

Section 1.0 – Introduction

The following requirement(s) are met throughout this section:

- §201.4(c)(1): *[The State plan **must** include a] description of the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how other agencies participated.*
- §201.4(b): *The [State] mitigation planning process **should** include coordination with other State agencies, appropriate Federal agencies, interested groups, during the planning process.*

The New York State Multi-Hazard Mitigation Plan is available for review and use electronically on the New York State Office of Emergency Management (NYSOEM) website at <http://www.semo.state.ny.us/>. NYSOEM doesn't recommend that the document be download and printed because many of the active links which direct the user to other related web sites and additional information will be lost in hard copy.

1.1 Plan Summary

The New York State Multi-Hazard Mitigation Plan represents the State's approach to mitigating the adverse impacts of natural disasters within its borders and fulfilling its Federal obligations to mitigate the risks resulting from natural hazards. Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, enacted by Section 104 of the Disaster Mitigation Act of 2000 (DMA), provides new emphasis on mitigation planning. Section 322 emphasizes the need for State and Local governments to closely coordinate mitigation planning and implementation efforts as well as continuing the requirement for a State Mitigation Plan as a condition of disaster assistance. This plan is also intended to serve Local jurisdictions as a guide in completing natural hazard mitigation plans that will meet the requirements set forth in DMA 2000. It is acknowledged that the success of any multi-hazard mitigation planning effort can only be achieved if both State and Local resources are utilized to identify risks, analyze vulnerability, and coordinate mitigation goals and objectives.

It is important to point out to all parties who read this plan that the hazards profiled are limited to natural hazards which may be caused by the weather and geology that dominates New York State. This plan represents Volume 1 of the New York State Comprehensive Emergency Management Plan (CEMP), but Individuals or Jurisdictions interested in information about human-caused, technological, or biological hazards may find information in Volume 2 of the CEMP. Additional information about the CEMP and its critical annexes, such a Pandemic Influenza, Terrorism, and Hazardous Material may be found in Volume 2 or on related State agency websites, such as the New York State Department of Health, New York State Office of Counter Terrorism, or similar Federal websites.

Planning Assistance for Jurisdictions: Jurisdictions across New York State may also be interested in developing their own Multi-Hazard Mitigation Plan, which will enable them to analyze and profile the natural hazards that impact their Jurisdiction. After hazards are identified and the community's assets are specified, the Jurisdiction can estimate the impact each hazard will have on the property and critical structures within its borders. The next step would be to

develop a comprehensive mitigation strategy to lessen or reduce the damage caused by each natural hazard. Throughout this plan, there are examples of methodologies that will assist Local jurisdictions in complying with the FEMA requirements specified in DMA 2000 for Multi-Hazard Mitigation Plans. As an advisory to Local Jurisdictions, the following suggestions should be considered prior to initiating the planning process:

- Develop a comprehensive understanding of the requirements specified in DMA 2000 regarding local hazard mitigation planning.
- Strongly consider developing your plan with the assistance of a qualified consultant firm or a regional planning organization that has received approval on a hazard mitigation plan for other jurisdictions. The planning process will usually require two full years of effort, and attempting to complete a plan without professional assistance can be extremely challenging.
- Assure that your plan is focused on all natural hazards that impact your Jurisdiction, and propose related mitigation goals, objectives, and activities which will reduce the damage caused by each hazard.
- Utilize the “FEMA Region 2 Tool Kit” in order to ensure that planning requirements are addressed. This tool kit is organized logically by planning requirements and it is designed to assist planning Jurisdictions to succeed in their mitigation planning effort: http://www.fema.gov/about/regions/regionii/toolkit_risk.shtm,
- Seek the guidance and technical assistance offered by the Mitigation and Planning Sections of the NYSOEM.

Utilize the Risk assessment information contained within this plan as a part of the Local risk assessment required to meet Local plan approval. The information contained within is not intended to provide Jurisdictions with all the information needed, but it can be utilized as one source of guidance.

A multi-hazard mitigation plan concentrates on actions that can be implemented prior to and after disasters in order to reduce or prevent personal injury and loss of life, reduce and eliminate damage to property, and reduce disaster response and recovery costs. All stake holders—various State and Local government authorities, certain Federal agencies, and the private sector—will be engaged in implementing, individually or cooperatively, the actions that have been addressed in the plan. The mitigation plan is also intended to help the State identify and prioritize mitigation opportunities in the immediate aftermath of a major disaster and to serve as a guide for Local government actions prior to and after a disaster event.

Planning Process/Planning Committee: The New York State Division of Homeland Security and Emergency Services (DHSES), State Office of Emergency Management (SOEM), served as the lead in the initial development and the update process of the New York State Multi-Hazard Mitigation Plan, (hereafter referred to as the Plan). The SOEM held several preliminary internal meetings, starting on December 9, 2009, in preparation for the Plan update process. Specific issues were identified that needed to be reviewed and updated in the plan and ideas were exchanged on how to best gather information from agencies and organizations. A wide range of State and Regional agencies that had a direct stake in the hazard mitigation and the disaster

recovery process were identified and invited to actively and directly participate in the plan update.

The initial Plan Update “kick-off” meeting was held with all relevant State and Regional agencies on April 16, 2010. All participants were sent “homework” packets in advance of the meeting and were asked to review and come prepared to make any necessary changes to the vision/goal/objective statements made in the previous Plan, review and update individual agency progress assessment reports on previous Plan goals and objectives, and begin to develop and identify additional hazard mitigation goals and objectives that the Agencies would strive to meet over the next three year Plan cycle. A listing of the participants and a summary of this meeting can be found in **Section 2 Table 2-2 Summary of Plan Development Collaboration**.

The Mitigation Section also worked with personnel from other sections of NYSOEM, representatives of member agencies of the New York State Disaster Preparedness Commission (DPC), as well as other State, Local, and Regional agencies. A summary of all collaborative contacts can be found in **Table 2-2**.

In addition, the existing approved New York State Standard Multi-Hazard Plan was posted on the SEMO website and comments from the Public and Local Jurisdictions were sought as the plan update was undertaken. A User’s Survey was also conducted via an on-line survey service known as Zoomerang. The survey document and a summary of the survey results can be found in **Table 2.2.1**. Subsequent drafts of the plan will also be posted on the NYSOEM website with an opportunity for public comment.

The DPC member agencies and the other State agencies consulted are responsible for the management or programming of a vast array of the built environment in the State as well as the administration of a myriad of policies and programs designed to protect the natural environment and wellbeing of the population. In the language of DMA 2000, these agencies are thus responsible for the various asset classes the mitigation plan is required to address.

The DPC is authorized by the New York State Consolidated Laws, Executive Law, Article 2-B titled “State and Local Natural and Man-Made Disaster Preparedness.” This Law establishes the “policy” of the State with respect to disaster preparedness, prevention, response, and recovery. The policy emphasizes Local level authority and responsibility to ensure development of effective and current plans and programs for protection from natural disasters. The provisions of NYS Law Article 2-B are similar to the provisions of Federal laws such as the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, and the Disaster Mitigation Act of 2000. Applicable to this State Hazard Mitigation Plan is Section 21 of the NYS Law Article 2-B, titled “Disaster Preparedness Commission Established; Meetings; Powers and Duties.” This section is applicable primarily because the DPC constitutes an existing framework employed for the benefit of various elements in emergency management including the mitigation planning process which is specifically required as outlined in Part 201.4 “Standard Mitigation Plan”, (b) “Planning Process”. The DPC is comprised of the commissioners or directors of 32 state agencies, the NY Chapter of the Red Cross, and Mr. Joseph Bruno (Commissioner of NYC OEM). Article 2-B, Section 21 establishes membership to the DPC, as outlined in the following excerpt:

“consisting of the Commissioners of Transportation, Health, Division of Criminal Justice Services, Education, Social Services, Economic Development, Agriculture and Markets, Housing and Community Renewal, General Services,

Labor, Environmental Conservation, Mental Health; Parks, Recreation and Historic Preservation, Correctional Services and Children and Family Services, the President of the NYS Energy Research and Development Authority, the Superintendents of State Police, Insurance, Banking, the Secretary of State, the State Fire Administrator, the Chair of the Public Service Commission, the Adjutant General, the Directors of the Offices within the Division of Homeland Security and Emergency Services, the Office for Technology, and the Office of Victim Services, the Chairs of the Thruway Authority, the Metropolitan Transportation Authority, the Port Authority of New York and New Jersey, the chief professional officer of the state coordinating chapter of the American Red Cross and three additional members, to be appointed by the Governor, two of whom shall be chief executives.”

Risk Assessment: In determining which hazards to profile and to use in the vulnerability assessment and estimating losses, a wide variety of factors were considered. Information analyzed included: historical data from Major Disaster declarations, State and Local disasters, flood insurance policy base, flood insurance coverage, and flood insurance claims, as well as programs and strategies to mitigate the effects of disasters caused by those hazards. Hazards that have the potential to cause significant impact, even though they have not previously resulted in disaster declarations, are also addressed. It should also be noted that while the focus of this plan is limited to mitigation for natural hazards, the State continues to address all potential hazards in three broad categories: natural, technological, and human-caused.

Accordingly, this plan also includes a risk assessment methodology that involves the analysis of several factors to provide the requisite outcomes of 44CFR part 201.4 (2).

The risk assessment process employed in the plan profiled the following hazards: flood, wind events (including hurricanes, nor'easters, tropical storms, and high wind events), tornado, earthquake, drought, landslide, winter/ice storms, land subsidence, wildfire, power failure, extreme temperatures, and hail storm. The cascading effects of several of these disasters were also considered. For example, hurricanes, tropical storms, and nor'easters usually cause coastal erosion, and winter and ice storms frequently cause wide scale power outages. Hazards that result from the cascading effect of a primary hazard were not always considered by themselves but were evaluated under the section for their primary hazards.

Given that all areas of the State are not exposed to the same hazards or to the same intensity and vulnerability, **Section 3** of the Plan addresses hazards on a County by County basis. However, it should be noted that some regions of the State may be more prone to specific hazard events, and it is recommended that Local Jurisdictions also examine the histories of neighboring Counties or Municipalities as they perform their risk analyses.

The methodology employed to satisfy the requirements of 44CFR Part 201.4 resulted in the development of detailed vulnerability and risk assessments for Jurisdictions within New York State. **Section 3** provides an extensive discussion of the results of this analysis.

This analysis considers information relating to previous occurrences of hazard events emphasizing the major disasters that have affected the State. From 1956 through the present, all but five of the disasters or emergencies that were declared major disasters or emergencies have been the result of damages from severe floods, hurricanes, coastal storms, and severe winter

storms. The five disaster declarations that do not fall into those categories are: the Love Canal, the World Trade Center Bombing in 1993, the Long Island Wildfires in 1995, the September 11, 2001 Terrorist Attacks, and the April 2002 Earthquake.

For the first time in its Multi-Hazard Mitigation Plan, New York State provides specific guidance to local government officials and hazard mitigation planners concerning the potential impacts of climate change on the magnitude and frequency of natural hazard events.

Mitigation Strategy: **Section 4** provides a detailed discussion of the State's mitigation strategy. The basis of the mitigation strategy section was developed during the prior State plan development effort which resulted in initial plan approval in 2005. In keeping with the requirements for the State plan update and in consideration of the recommended revisions from FEMA, an effort was made to analyze Local plans and to integrate mitigation actions as appropriate. It should be noted that specific mitigation projects that did not have a widespread or regional impact were not reported, but action items with a more generalized impact were discussed or integrated into this section. In keeping with prior determinations, the general headings of end users, services, administration, and legislation were maintained as it was felt that these were still valid.

Following the discussion of goals and objectives, a thorough assessment of Local capabilities was presented as well as implementation tools for Local government. A prioritized list of mitigation actions based on performance is presented as opposed to detailed hazard mitigation projects. It was not considered technically or politically feasible for the plan to include a detailed identification of mitigation projects as discussed in 44 CFR Part 201.4. The reason being, such detail is beyond the scope of the plan as most mitigation projects are identified and implemented at the Local level given New York State's strong emphasis on home rule decision-making. State level actions are more in the form of program and policy implementation and legislative enforcement. Finally, **Section 4** also addresses examples of mitigation actions and activities, multi-hazard mitigation strategies, and hazard specific strategies.

Local Mitigation Planning: The Mitigation Section of NYSOEM has been providing technical assistance to Local governments for the past several years. Starting in 1997 following the passage of the National Flood Insurance Reform Act of 1994, which mandated the preparation of floodplain management plans as a pre-requisite for the ability to obtain project funds, the NYSOEM's Mitigation Section has facilitated planning at the Local level. With the enactment of DMA 2000, Local planning assistance has been intensified. Accordingly, the Mitigation Section currently provides technical assistance to any community that requests it. Technical assistance has been provided at workshops conducted by Counties or NYSOEM's five regional offices, at Applicants Briefings conducted after Presidential Declarations, during one-on-one meetings with the community officials and via telephone. Mitigation planning tools, guidance material, hazard maps, and data include: landslide susceptibility mapping, wind zone mapping, peak ground acceleration (seismic) mapping, as well, historical information including disaster declaration and NFIP report statistics describing both the number of policies and claims are frequently provided to communities engaged in the planning process. Finally, the Mitigation staff review and critique locally prepared draft mitigation plans prior to submitting the plans to FEMA for review and approval. In addition to the foregoing, **Section 5** details the State's efforts in assisting Local governments in identifying mitigation funding sources, ensuring that Local plans are integrated in mitigation planning and prioritizing Local assistance.

Plan Monitoring and Evaluation System: Section 6 of the plan explains in detail the State's plan monitoring and evaluation process. The past several years have revealed certain weaknesses in the monitoring and evaluation methodology proposed in the prior plan, so revisions were incorporated into the Plan to build in more specific accountability and to assure timelines are monitored.

In collaboration with key State agencies, the NYSOEM has developed Plan monitoring and maintenance procedures that will facilitate regular review and revisions to the Plan. OEM will conduct an annual review of the Plan and the progress made toward achieving the listed planning goals, objectives, and action items. All pertinent information obtained during the year will be reviewed and documented by the Mitigation Staff. If deemed appropriate and necessary, the Plan will be revised as updated information becomes available. Each year, following FEMA approval/re-approval of the State Mitigation Plan, OEM will conduct a formal review of the Plan. Status Reports will be distributed to State agencies or organizations in order to monitor progress toward the implementation of mitigation actions and obtain information required to update the Plan and keep it current. For example, agencies will be asked to complete a Status Report on their progress in accomplishing assigned projects with an emphasis on measurable outcomes. In particular, quantifiable information gathered from State agencies may include, but not be limited to, funding amounts, community technical assistance totals, Local plan development totals, advancements in natural hazard analysis, vulnerability assessments and regulations or policies that support mitigation programmatic development and descriptions of mitigation property protection and infrastructure projects. The formal plan review process will include an official reactivation of the Planning Committee during the second twelve-month period following the date of FEMA Plan approval. All of the information gathered at the various planning meetings will be combined into the revised Plan and submitted to FEMA for review and approval.

Project Management Capability: Project Management is necessary for any mitigation program to be successful and to insure that approved mitigation measures (projects) are implemented in accordance with approved project provisions and published regulations and guidelines. Once a mitigation project has begun, NYSOEM Mitigation Staff will monitor the project's progress through closeout; follow-up contacts will also be maintained after project completion to ensure that approved projects are meeting their proposed intent.

NYSOEM Project Managers will ensure that all supporting documentation (building or regulatory agency permits) are in order and up to date, quarterly reports are received and submitted to FEMA on time, and all reimbursement requests are accurate and relevant to the projects authorized expenses. Approved reimbursement requests will be forwarded to NYSOEM Finance for processing and payment and every effort will be made to close projects out in a timely manner. The NYSOEM Mitigation Section will maintain the project file for three years from the date of the AGAR signature on the Closeout Form.

The Mitigation Planning Section has demonstrated the capacity to manage the statewide planning development effort over several years. The number of approved plans in NYS continues to grow as more and more jurisdictions choose to participate in the mitigation planning process. NYSOEM will continue to allocate the resources needed to properly educate Jurisdictions in the requirements of DMA 2000, and also to provide the technical assistance to assist Jurisdictions toward development and approval of their Local plans.

On a statewide basis, New York has demonstrated outstanding managerial capability to implement and achieve numerous mitigation related goals. As demonstrated within the pages of this document, the mitigation related efforts undertaken by numerous agencies reveal a deep and unwavering commitment to mitigate hazards which threaten our citizens. In addition to the statewide implementation and review of the Plan, all DPC agencies have a mandate to assure that the safety and protection of New York States Citizens is never overlooked.

Program Management Capability/Assessment of Mitigation Actions: Sections 8 & 9 describes the State's program management capabilities and approaches to assess mitigation actions. Specifically, these sections of the plan outline the State's capabilities in environmental reviews, benefit cost analysis and management, and reporting on the various mitigation projects and on the assessment of mitigation actions. These activities and other activities are expertly managed by the appropriate sections of NYSOEM.

Effective Use of Available Mitigation Funding: Discussed in **Section 10** are the State's strategies to use or allocate the various mitigation funds that it manages. The objective process that the State uses to award funding from the HMGP, FMA, SRL, and PDM programs is clearly outlined.

Commitment to Comprehensive Mitigation Programs: Outlined in **Section 11** is a clear demonstration of the State's commitment to a comprehensive mitigation program. Information is provided on the State's support for Local mitigation planning, adoption, and enforcement of applicable codes, mitigation efforts for critical facilities, and the integration of mitigation into recovery operation.

Mitigation Plan Adoption Process: The final section of the plan, Section 12, outlines the adoption process for the plan and identifies several State and Federal authorities and references. After FEMA determines that the revised plan is approvable, the plan shall be formally adopted by the Disaster Preparedness Commission. Also in Section 12 the State of New York provides assurances that it will comply with all applicable Federal Statutes and Regulations during the periods for which it receives grant funding, and it will amend its plan whenever necessary to reflect changes in State or Federal Laws as required by 44 CFR 13.11 (d).

1.2 – State Background Information

The following sections provide background information for the State of New York. General information for the State is listed in **Table 1-1**.

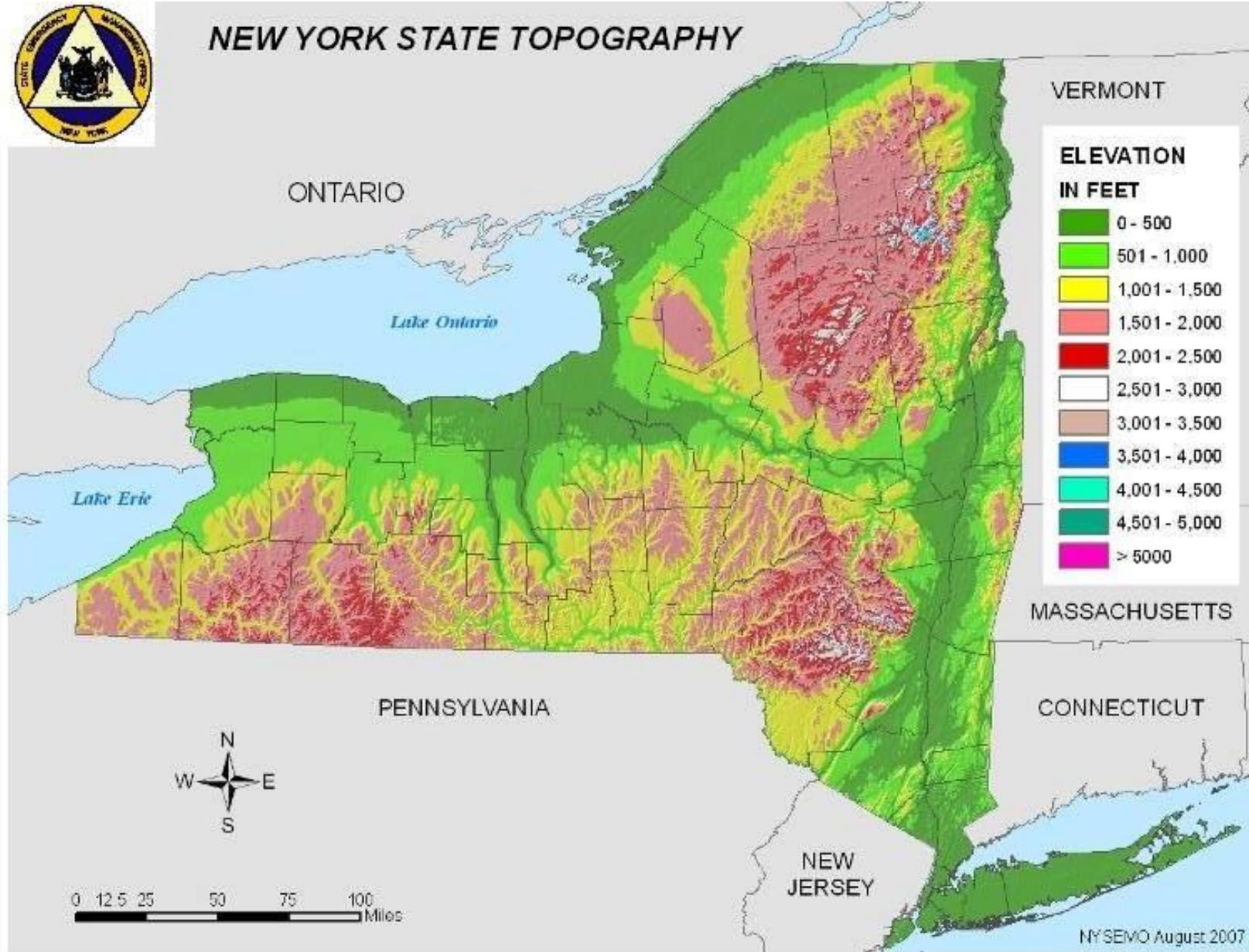
Table 1-1
New York State Facts

State Capital	Albany
Land Area	47,223,839 square miles
Depth (North-South)	310 miles
Length (East-West)	440 miles, including Long Island
Counties	62
Number of Cities	62
Number of Villages	553
Number of Towns	932
Population	19,306,183
State and Local Roads	112,956.17 miles
State Roads	16,489.91 miles
Local Road	96,466.26 miles
Number of Hospitals	259 estimated
Highest Point	Mount Marcy, 5,344 feet above sea level
Lakes, Ponds and Reservoirs	Over 6,700
Largest City	New York City
Largest Park	The Adirondack Park (larger than the Yellowstone, Yosemite, Grand Canyon, Glacier, and Olympic National Parks combined)
Largest Lake (within State borders)	Oneida, 79.8 square miles
Longest river	Hudson, 306 miles
Longest toll expressway in the world	Governor Thomas E. Dewey Thruway, 559 miles
State Motto	Excelsior, which means Ever Upward
State Nickname	Empire

1.2.1 – Land Area

The total area of New York State is 54,471.144 square miles (47,223,839 in land and 7,247,305 in inland water). There are four mountain ranges in New York State: the Adirondacks in the North, the Catskill and Shawangunk ranges in the South Central, and the Taconic in the East. The highest point in New York State is Mount Marcy, Essex County, in the Adirondacks at 5,344 feet above sea level. A topography map of New York State is shown as **Figure 1-1**.

Figure 1-1: New York State Topography



1.2.2 – Bodies of Water

There are 6,713 natural ponds, lakes, and reservoirs of one acre or more, 76 with an area of one square mile or more. There are 1,745 square miles of inland water, including some 4,000 lakes, ponds, and reservoirs.

The State has 70,000 miles of rivers and streams; 127 miles of Atlantic Ocean coastline; 9,767 miles of shoreline which includes 8,778 miles of Lake Shoreline, 231 miles of shorefront on the Long Island Sound, 548 miles of beachfront in the Long Island area, and 83 miles of coastal barrier islands off Long Island.

Traversing the State from east to west, the New York State Barge Canal System is the longest internal waterway system in any state (800 miles), carrying over 2 million tons of cargo per year. The Canal, however, is primarily used as a water recreation resource

1.2.2.1 – Rivers

The State has approximately 70,000 miles of rivers and streams, with the majority of these located along the Hudson River Valley.

Longest

The Hudson River is the longest river in the State at 306 miles long and it drains an area of 13,370 square miles. Its average discharge is 21,500 cubic feet per second. The Hudson's most distant source is in Essex County, the Adirondack Mountains. Lake Tear of the Clouds is the highest lake in the State - 4,320 feet above sea level - and is considered the source of the Hudson River. The Hudson empties into the Atlantic Ocean at New York City.

Greatest Volume

The Niagara River has the highest flow, spilling 40 million gallons of water 180 feet downward each minute across a ledge nearly 2/3 of a mile wide at Niagara Falls.

1.2.2.2 – Lakes

There are over 6,700 natural ponds, lakes and reservoirs of one acre or more in the State of New York. There are 76 lakes with an area equal to or greater than one square mile and there are 10 natural fresh-water lakes of 10 square miles or more.

Oneida Lake, at 79.8 square miles, is the largest lake completely within the state. Other prominent lakes are the Finger Lakes, Otsego Lake, Lake George, Lake Placid, and Lake Champlain, which is 107 miles long.

Lake Champlain, in Essex County, covers a 490-square-mile area and includes islands that total about 55 square miles.

Lake Erie borders New York State for a linear distance of 64 miles. Its surface area in the U.S. totals 5,002 square miles.

Lake Ontario forms the northern boundary of New York State and central Canada for a linear distance of 146 miles, and the area in the U.S. is 3,033 square miles.

1.3 – Population and Development

The State's 19 million people and general building stock (valued at roughly \$1.2 trillion) are not evenly dispersed throughout its borders, neither are they equally exposed to the major hazards of the State. Population and building stock are measures that provide indications of the potential vulnerability to natural hazards. **Figure 1-2** and **1-3** show the population change within NYS from 2000 to 2009 by County and Municipality. **Figure 1-4 and 1-5** present population data including recent population trends and a summary of population by percent of New York State total by municipality and county. The majority of the population resides in the Southeastern, and Western sections of the state.

Figure 1-2: New York State County Population Change 2000 – 2009

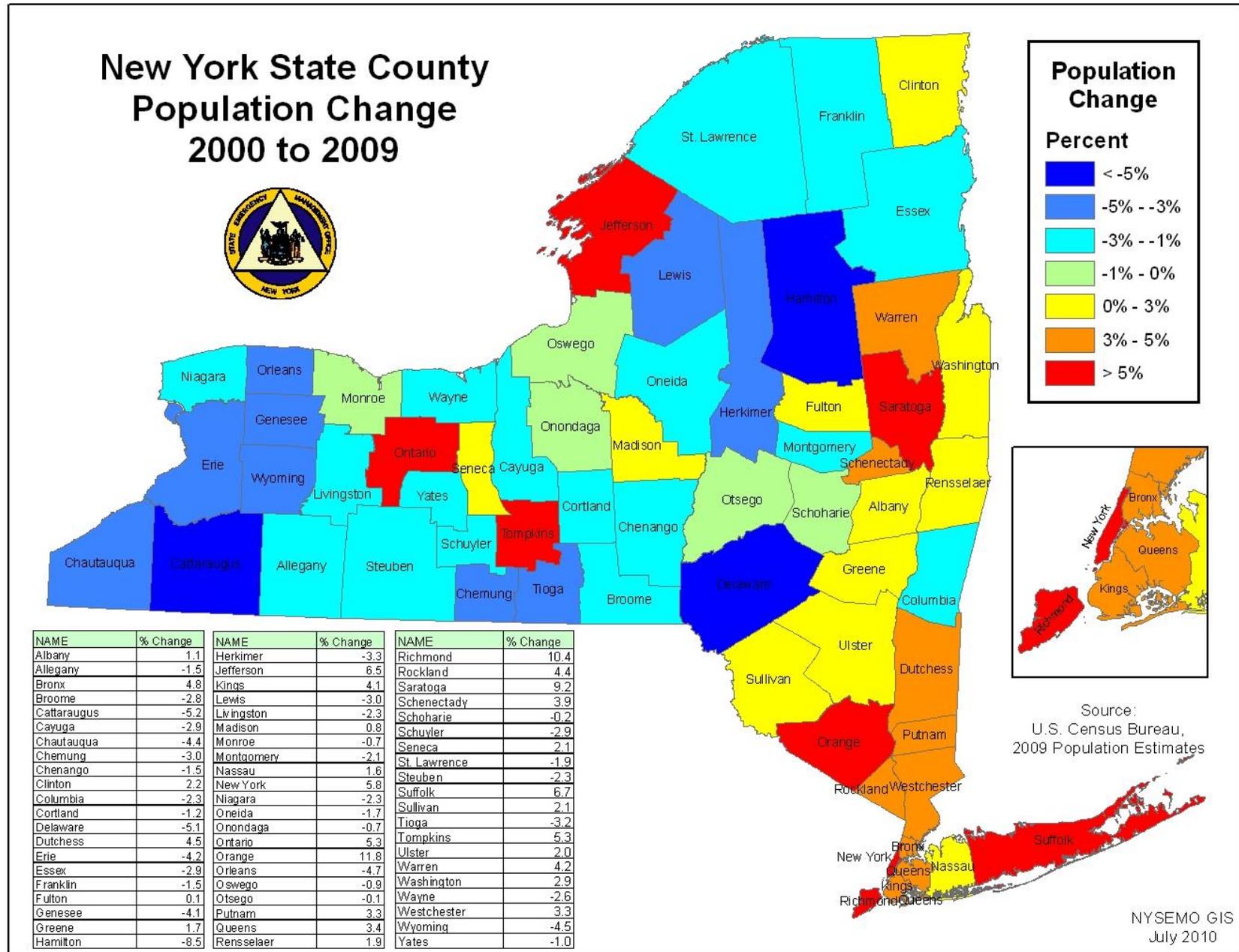


Figure 1-3 New York State Municipality Population Change 2000 – 2009

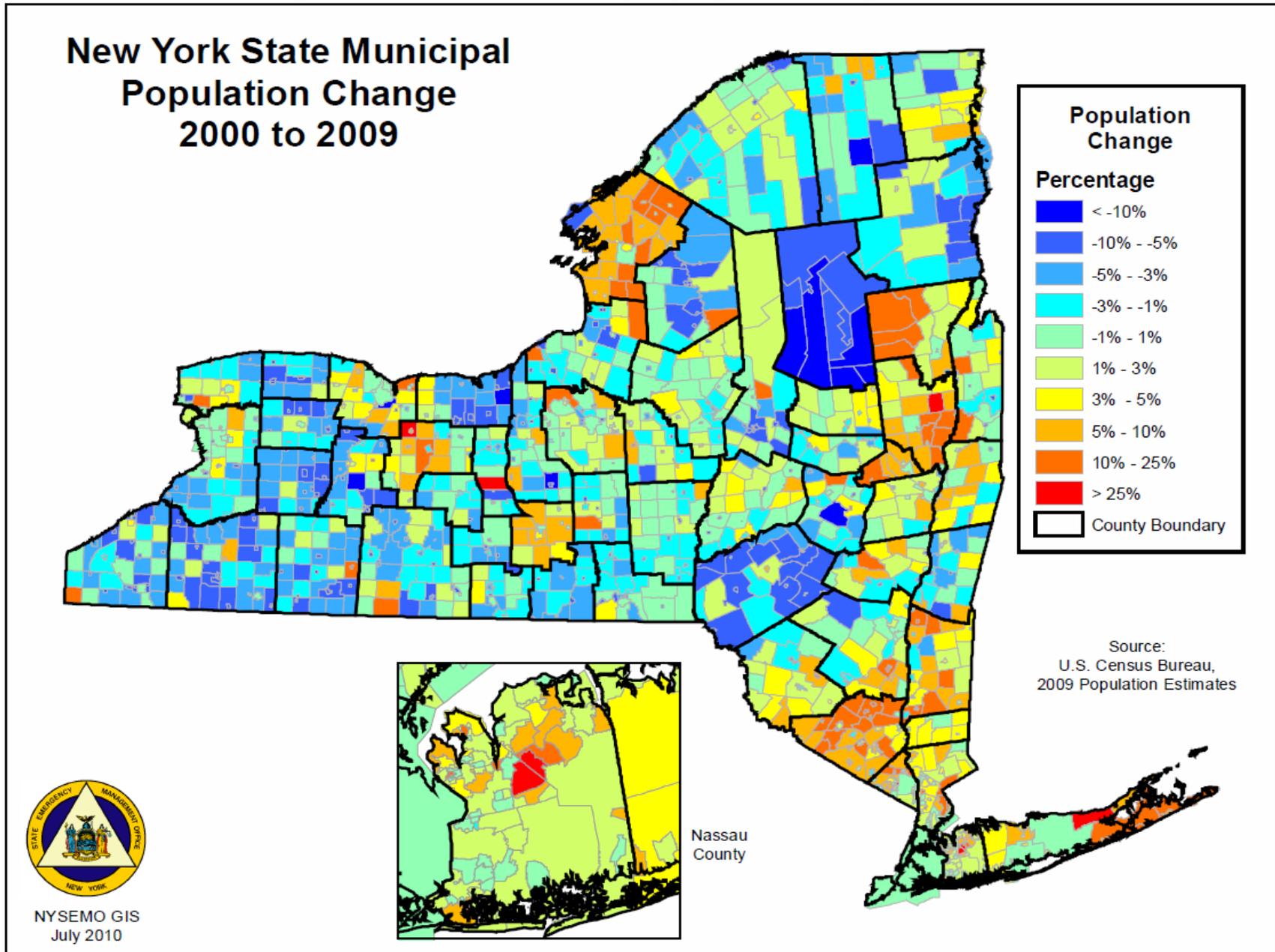


Figure 1-4: New York State Municipal 2009 Population Estimates

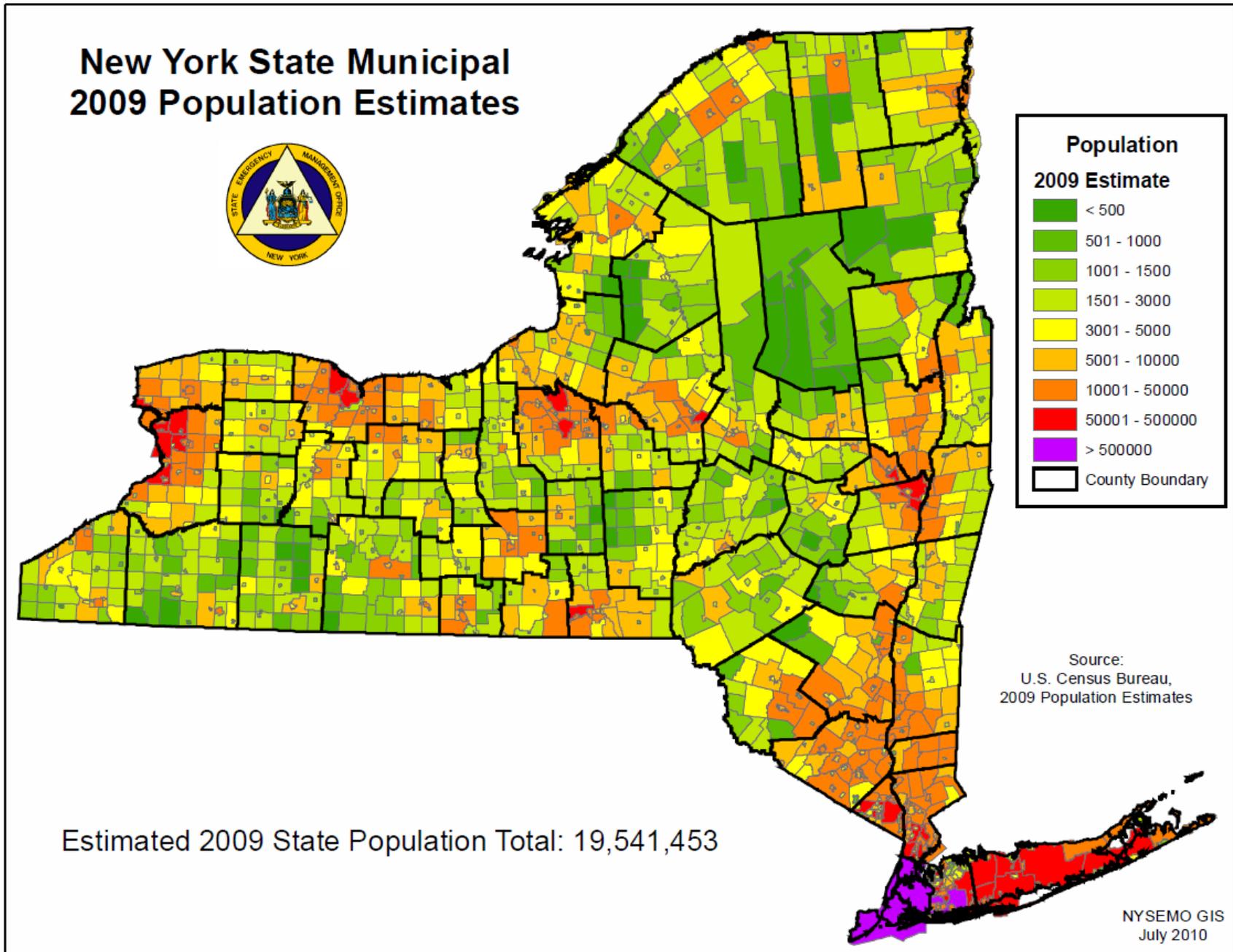


Figure 1-5: New York State County 2009 Population Estimates

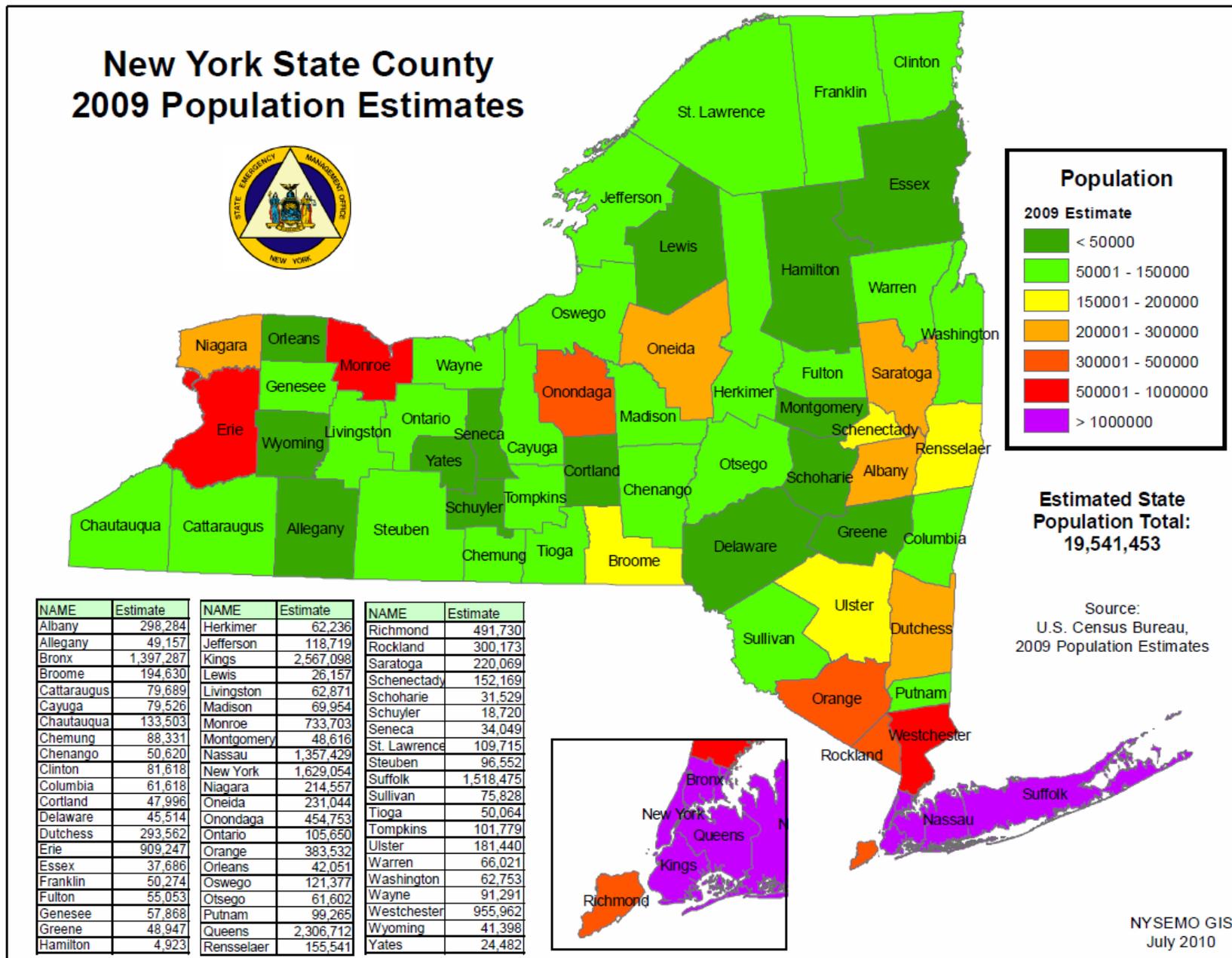


Table 1-2 presents the general building stock dollar value exposure by county.

**Table 1-2
New York State General Building Stock Dollar Value Exposure by County (\$000)**

COUNTY	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	AG	RELIGION	GOV	EDUCATION	TOTAL
Albany	15,255,303	3,503,104	348,262	26,828	257,975	498,617	229,524	20,119,613
Allegany	2,654,728	205,528	24,002	4,072	35,810	21,672	44,302	2,990,114
Bronx	47,763,305	8,376,990	590,055	9,666	359,432	48,481	563,649	57,711,578
Broome	9,311,283	1,530,790	281,759	24,856	125,506	35,343	73,243	11,382,780
Cattaraugus	4,388,381	506,320	94,922	14,149	52,445	31,687	64,668	5,152,572
Cayuga	4,121,137	575,239	118,299	21,709	59,561	22,710	63,636	4,982,291
Chautauqua	6,593,864	781,265	233,494	23,095	90,550	25,894	60,997	7,809,159
Chemung	3,965,121	730,810	205,948	7,886	50,055	20,557	22,000	5,002,377
Chenango	2,429,238	342,407	134,170	25,447	41,677	14,685	14,877	3,002,501
Clinton	3,242,792	566,991	117,427	7,557	33,322	16,785	71,198	4,056,072
Columbia	3,827,996	420,953	83,459	18,058	35,590	13,432	25,170	4,424,658
Cortland	2,358,716	375,598	99,403	6,496	28,062	14,545	38,766	2,921,586
Delaware	3,123,257	276,849	65,294	14,876	41,410	15,974	25,867	3,563,527
Dutchess	15,580,257	2,039,964	465,612	48,886	185,924	60,512	242,391	18,623,546
Erie	49,684,027	7,975,254	1,871,924	66,338	564,096	131,023	406,132	60,698,794
Essex	2,716,389	287,495	32,439	10,573	33,250	23,227	31,086	3,134,459
Franklin	2,714,670	319,325	41,025	20,311	37,214	35,476	48,612	3,216,633
Fulton	3,108,310	335,603	92,278	4,466	34,842	12,519	22,439	3,610,457
Genesee	2,896,868	442,554	148,348	14,342	43,131	36,842	62,448	3,644,533
Greene	3,116,936	335,320	53,582	10,038	36,199	17,201	44,710	3,613,986
Hamilton	883,908	53,035	6,912	433	8,669	4,824	5,938	963,719
Herkimer	3,505,133	372,551	66,106	9,276	29,250	17,279	24,628	4,024,223
Jefferson	5,308,266	614,481	118,005	11,398	42,813	26,314	33,078	6,154,355
Kings	112,905,255	15,116,410	2,530,429	22,679	1,344,608	220,016	1,073,220	133,212,617
Lewis	1,632,992	237,387	41,381	19,928	17,800	5,134	9,776	1,964,398
Livingston	3,072,685	335,814	83,925	10,551	53,863	17,048	65,911	3,639,797
Madison	3,505,665	379,812	136,993	34,309	36,437	56,198	60,100	4,209,514
Monroe	37,691,978	6,036,041	1,177,471	42,266	420,646	85,965	450,655	45,905,022
Montgomery	2,478,002	347,716	103,149	7,161	23,994	8,390	9,194	2,977,606
Nassau	89,953,540	14,196,396	1,842,284	94,373	644,965	181,233	2,400,550	109,313,341
New York	75,774,455	65,225,255	4,450,023	50,585	2,534,360	836,931	1,530,635	150,402,244
Niagara	11,163,264	1,202,306	395,610	25,286	95,680	46,316	101,279	13,029,741
Oneida	10,522,065	1,547,519	286,721	18,037	101,322	60,169	119,658	12,655,491
Onondaga	23,151,246	4,137,458	914,958	92,740	233,209	89,992	189,875	28,809,478
Ontario	5,472,352	725,954	194,746	17,555	44,434	13,541	106,633	6,575,215
Orange	17,973,981	2,676,600	542,636	56,954	185,345	1,073,339	169,664	22,678,519
Orleans	2,011,884	233,494	111,646	6,167	15,617	4,543	18,147	2,401,498
Oswego	5,769,111	688,404	90,709	8,693	61,681	21,405	81,233	6,721,236
Otsego	3,350,701	410,421	64,698	26,362	56,882	13,947	47,716	3,970,727
Putnam	6,146,789	576,385	827,036	10,328	59,335	11,166	19,004	7,650,043

COUNTY	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	AG	RELIGION	GOV	EDUCATION	TOTAL
Queens	91,019,571	9,926,176	1,919,944	24,240	722,188	116,449	577,815	104,306,383
Rensselaer	8,466,129	868,383	156,420	13,070	69,812	32,731	511,571	10,118,116
Richmond	22,733,050	1,606,191	152,003	7,614	101,135	12,175	117,893	24,730,061
Rockland	16,215,878	2,116,029	425,195	19,615	176,017	54,346	223,989	19,231,069
Saint Lawrence	5,686,706	628,781	163,069	12,757	46,485	29,155	36,549	6,603,502
Saratoga	11,191,083	1,298,623	193,420	24,371	69,548	17,490	237,809	13,032,344
Schenectady	7,714,998	1,907,774	598,534	6,803	56,628	16,056	29,259	10,330,052
Schoharie	1,778,971	214,507	37,575	17,588	44,478	9,691	27,565	2,130,375
Schuyler	1,017,533	60,691	10,047	1,929	6,454	4,097	3,347	1,104,098
Seneca	1,705,613	293,481	32,556	6,845	22,403	12,389	31,523	2,104,810
Steuben	5,001,249	596,202	189,481	25,005	49,611	15,872	83,515	5,960,935
Suffolk	86,848,991	12,502,395	3,264,084	225,917	600,390	193,733	457,219	104,092,729
Sullivan	5,401,804	482,607	78,125	14,755	50,612	19,438	33,863	6,081,204
Tioga	2,452,362	199,144	86,163	13,542	29,629	7,366	20,635	2,808,841
Tompkins	4,928,651	631,911	55,441	12,298	41,570	17,467	200,347	5,887,685
Ulster	10,062,381	1,226,486	278,292	57,990	107,699	34,777	101,147	11,868,772
Warren	3,711,285	610,222	79,109	6,691	40,367	13,882	13,794	4,475,350
Washington	3,181,050	256,888	106,725	29,063	33,101	17,072	22,453	3,646,352
Wayne	4,777,982	476,441	134,213	67,542	47,872	14,998	28,721	5,547,769
Westchester	56,947,555	9,235,555	1,451,128	89,984	674,934	109,616	638,620	69,147,392
Wyoming	2,029,101	234,194	37,568	16,889	24,201	15,429	11,474	2,368,856
Yates	1,460,154	157,321	22,869	7,642	13,600	4,022	15,317	1,680,925
TOTALS	965,457,947	190,571,800	28,559,101	1,646,880	11,185,695	4,659,183	12,097,034	1,214,177,640

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

The following **Table 1-3** represents a summary of revisions, additions, and eliminations made to the 2008 NYS Hazard Mitigation Plan in developing the 2011 update. However, there were some sections where revisions were not feasible or warranted due to limited resources or the fact that little information changed.

**Table 1-3
Summary of 2011 State Plan Revisions**

Section 1.0 - Introduction
<p>1.1 – Plan Summary: Minor revisions were made to this portion of the plan in order to describe some of the changes and to suggest to Jurisdictions some strategies to utilize as they develop their plans. The statistical information about NYS was reviewed and updated as appropriate. Population information was updated and supplemental maps were incorporated to reflect population trends. The NYS Hazard Mitigation Plan “Users Survey” that the NYS OEM conducted was noted. A discussion on climate change issues was incorporated so that local officials were made aware of the various on-going initiatives and, where appropriate, to provide future climate change projections so that local officials could incorporate this information into local planning and decision making processes.</p>

Section 2.0 – State Coordination Efforts & Capabilities

2.1 – Multi-Hazard Mitigation Planning Process

The planning process section was updated to reflect activities undertaken to accomplish the 2011 Plan Update while coordinating the input and involvement of large numbers of people and agencies. The make-up of the State agencies represented on the DPC was updated. Several additional agencies agreed to participate in the development of 2011 Plan update, including the NYS Department of Labor and the State University of NY (SUNY Central). In addition, the New York Metropolitan Transportation Authority (MTA) also contributed input to the 2011 update process. The organizational chart and the listing of State agencies have been updated. The information gathering process and the listing of collaborative efforts were extensively updated to reflect recent planning activities. All appropriate plans and information were reviewed and the listing of resources was updated.

2.2 – Integration with State Planning Efforts

This section had minor editorial updates, as necessary.

2.3 – State Agencies

This section was extensively updated and edited from the previous version, particularly in the description of the mission and roles played in the hazard mitigation arena by the various NYS agencies. More concise mission statements were developed for each DPC agency and web links to each agency's homepages were provided so End Users receive the most current information.

2.4 - Consolidation of Planning Requirements for All State Mitigation Programs

This section had minor editorial updates, as necessary.

2.5 – Federal Agencies

This section was updated, as appropriate. Information concerning FEMA programs was updated to reflect additional disaster declaration and provide the most current information on the CRS Program

2.6 – Local Agencies

Agencies such as the Delaware River Basin Commission, the Susquehanna River Basin Commission and the Genesee / Finger Lakes Regional Planning Council participated in the planning process, and submitted updated material for these sections.

Section 3.0 – Risk Assessment

This section of the plan was extensively revised. Each hazard was thoroughly researched and updated with the most readily available information. Historical data was significantly researched and expanded. All hazard profiles will show expanded information and offers several improved examples of GIS data to predict vulnerability. NFIP maps, Earthquake Loss, and Landslide maps show some improved presentation. Unfortunately, due to significant resource constraints, some data or GIS products were not updated, such as the Q3 data for **some** counties and the OGS Fixed Asset inventory.

Section 4.0 – Mitigation Strategy

The Vision, Goals and Objectives for the Plan were reviewed by the DPC agencies and numerous revisions were made. The status of hazard mitigation activities outlined in the Plan approved in January, 2008 was updated and reported on in this Section. A list of new and continuing hazard

mitigation activities for the period of January 1, 2011 through December 31, 2013 was developed and included in this section.

Section 5.0 –Local Mitigation Planning

Section 5.2 – Funding Sources were updated, as appropriate.

Section 6.0 –Plan Maintenance Procedure

The SOEM believes that the process developed in the 2008 Plan has been working effectively and therefore the SOEM intends to leave the same process in place for the 2011 Plan.

Section 7.0 –Monitoring Progress of Mitigation Activities

Section 7 was reviewed and revised by the SOEM Mitigation Section. The monitoring process of activities and projects was proven to still be relevant, in use, and up to date.

Section 8.0 – Program Management Capability

This section was significantly revised to focus on describing the current project solicitation and selection process.

Section 9.0 – Assessment of Mitigation Actions

This section was updated, as appropriate and minor revisions were made.

Section 10.0 – Effective Use of Available Mitigation Funding

This section was updated, as appropriate.

Section 11.0 – Commitment to a Comprehensive Mitigation Program

Section 11, in the prior 2008 approved Plan, has been eliminated in the 2010 submission. It was felt that since this is not a requirement and that it added little to the value of the Plan, it was appropriate to eliminate this section.

Section 12.0 – Mitigation Plan Adoption Process

This section was updated as appropriate and as directed in FEMA’s Crosswalk review.