

## **Table of Contents**

### **Section 1.0 – Introduction**

#### **1.1 – Plan Summary**

#### **1.2 - State Background Information**

##### 1.2.1 – Land Area

##### 1.2.2 – Bodies of Water

###### 1.2.2.1 – Rivers

###### 1.2.2.2 - Lakes

#### **1.3 - Population and Development**

#### **1.4 – Summary of 2011 New York State Hazard Mitigation Plan Revisions**

### **Section 2.0 – State Coordination Efforts & Capabilities**

#### **2.1 – Multi-Hazard Mitigation Planning Process**

##### 2.1.1 – The Plan Update Process

##### 2.1.2 – Information Gathering Process

##### 2.1.3 – Review and Integration of Existing Plans and Documents

#### **2.2 – Integration with State Planning Efforts**

##### 2.2.1 – Incorporation of Mitigation into Other State Planning Efforts

#### **2.3 - State Agencies**

##### 2.3.1 - New York State Office of Emergency Management (NYSOEM)

##### 2.3.2 - New York State Department of State (DOS)

##### 2.3.3 – New York State Division of Homeland Security & Emergency Services (DHSES) – Office of Fire Prevention and Control (OFPC)

##### 2.3.4 - New York State Department of Environmental Conservation (DEC)

##### 2.3.5 - Office of Parks, Recreation, and Historical Preservation (OPRHP)

##### 2.3.6 - New York State Bridge Authority (NYSBA)

##### 2.3.7 - New York State Department of Agriculture and Markets (AGMKT)

##### 2.3.8 - New York State Division of Housing and Community Renewal (DHCR)

##### 2.3.9 - New York State Department of Transportation (DOT)

##### 2.3.10 - New York State Office of General Services (OGS)

##### 2.3.11 – New York State Thruway Authority (NYSTA)

##### 2.3.12 – New York State Metropolitan Transit Authority (MTA)

##### 2.3.13 – New York/New Jersey Port Authority (NY/NJPA)

#### **2.4 - Coordination with Other Agencies**

#### **2.5 - Federal Agencies**

##### 2.5.1 - Federal Emergency Management Agency (FEMA)

##### 2.5.2 - United States Department of Interior (DOI)

##### 2.5.3 - United States Army Corps of Engineers (USACE)

##### 2.5.4 - Natural Resource Conservation Service (NRCS)

#### **2.6 - Local Agencies**

##### 2.6.1 - Environmental Emergency Services, Inc. (EES): Chemung & Steuben Counties

##### 2.6.2 - Hudson River - Black River Regulating District (HRBRRD)

##### 2.6.3 - New York City Department of Environmental Protection (NYCDEP)

##### 2.6.4 - Genesee/Finger Lakes Regional Planning Council (G/FLRPC)

## **2.7 - Inter-State Agreements**

- 2.7.1 - Delaware River Basin Commission (DRBC)
- 2.7.2 - Susquehanna River Basin Commission (SRBC)
- 2.7.3 - Northeastern Forest Fire Protection Compact (NFFPC)

## **Section 3.0 – Hazard Profile & Risk Assessment**

### **3.1 – New York State Hazard Identification**

### **3.2 – Risk Analysis**

- 3.2.1 - U.S. Census Local Population and Housing Data
- 3.2.2 - Use of Planning Tools in Local Plan Development
- 3.2.3 - FEMA Profiling Requirements
- 3.2.4 - Description of State Facilities

### **3.3 - Profiling Hazard Events, Assessing Vulnerability, & Estimating Loss**

- 3.3.1 - Past Major Disaster Events
- 3.3.2 - Climate Change
- 3.4 - Flood Hazard Profile
  - 3.4.1 - NFIP Analysis
  - 3.4.2 - Exposure Analysis (RPS)
  - 3.4.3 - NFIP-RPS Comparison
  - 3.4.4 - Flood Hazard Profile (Continued)
- 3.5 - Hurricane Hazard Profile
- 3.6 - Tornado Hazard Profile
- 3.7 - Winter Storm Hazard Profile
- 3.8 - Hail Storm Hazard Profile
- 3.9 - Wildfire Hazard Profile
- 3.10 - Drought Hazard Profile
- 3.11 - Extreme Temperatures Hazard Profile
- 3.12 - Earthquake Hazard Profile
- 3.13 - Landslide Hazard Profile
- 3.14 - Land Subsidence Hazard Profile
- 3.15 - Power Failure Hazard Profile

## **Section 4.0 – Mitigation Strategy**

### **4.1 – Hazard Mitigation Goals**

- 4.1.1 State Hazard Mitigation Vision
- 4.1.2 Goals and Update Assessment

### **4.2 – State Capability Assessment**

- 4.2.1 - Local Capability Assessment

### **4.3 – Mitigation Projects, Actions, and Activities**

- 4.3.1 Mitigation Projects
- 4.3.2 Mitigation Actions and Activities
  - 4.3.2.1 Multi-Hazard
  - 4.3.2.2 Flood Hazard
  - 4.3.2.3 Landslide Hazard
  - 4.3.2.4 Wildfire Hazard
  - 4.3.2.5 Winter Storm Hazard
  - 4.3.2.6 Earthquake Hazard

**Section 5.0 –Local Mitigation Planning**

**5.1 – Technical Assistance**

5.1.1 Mitigation Section, (NYSOEM)

**5.2 – Funding Sources**

**5.3 – Local Plan Integration**

5.3.1 Reviewing, Coordinating, and Integrating Local Plans

5.3.2 Timeframe for Reviewing Local Plans

**5.4 – Prioritizing Local Assistance**

5.4.1 Cost Effectiveness of Projects

**Section 6.0 –Plan Maintenance Procedures**

**6.1 - Plan Monitoring and Evaluation System**

**6.2 – Plan Updating System**

6.2.1 Plan Evaluation Criterion

**Section 7.0 –Monitoring Progress of Mitigation Activities**

**7.1 – Project Management**

7.1.1 Initiation of Projects

7.1.2 Eligibility Determination

7.1.3 Monitoring Progress of Mitigation Activities

7.1.4 Project Closeouts

7.1.5 Documentation

**Section 8.0 – Reserved for Future Development**

**Section 9.0 – Reserved for Future Development**

**Section 10.0 – Reserved for Future Development**

**Section 11.0 – Reserved for Future Development**

**Section 12.0 – Mitigation Plan Adoption Process**

**12.1 – Formal Adoption Process**

**12.2 – Authorities and References**

12.2.1 – New York State

12.2.2 – Federal

12.2.3 - Sample Adoption Resolution

## **Appendices**

**Appendix 1** – NFIP, RPS, & NFIP/RPS Comparison Spreadsheet Data and NYS RPS Property Classification List (N.b.: data spreadsheets *must* be opened with Excel program)

**Appendix 2** – Planning Activity Application and Project Evaluation & Priority Ranking System Forms, Multi-Hazard Mitigation Planning Grant – Application (HMGP-1827 example)

## **Figures and Tables**

### **Section 1.0 -Tables**

1-1 New York State Facts

1-2 New York State General Building Stock Dollar Value Exposure by County

1-3 Summary of 2011 State Plan Revisions

### **Section 1.0 -Figures**

1-1 New York State Topography

1-2 New York State County Population Change 2005-2009

1-3 New York State Municipality Population Change 2000-2009

1-4 New York State Municipal 2009 Population Estimates

1-5 New York State County 2009 Population Estimates

### **Section 2.0 -Tables**

2-1 Planning Participants

2-2 Summary of Plan Development Collaboration

2-3 Summary of 2010 User Survey Results

2-4 State Agencies Roles In Mitigation Efforts

2-5 Local Waterfront Revitalization Plans in New York State

2-6 List of Coastal Water Bodies and Designated Inland Waterways

2-7 NFIP - Community Rating System (CRS) Participants

### **Section 2.0 –Figures**

2-1 Disaster Preparedness Commission (DPC) Organizational Chart

2-2 High Hazard Dams in New York State

### **Section 3.0 -Tables**

3-1 Hazard Definitions

3-2 U.S. Census Local Population and Housing Data

3-3 New York State Entities

3-4 FEMA Historical Disaster Declarations

### **Flood**

3-5 Ice Jam Database: Ice Jam Event Ranking by State

3-6 Ice Jam Flooding Events Occurring Between 3/2/2007 and 3/11/2009

3-7 Coastal Flooding Events Reported in New York Between 9/1/1815 and 11/14/2009

3-8 Coastal Erosion Hazard Area Communities

- 3-9 Historical Incidents of Flooding (undeclared events)
- 3-10 Incidents of Flooding (undeclared events) 2004-2007
- 3-10.1 Incidents of Flooding (both declared and undeclared between 4/1/2007 and 1/26/2010)
- 3-11 Major Flood Disaster Declarations (1954-2003)
- 3-12 Major Flood Disaster Declarations (2004-2007)
- 3-13 Major Flood Disaster Declarations (2007-2010)
- 3-14 Detailed County NFIP Data
- 3-15 National Flood Insurance Program (NFIP) Policy Growth
- 3-16 Repetitive Loss Properties
- 3-17 Severe Repetitive Loss Properties by Community
- 3-18 National Flood Insurance Program CRS Participants
- 3-19 County Jurisdiction Threatened and Vulnerable to Flood Loss (excluding Q3 data)
- 3-20 Estimating Potential Flood Loss by County
- 3-21 Estimating Potential Flood Loss by County 2005 Table (for comparison only)
- 3-22 Flood Hazard Exposure (in 100 year Flood plain) New York State Agency Facilities

### **Hurricane**

- 3-23 Saffir Simpson Hurricane Scale
- 3-24 Estimated Population Growth For Counties Susceptible to Hurricane and/or Tropical Storm Damage
- 3-25 Historical Major Disaster Declarations
- 3-26 Historic Hurricane Tracking Through New York State
- 3-27 Wind Hazard Exposure (FEMA Wind Zone Hurricane Susceptible Region) New York State Agency Facilities
- 3-28 Jurisdiction Most Threatened by Extreme Wind and Vulnerable to Extreme Wind Loss
- 3-29 New York State Public and Private Mapping and Modeling
- 3-30 Estimated Population Residing Within Hurricane Storm Surge Zones

### **Tornado**

- 3-31 Enhanced Fujita Scale
- 3-32 Tornado Events (by County) 1950 - 2007
- 3-33 Frequency and Magnitude of Past Tornado Events in New York State
- 3-34 Tornadoes in New York State Causing Two or More Deaths

### **Winter Storm**

- 3-35 Snow and Ice Related Disaster Events
- 3-36 Jurisdictions Most Threatened by Snow and Vulnerable to Snow Loss
- 3-37 Jurisdictions Most Threatened by Ice Storms and Vulnerable to Ice Storm Loss
- 3-38 Snow Hazard Exposure New York State Agency Facilities

### **Hail Storm**

- 3-39 Hail Description and Diameter (Inches)
- 3-40 National Climatic Data Center: New York State Hail Information 05-07 1Inch or Greater
- 3-41 Annualized Crop Losses from Hail by County

### **Wildfire**

3-42 Wildfire Occurrence Statistics 1985-2009

3-43 State Facilities – Assessing Vulnerability & Estimating Loss for Wildfire Hazard

### **Drought**

3-44 Past Occurrences of Drought in New York State

3-45 New York State Drought Plan Monitoring Component

3-46 Summary of Response Actions in Drought Conditions: State, Local, and Water Suppliers

### **Extreme Temperatures**

3-47 Adverse Effects of Prolonged Heat Exposure

3-48 National Weather Service Alert Procedures

3-49 Health Hazards and Symptoms Associated with Extreme Heat Conditions

3-50 NWS Terms for Extreme Cold

3-51 NCDC Recorded Extreme Temperature Events

### **Reserved for Future Use**

3-52

### **Earthquake**

3-52 Magnitude and Intensity Comparison

3-53 Modified Mercalli Intensity (MMI) and PGA Equivalents

3-54 Earthquake History Throughout New York State 1737-2005

3-55 New York State Declared Earthquake Disasters from 1950-2007

3-56 Earthquake Hazard Exposure (by PGA Value) of New York State Agency Facilities

3-57 Estimated Annualized Earthquake Losses for the United States

3-58 HAZUS-MH Estimated Annualized Losses for NYS

3-59 HAZUS-MH Earthquake Loss Estimation by County

3-60 HAZUS-MH Earthquake Annualized Loss Estimation and Ranking Results

3-61 A Summary of the Findings of the NYCEM Report

Comment [NF1]: Review after Dan's input

### **Landslide**

3-62 Landslide Incidence/Susceptibility Color Code

3-63 Landslide Events 1837-2007

3-64 Fatal Landslides 1837-2007

3-65 Non-Fatal Landslides 1963-2007

3-66 Historic Landslide Events

3-67 Jurisdiction Most Threatened by Landslide and Vulnerable to Landslide Loss

3-68 Landslide Hazard Exposure of New York State Agency Facilities

### **Land Subsidence**

No Tables

### **Power Failure**

3-69 Power Failure Emergency Declaration

### **Section 3.0 - Figures**

3-1 New York State Counties

3-2 Presidential Disaster Declarations New York State 1954 – November 2010

3-3 Damages Required for Disaster Declaration – effective October 1, 2010

### **Flood**

3-4 New York State Topography

3-5 Number of Ice Jam Incidents on New York State Rivers

3-6 Coastal Erosion Hazard Areas

3-7 Presidential Disaster Declarations of Flooding Events 1953 - June 2010

3-8 National Flood Insurance Program Number of Policies by County

3-9 National Flood Insurance Program-Change in the Number of Policies 2007-2010 by County

3-10 National Flood Insurance Program Insurance Number of Policies by Municipality

3-11 National Flood Insurance Program Insurance in Force by County

3-12 National Flood Insurance Program Change of Insurance in Force 2007-2010 by County

3-13 National Flood Insurance Program Total Insurance in Force by County

3-14 National Flood Insurance Program Change in Total Insurance in Force 2007-2010 by

Municipality

3-15 National Flood Insurance Program Total Claims 1978-2010 by County

3-16 National Flood Insurance Program Change in Claims 2007-2010 by County

3-17 National Flood Insurance Program Total Claims Paid between 1978-2010 by County

3-18 National Flood Insurance Program Total Claims Paid between 2007-2010 by County

3-19 National Flood Insurance Program Total Claims Paid between 2007-2010 by Municipality

3-20 National Flood Insurance Program Total Claims Paid between 1978-2010 by Municipality

3-21 National Flood Insurance Program Total Claims Paid Divided by County Population

3-22 Reserved for Future Development

3-23 Reserved for Future Development

3-24 Reserved for Future Development

3-25 Reserved for Future Development

3-26 Reserved for Future Development

3-27 Reserved for Future Development

3-28 Reserved for Future Development

3-29 100-Year Floodplain Property Exposure Analysis

3-30 The Number of Residential Properties in a 100 Year Flood Zone by County

3-31 The Number of Residential Properties in a 100 Year Flood Zone by Municipality

3-32 Municipal Per Capita Residential Property Value in a 100 Year Flood Zone by County

3-33 Municipal Per Capita Residential Property Value in a 100 Year Flood Zone by Municipality

3-34 Municipal Per Capita Total Property Value in a 100 Year Flood Zone by County

3-35 Municipal Per Capita Total Property Value in a 100 Year Flood Zone by Municipality

3-36 Total Value of Properties in a 100 Year Flood Zone by County

3-37 Total Value of Residential Property in a 100 Year Flood Zone by County

3-38 Total Value of Residential Property in a 100 Year Flood Zone by Municipality

3-39 Total Value of Properties in a 100 Year Flood Zone by Municipality

3-40 Albany County Residential Property Exposure in 100 Year Floodplains

3-41 Allegany County Residential Property Exposure in 100 Year Floodplains

3-42 Broome County Residential Property Exposure in 100 Year Floodplains

- 3-43 Cattaraugus County Residential Property Exposure in 100 Year Floodplains
- 3-44 Cayuga County Residential Property Exposure in 100 Year Floodplains
- 3-45 Chautauqua County Residential Property Exposure in 100 Year Floodplains
- 3-46 Chemung County Residential Property Exposure in 100 Year Floodplains
- 3-47 Chenango County Residential Property Exposure in 100 Year Floodplains
- 3-48 Columbia County Residential Property Exposure in 100 Year Floodplains
- 3-49 Cortland County Residential Property Exposure in 100 Year Floodplains
- 3-50 Delaware County Residential Property Exposure in 100 Year Floodplains
- 3-51 Dutchess County Residential Property Exposure in 100 Year Floodplains
- 3-52 Erie County Residential Property Exposure in 100 Year Floodplains
- 3-53 Genesee County Residential Property Exposure in 100 Year Floodplains
- 3-54 Herkimer County Residential Property Exposure in 100 Year Floodplains
- 3-55 Jefferson County Residential Property Exposure in 100 Year Floodplains
- 3-56 Livingston County Residential Property Exposure in 100 Year Floodplains
- 3-57 Madison County Residential Property Exposure in 100 Year Floodplains
- 3-58 Monroe County Residential Property Exposure in 100 Year Floodplains
- 3-59 Niagara County Residential Property Exposure in 100 Year Floodplains
- 3-60 Oneida County Residential Property Exposure in 100 Year Floodplains
- 3-61 Onondaga County Residential Property Exposure in 100 Year Floodplains
- 3-62 Ontario County Residential Property Exposure in 100 Year Floodplains
- 3-63 Orange County Residential Property Exposure in 100 Year Floodplains
- 3-64 Oswego County Residential Property Exposure in 100 Year Floodplains
- 3-65 Rensselaer County Residential Property Exposure in 100 Year Floodplains
- 3-66 Rockland County Residential Property Exposure in 100 Year Floodplains
- 3-67 Saratoga County Residential Property Exposure in 100 Year Floodplains
- 3-68 Steuben County Residential Property Exposure in 100 Year Floodplains
- 3-69 Suffolk County Residential Property Exposure in 100 Year Floodplains
- 3-70 Sullivan County Residential Property Exposure in 100 Year Floodplains
- 3-71 Tioga County Residential Property Exposure in 100 Year Floodplains
- 3-72 Tompkins County Residential Property Exposure in 100 Year Floodplains
- 3-73 Ulster County Residential Property Exposure in 100 Year Floodplains
- 3-74 Westchester County Residential Property Exposure in 100 Year Floodplains
- 3-75 Number of Residential Properties in a 100 Year Flood Zone Compared to the Number of NFIP Policies in Either an A-Zone or V-Zone by County
- 3-76 Number of Residential Properties in a 100 Year Flood Zone Compared to the Number of NFIP Policies in Either an A-Zone or V-Zone by Municipality
- 3-77 Number of Residential Properties in a 100 Year Flood Zone Compared to the Number of NFIP Policies by County
- 3-78 Number of Residential Properties in a 100 Year Flood Zone Compared to the Number of NFIP Policies by Municipality
- 3-79 Value of Residential Property in a 100 Year Flood Zone Compared to the Total Insurance Coverage by County
- 3-80 Value of Residential Property in a 100 Year Flood Zone Compared to the Total Insurance Coverage by Municipality
- 3-81 Residential Properties in an A-Zone or V-Zone by Municipality
- 3-82 Estimated Value of all Property in a 100 Year Flood Zone Compared to the NFIP Total Insurance Coverage by County

- 3-83 Estimated Value of all Property in a 100 Year Flood Zone Compared to the NFIP Total Insurance Coverage by Municipality
- 3-84 Flooding Outside Mapped Floodplains (Westchester County)
- 3-85 Hazard Identification and Risk Assessment
- 3-85.1 NYS Wide FEMA DFIRM Status - October 2010

### **Hurricane**

- 3-86 New York State County 2009 Population Estimates
- 3-87 Wind Zones in the United States
- 2-88 New York State Wind Zones
- 3-89 100 Year Peak Gust Wind Probability
- 3-90 Presidential Disaster Declarations Hurricanes and Tropical Depressions 1953 - August 2007
- 3-91 Reserved for Future Development
- 3-92 1990-2006 Hurricane Tracks
- 3-93 Location Scenario of New York City Storm Surge Susceptibility
- 3-94 Hurricane Katrina Scenario Tracking Through New York State
- 3-95 Hurricane Storm 12 Modeling Tracks
- 3-96 Total Economic Loss Per Category, Track, and Speed
- 3-97 Total Debris in Tons Per Category, Track, and Speed
- 3-98 Total Displaced Households Per Category, Track, and Speed
- 3-99 Total Short Term Shelter Needs Per Category, Track, and Speed
- 3-100 Estimated Population in Surge Zone by Jurisdiction
- 3-101 Estimated Worst Case Losses to New York State Coastal Counties

### **Tornado**

- 3-102 Wind Zones in the United States
- 3-103 Tornado Risk Areas in the Continental United States
- 3-104 Tornadoes in New York State 1950 – 2005
- 3-104.1 Probability of a Tornado Event in NYS
- 3-104.2 NSSL-Probability of a Tornado Event

### **Winter Storm**

- 3-105 New York State Annual Snowfall Normals 1979-2009
- 3-106 Presidential Disaster Declarations Winter Snow Storms and Blizzards 1953 - August 2007
- 3-107 Presidential Disaster Declarations Ice Storms 1953 - August 2007
- 3-108 Average Number of Hours Per Year With Freezing Rain in the United States

### **Hail**

- 3-109 Areas Associated with Agricultural Land Use
- 3-110 Hail Days Per Year (1995 - 1999)

### **Wildfire**

- 3-111 2010 Wildfire Protection Areas
- 3-112 Wildfire Occurrence from 1985 through 2009
- 3-113 Local Fire Department Wildfires from 2005 through 2009
- 3-114 Fire Danger Rating Map for New York on April 17, 2008

## **Drought**

- 3-115 Interrelationship of the Hydrological Cycle
- 3-116 New York State Drought Management Region

## **Extreme Temperatures**

- 3-117 Weather Fatalities
- 3-118 Heat Index - Accurate Measurement of Temperature During an Extreme Heat Event
- 3-119 National Weather Service Publications: Heat Wave
- 3-120 National Weather Service Windchill Chart
- 3-121 Percentage of Population Most Vulnerable to Extreme Temperatures

## **Earthquake**

- 3-122 NEHRP Soil Classification
- 3-123 PGA % Seismic Hazard Map (USGS 2002 Seismic Hazard Map)
- 3-124 PGA % Seismic Hazard Map (USGS 2008 Seismic Hazard Map)
- 3-125 Change between USGS 2002 and 2008 Seismic Hazard Maps
- 3-126 NYS Geological Survey Seismic Shear Wave Velocity Tests

3-127 Reserved for Future Development

3-128 Reserved for Future Development

3-129 Reserved for Future Development

- 3-130 National Earthquake Hazard Reduction Program (NEHRP) Soil Site Classifications  
Assigned to NYS Surficial Geologic Units
- 3-131 NEHRP Site Class
- 3-132 2003 NEHRP Recommended Revisions For New Building and Other Structures
- 3-133 Spectral Acceleration (SA) % Map based on Soil Site Classification and Acceleration  
Parameter Coefficients
- 3-134 Albany County Adjusted Spectral Acceleration (SA) Map
- 3-135 Allegany County Adjusted Spectral Acceleration (SA) Map
- 3-136 Broome County Adjusted Spectral Acceleration (SA) Map
- 3-137 Cattaraugus County Adjusted Spectral Acceleration (SA) Map
- 3-138 Cayuga County Adjusted Spectral Acceleration (SA) Map
- 3-139 Chautauqua County Adjusted Spectral Acceleration (SA) Map
- 3-140 Chemung County Adjusted Spectral Acceleration (SA) Map
- 3-141 Chenango County Adjusted Spectral Acceleration (SA) Map
- 3-142 Clinton County Adjusted Spectral Acceleration (SA) Map
- 3-143 Columbia County Adjusted Spectral Acceleration (SA) Map
- 3-144 Cortland County Adjusted Spectral Acceleration (SA) Map
- 3-145 Delaware County Adjusted Spectral Acceleration (SA) Map
- 3-146 Dutchess County Adjusted Spectral Acceleration (SA) Map
- 3-147 Erie County Adjusted Spectral Acceleration (SA) Map
- 3-148 Essex County Adjusted Spectral Acceleration (SA) Map
- 3-149 Franklin County Adjusted Spectral Acceleration (SA) Map
- 3-150 Fulton County Adjusted Spectral Acceleration (SA) Map
- 3-151 Genesee County Adjusted Spectral Acceleration (SA) Map
- 3-152 Greene County Adjusted Spectral Acceleration (SA) Map
- 3-153 Hamilton County Adjusted Spectral Acceleration (SA) Map

- 3-154 Herkimer County Adjusted Spectral Acceleration (SA) Map
- 3-155 Jefferson County Adjusted Spectral Acceleration (SA) Map
- 3-156 Lewis County Adjusted Spectral Acceleration (SA) Map
- 3-157 Livingston County Adjusted Spectral Acceleration (SA) Map
- 3-158 Madison County Adjusted Spectral Acceleration (SA) Map
- 3-159 Monroe County Adjusted Spectral Acceleration (SA) Map
- 3-160 Montgomery County Adjusted Spectral Acceleration (SA) Map
- 3-161 Nassau County Adjusted Spectral Acceleration (SA) Map
- 3-162 New York City Adjusted Spectral Acceleration (SA) Map
- 3-163 Niagara County Adjusted Spectral Acceleration (SA) Map
- 3-164 Oneida County Adjusted Spectral Acceleration (SA) Map
- 3-165 Onondaga County Adjusted Spectral Acceleration (SA) Map
- 3-166 Ontario County Adjusted Spectral Acceleration (SA) Map
- 3-167 Orange County Adjusted Spectral Acceleration (SA) Map
- 3-168 Orleans County Adjusted Spectral Acceleration (SA) Map
- 3-169 Oswego County Adjusted Spectral Acceleration (SA) Map
- 3-170 Otsego County Adjusted Spectral Acceleration (SA) Map
- 3-171 Putnam County Adjusted Spectral Acceleration (SA) Map
- 3-172 Rensselaer County Adjusted Spectral Acceleration (SA) Map
- 3-173 Rockland County Adjusted Spectral Acceleration (SA) Map
- 3-174 Saratoga County Adjusted Spectral Acceleration (SA) Map
- 3-175 Schenectady County Adjusted Spectral Acceleration (SA) Map
- 3-176 Schoharie County Adjusted Spectral Acceleration (SA) Map
- 3-177 Schuyler County Adjusted Spectral Acceleration (SA) Map
- 3-178 Seneca County Adjusted Spectral Acceleration (SA) Map
- 3-179 Saint Lawrence County Adjusted Spectral Acceleration (SA) Map
- 3-180 Steuben County Adjusted Spectral Acceleration (SA) Map
- 3-181 Suffolk County Adjusted Spectral Acceleration (SA) Map
- 3-182 Sullivan County Adjusted Spectral Acceleration (SA) Map
- 3-183 Tioga County Adjusted Spectral Acceleration (SA) Map
- 3-184 Tompkins County Adjusted Spectral Acceleration (SA) Map
- 3-185 Ulster County Adjusted Spectral Acceleration (SA) Map
- 3-186 Warren County Adjusted Spectral Acceleration (SA) Map
- 3-187 Washington County Adjusted Spectral Acceleration (SA) Map
- 3-188 Wayne County Adjusted Spectral Acceleration (SA) Map
- 3-189 Westchester County Adjusted Spectral Acceleration (SA) Map
- 3-190 Wyoming County Adjusted Spectral Acceleration (SA) Map
- 3-191 Yates County Adjusted Spectral Acceleration (SA) Map
- 3-192 Northeast Seismicity from October 1975-March 2010
- 3-193 Presidential Disaster Declarations Earthquake 1953 – October 2010
- 3-194 Annualized Earthquake Loss
- 3-195 Per Capita Annualized Earthquake Loss
- 3-196 Annualized Earthquake Loss Per Square Mile
- 3-197 Building Types in Manhattan Neighborhoods
  
- 3-198 **Reserved for Future Development**
- 3-199 **Reserved for Future Development**

## **Landslide**

- 3-200 Landslide Susceptibility
- 3-201 Landslide Inventory Map of New York Comparison of NYSGS and USGS
- 3-202 Landslide Inventory and Surficial Geology
- 3-203 Landslide Inventory of New York State
- 3-204 Soil Survey of New York State
- 3-205 USGS & NYSGS Preliminary Landslide Analysis Algorithm
- 3-206 Landslide Susceptibility Schenectady County, NY
- 3-207 Landslide Susceptibility Descriptive Zones for Schenectady County, NY
- 3-208 Schenectady County Landslide Study Risk Score Values at Point Locations of Landslide Occurrences
- 3-209 Landslide Susceptibility Schenectady County, NY Model Validation
- 3-210 Integration of GIS into Schenectady Internet Mapping System (SIMS)

## **Land Subsidence**

- 3-211 USGS United States Map of Karst From Evaporative and Carbonate Rock
- 3-212 Mineral Resources of New York
- 3-213 Claverack Creek in February 2006
- 3-214 USGS Livingston County Study
- 3-215 USGS Onondaga County Study

## **Power Failure**

No Figures

## **Section 4.0 - Tables**

- 4-1 Mitigation Implementation Tools for Local Governments
- 4-2 Recommended Project Types by Natural Hazards
- 4-3 Multi-Hazard Mitigation Strategy
- 4-4 Flood-Hazard Mitigation Strategy
- 4-5 Landslide-Hazard Mitigation Strategy
- 4-6 Wildfire Hazard Mitigation Strategy
- 4-7 Winter Storm Hazard Mitigation Strategy
- 4-8 Earthquake Hazard Mitigation Strategy

## **Section 5.0 - Tables**

- 5-1 Funding Sources for Mitigation

## **Section 6.0 - Tables**

- 6-1 Plan Maintenance

## **Section 7.0**

No Tables or Figures

## **Section 8.0 - Reserved for Future Development**

## **Section 9.0 - Reserved for Future Development**

**Section 10.0 - Reserved for Future Development**

**Section 11.0 - Reserved for Future Development**

**Section 12.0**  
No Tables or Figures