="list-style-type: none"> SITES analysis for outlet and overflow structures to determine scour and erosion 	New and Existing	Flood	1-1 1-11	County DPW - Engineering	High	Medium	County CIP Funding	Short Term (initial analysis)	High	PR



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	vulnerability and where additional protective measures are warranted.										
24. b	<p>County-owned flood control watershed program:</p> <ul style="list-style-type: none"> Results of SITES analysis will likely result in identification of further projects required to increase protective measures at overflow structures. 	New and Existing	Flood	1-1 1-11	County DPW - Engineering	Medium	Medium	Federal, State, County grant opportunities	Long Term DOF (repairs are identified)	High	SP
25. a.	<p>County-owned flood control Watershed Program:</p> <ul style="list-style-type: none"> Outlet pipe inspections using a video camera mounted on a small track-driven remote-controlled vehicle to be performed under low or no-flow conditions. 	Existing	Flood	1-1 1-11	Count DPW – Engineering	Medium	Medium	County CIP Funding	Short Term (initial analysis)	Medium	PR, NR
25b.	<p>County-owned flood control Watershed Program-</p> <p>Results of analysis could result in identification of upgrades and/or repairs that are needed in the outflow pipes to keep the dam outflow functioning correctly.</p>	Existing	Flood	1-1 1-3 1-11	County DPW - Engineering	Medium	Medium	Federal, State, County grant opportunities	Long Term DOF (repairs as identified)	Medium	SP



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
26. a.	County-owned flood control Watershed Program- Please see above	Existing	Flood	1-1 1-3 1-11	County DPW – Engineering	Medium	Medium	County CIP Funding – may be some federal funds through NRCS	Short Term	Medium	PR
26b.	County-owned flood control Watershed Program Project identification and cost estimates for repairs identified in 26a	Existing	Flood	1-1 1-3 1-11	County DPW - Engineering	Medium	Medium	County CIP Funding – may be some federal funds through NRCS		Medium	SP
27. a.	County-owned flood control Watershed Program Please see above.	Existing	Flood	1-1 1-3 1-11	County DPW – Engineering	Medium	Medium	County CIP Funding	Short Term	Medium	SP
27b.	County-owned flood control Watershed Program Implement specific projects identified in 27a above.	Existing	Flood	1-1 1-3 1-11	County DPW – Engineering	Medium	Medium	County CIP Funding		Low	PE, PR
28.	Provide technical assistance and support to local municipalities applying to the CRS program.	N/A	Flood	3-1 4-2	County Planning	Low	Low	County Budget	On-going	Low	PE, PR
29.	Conduct workshops for residents regarding hazard mitigation, flood insurance, disaster preparedness and related topics.	N/A	All Hazards	1-1 1-2 1-6 2-1	County Planning	Low	Low	County Budget	On-going	High	PE
30.	Provide technical	N/A	Flood	2-1	County	Medium	Low	County	On-going	Medium	PE



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	assistance to municipalities on hazard mitigation planning, hazard mitigation funding, flood insurance, flood mapping, and related issues through the Flood Task Force			2-2 2-3	Planning			Budget			
31.	Participate in the Upper Susquehanna River Basin Flood Risk Management Study currently underway by the Army Corps of Engineers	N/A	Flood	1-1 1-3 3-1	County Planning	Low	Low	County Budget	On-going DOF	Low	NR, PR
32.	Pursue green infrastructure initiatives as solutions to localized flooding and drainage issues for County-owned facilities and infrastructure.	New and Existing	Flood/ Drought	1-4 1-5	County Planning and DPW	Medium	Medium	Federal, State, County grant opportunities	On-going DOF	Low	NR
33.	Continue public education efforts and municipal training for stormwater management, green infrastructure, and other related issues.	N/A	Flood/ Severe Storms/ Drought	2-1 2-2 2-4	Broome-Tioga Stormwater Coalition	Low	Low	County Budget, Federal training opportunities	On-going	Medium	PE
34. a	Watershed-based Mitigation Strategy: 1.) Identify and map areas of concern for localized flooding and drainage and prioritize target areas. 2.) Develop plans for mitigating issues in three target areas.	N/A	Flood/ Severe Storms	1-1 1-8 2-3	County Planning	Medium	Medium	NYS Dept. of State--LWRP	Short Term	Medium	NR
34. b	Watershed-based Mitigation Strategy: Assist municipalities in obtaining funding for	N/A	Flood/ Severe Storms	1-1 3-1 1-8	County Planning	Medium	Medium	Federal grant opportunities County	Short Term DOF	Medium	NR, PR



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
	the implementation of plans developed in the strategy for the three target areas.							Budget			
34. c	Watershed-based Mitigation Strategy: Utilize strategy to identify additional opportunities for planning and implementation of mitigation actions for areas identified in the study.	N/A	Flood/ Severe Storms	1-3 1-8	County Planning	Medium	Medium	Federal, State, grant opportunities County Budget	DOF	Medium	NR, PR
35.	Evaluate available mapping data associated with stormwater and water resource infrastructure. Collect existing data and fill in gaps where information is missing.	N/A	Flood/ Severe Storms/ Drought/ Extreme Temps	1-3	County Planning and GIS	Medium	Medium	County Budget	Short Term	Low	PR
36.	Continued support of consistent funding for river gauges through inclusion as a Federal budget line item.	N/A	Flood	1-1 1-3	Flood Task Force	Medium	Low	County Budget (Staff Time)	Short Term DOF	High	PR, PE
37.	Implement outreach and education efforts for realtors, municipalities and homebuyers regarding real estate disclosure in hazard areas.	N/A	All Hazards	1-2 1-6 2-1	County Planning & Flood Task Force	Low	Low	County Budget (Staff Time)	Short Term	Low	PE
38.	Explore further opportunities to leverage flood inundation mapping to support emergency management and public awareness during flood events.	N/A	Flood	1-3 2-1 2-3	County Planning (GIS)	Low	Low/Med	County Budget	On-going	Low	ES



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Initiative	Mitigation Initiative	Applies to New and/or Existing Structures*	Hazard(s) Mitigated	Goals and Objectives Met	Lead and Support Agencies	Estimated Benefits	Estimated Cost	Sources of Funding	Timeline	Priority	Mitigation Category
39.	Improve integration and coordination for protection of vulnerable populations.	N/A	All Hazards	1-1 1-2 2-1 4-6	County Mental Health	Medium	Low/Med	County Budget	Short Term	Medium	ES
40.	Use modeling to anticipate transportation routes expected to be impacted during flood events and identify/establish alternate routes. Identify alternate routes that are of a high priority due to presence of essential facilities (i.e. hospitals, shelters)										
	Please see above.	N/A	Flood	4-4 4-5	County Planning/ BMTS/Transit	High	Low/Med	County Budget	Short Term	Medium	ES
41.	Develop plan for transition to alternate routes during a hazard event and dissemination of information to the public and municipal agencies.	N/A	Flood	4-4 4-6	County Planning/ BMTS/ NYS DOT/ OES/Transit	High	Low/Med	County Budget	Short Term DOF	Medium	ES, PE
42.	Support NYS Department of Transportation and Federal Highway Administration vulnerability assessment for transportation infrastructure pilot project.	Existing	Flood	3-1 3-3	NYS DOT	Low	Low	FHWA	Short Term DOF	Low	PR

Notes:

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

Acronyms

- ARC American Red Cross
- BCIDA Broome County Industrial Development Agency
- BCOES Broome County Office of Emergency Services
- BCPD Broome County Planning Department and Economic Development
- BCSWCD Broome County Soil and Water Conservation District
- FEMA Federal Emergency Management Agency
- NFIP National Flood Insurance Program
- NYSDEC New York State Department of Environmental Conservation
- NYS DOT New York State Department of Transportation



NYSEG	New York State Electric and Gas
NYSFSMA	New York State Floodplain and Stormwater Managers Association
NYSOEM	New York State Office of Emergency Management
USACE	United States Army Corp of Engineers
USGS	United States Geological Survey

Costs:

Where actual project costs have been reasonably estimated:

Low = < \$10,000

Medium = \$10,000 to \$100,000

High = > \$100,000

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

Low = Possible to fund under existing budget. Project is part of, or can be part of an existing on-going program.

Medium = Could budget for under existing work-plan, but would require a reappropriation of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.

High = Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

Benefits:

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

Low = < \$10,000

Medium = \$10,000 to \$100,000

High = > \$100,000

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

Low = Long term benefits of the project are difficult to quantify in the short term.

Medium = Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.

High = Project will have an immediate impact on the reduction of risk exposure to life and property.

Potential FEMA HMA Funding Sources:

PDM = Pre-Disaster Mitigation Grant Program

FMA = Flood Mitigation Assistance Grant Program

RFC = Repetitive Flood Claims Grant Program

SRL = Severe Repetitive Loss Grant Program

HMGP = Hazard Mitigation Grant Program

Timeline:

Short = 1 to 5 years. Long Term = 5 years or greater. OG = On-going program.

DOF = Depending on funding.

Notes (for Mitigation Type):

1. PR=Prevention: Government, administrative or regulatory actions or processes that influence the way land and buildings are developed and built Examples of these are acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.

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2. PP= Property Protection: These actions also include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
3. PE=Public Education and Awareness: Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
4. NR=Natural Resource Protection: Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
5. SP=Structural Projects: Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
6. ES=Emergency Services: Actions that protect people and property, during and immediately following, a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

G.) PRIORITIZATION OF MITIGATION INITIATIVES

Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
1	2	H	L	Y	N	Y	M
2	2	H	L	Y	N	N	M
3	2	H	M	Y	N	Y	M
4	2	H	L	Y	N	Y	M
5	2	M	L	Y	N	Y	M
6	3	H	L	Y	N	Y	H
7	1	M	L	Y	N	Y	M
8	2	M	L	Y	N	Y	M
9	2	M	L	Y	N	N	M
10	4	M	L	Y	N	Y	M
11	3	H	L	Y	N	N	M
12	3	M	L	Y	N	N	L
13	2	M	L	Y	N	Y	M
14	2	L	L	Y	N	Y	M
15	4	M	L	Y	N	Y	M
16	1	L	L	Y	N	Y	M
17	2	M	L	Y	N	Y	M
18	1	M	L	Y	N	Y	M
19	2	M	M	Y	N	N	M
20	3	M	M	Y	N	Y	M
21a	3	H	M	Y	Y	N	M
21b	2	H	H	Y	Y	N	M
22	5	M	L	Y	N	Y	H
23	3	M	M	Y	N	Y	L
24a	2	H	M	Y	Y	N	H
24b	2	M	M	Y	Y	N	H
25a	2	M	M	Y	Y	N	M
25b	3	M	M	Y	Y	N	M
26a	3	M	M	Y	Y	N	M
26b	3	M	M	Y	Y	N	M
27a	3	M	M	Y	Y	N	M
27b	3	M	M	Y	Y	N	M

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Initiative #	# of Objectives Met	Benefits	Costs	Do Benefits equal or exceed Costs? (Yes or No)	Is project Grant eligible? (Yes or No)	Can Project be funded under existing programs/budgets? (Yes or No)	Priority (High, Med., Low)
28	2	L	L	Y	N	Y	L
29	4	L	L	Y	N	Y	H
30	3	M	L	Y	N	Y	M
31	3	L	L	Y	N	N	L
32	2	M	M	Y	Y	N	L
33	3	L	L	Y	Y	Y	M
34a	3	M	M	Y	Y	N	M
34b	3	M	M	Y	Y	N	M
34c	2	M	M	Y	Y	N	M
35	1	M	M	Y	N	N	L
36	2	M	ML	Y	N	N	H
37	3	L	L	Y	N	N	L
38	3	L	L	Y	N	Y	L
39	3	M	L	Y	N	N	M
40	2	H	L	Y	N	N	M
41	2	H	L	Y	N	N	M
42	2	L	L	Y	Y	N	L

Notes: H = High. L = Low. M = Medium. N = No. N/A = Not applicable. Y = Yes.

Explanation of Priorities

High Priority = A project that meets multiple objectives (i.e., multiple hazards), benefits exceeds cost, has funding secured or is an on-going project and project meets eligibility requirements for the Hazard Mitigation Grant Program (HMGP) or Pre-Disaster Mitigation Grant Program (PDM) programs. High priority projects can be completed in the short term (1 to 5 years).

Medium Priority = A project that meets goals and objectives, benefits exceeds costs, funding has not been secured but project is grant eligible under, HMGP, PDM or other grant programs. Project can be completed in the short term, once funding is completed. Medium priority projects will become high priority projects once funding is secured.

Low Priority = Any project that will mitigate the risk of a hazard, benefits do not exceed the costs or are difficult to quantify, funding has not been secured and project is not eligible for HMGP or PDM grant funding, and time line for completion is considered long term (1 to 10 years). Low priority projects may be eligible other sources of grant funding from other programs. A low priority project could become a high priority project once funding is secured as long as it could be completed in the short term.

Prioritization of initiatives was based on above definitions: Yes

Prioritization of initiatives was based on parameters other than stated above: Not applicable.

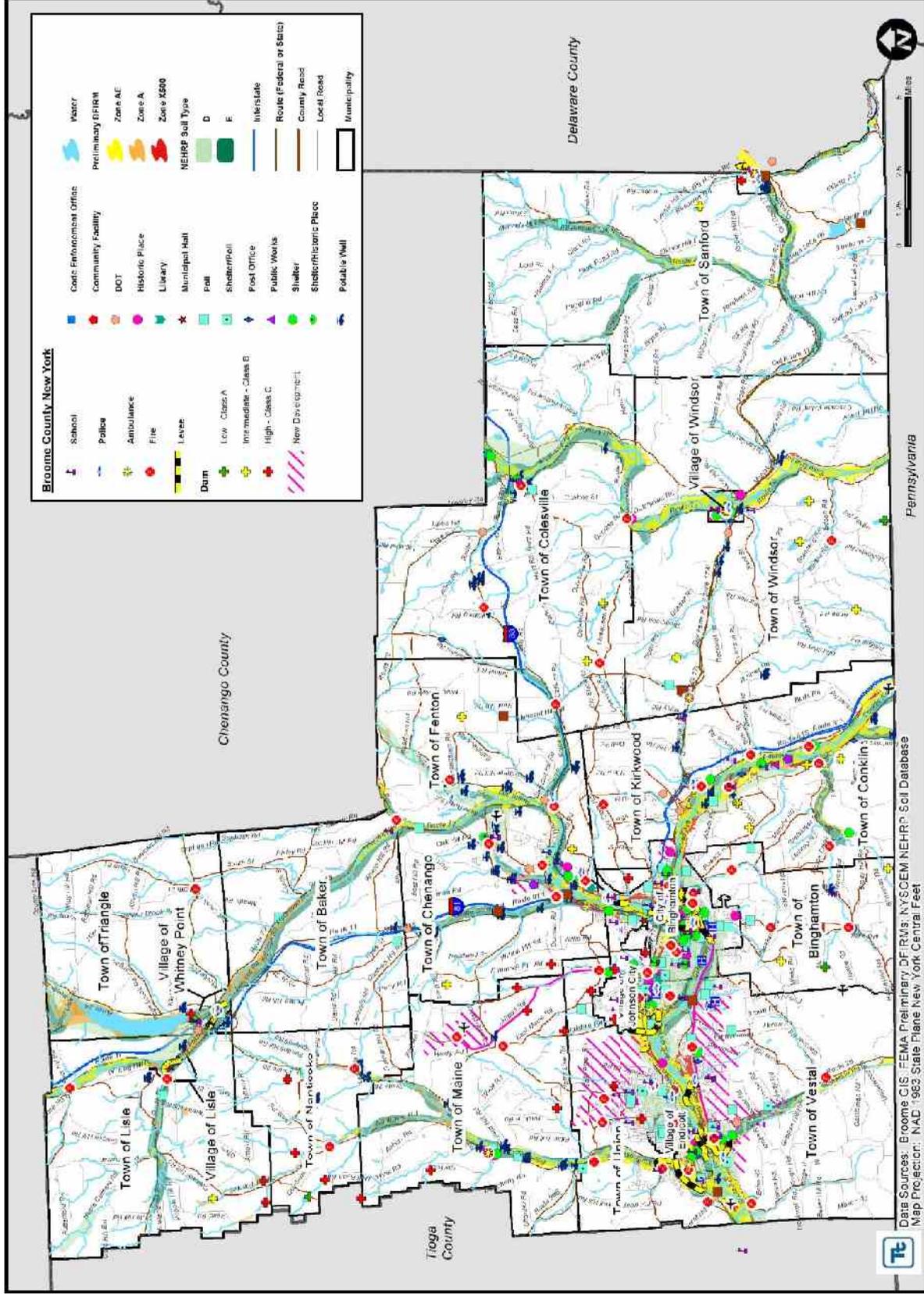
H.) FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Studies and investigations have been included in Table F-3 (Proposed Hazard Mitigation Initiatives) which will assist Broome County in identifying needs, risks, and vulnerabilities of County infrastructure and flood control structures.

I.) HAZARD AREA EXTENT AND LOCATION

A hazard area extent and location map has been to illustrate the probable areas impacted within Broome County and is provided on the next page. This map is based on the best available data at the time of the preparation of this Plan, and is considered to be adequate for planning purposes. Maps have only been generated for those hazards that can be clearly identified using mapping techniques and technologies, and for which the County has significant exposure. The Planning Area maps are provided in the hazard profiles within Section 5.4, Volume I of this Plan and in the municipal annexes in Section 9 of this plan.

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J.) STATUS OF INCORPORATION OF MITIGATION PLANNING INTO EXISTING AND FUTURE PLANNING MECHANISMS

It is the intention of the County to incorporate mitigation planning as an integral component of daily operations. Below is a list of planning mechanisms that have been/will be incorporated into procedures.

Planning Mechanisms	Has Been Utilized	Will Be Utilized
Operating Budget When constructing upcoming budgets, Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.	X	X
Capital Improvement Budget When constructing upcoming budgets Hazard Mitigation Actions will be funded as budget allows. Construction projects will be evaluated to see if they meet the Hazard Mitigation goals and objectives.	X	X
Human Resource Manual Employee job descriptions may contain Hazard Mitigation Actions.		X
Building and Zoning Ordinances A variety of building and zoning regulations are used to restrict the uses of land and establish building specifications. Prior to land use, zoning changes or development permitting the county will review the hazard mitigation plan and other hazard analysis to ensure consistent and compatible land use.	N/A	N/A
Comprehensive Land Use Plan A land use plan is intended to identify land use issues and to make recommendations on how to address these issues. When applicable the county will incorporate Hazard Mitigation Actions in the development and extent of the regulations.		X
Grant Applications Data and maps will be used as supporting documentation in grant applications	X	X
Municipal Ordinances When updating municipal ordinances Hazard Mitigation will be a priority.	N/A	N/A
Fire Plan The Hazard Mitigation Plan will be used as a resource for the development of future Fire Plans.	N/A?	N/A?
Capital Improvement Planning The municipality will establish a protocol to review current and future projects for hazard vulnerability. The will incorporate hazard resistant construction standards into the design and location of projects.		X
Day to Day Operations Incorporate Hazard Mitigation Actions in daily operations and all projects will be a goal of the municipality.	X	X
Local School Service Projects The County will work with the local school district(s) and assist with community service projects for the service organizations as they relate to Hazard Mitigation Actions.		X

Planning Mechanisms	Has Been Utilized	Will Be Utilized
Municipal Budget- Adopted annually the County will look at Mitigation Actions when allocating funding.		X
Economic Development- The local economic development group will utilize the identification of hazard areas when assisting new business in finding a location.	X	X

K.) ADDITIONAL COMMENTS

No additional comments at this time.