

# SECTION 1: INTRODUCTION

## 1.1 PLAN ADOPTION RESOLUTIONS

In accordance with Section 201.6 of the Disaster Mitigation Act of 2000 (DMA 2000), Nassau County, New York developed this Multi-Jurisdictional Hazard Mitigation Plan to identify the natural hazards that threaten the County, as well as ways to reduce the future damages associated with these hazards.

The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards.

[Sec. 201.6 \(DMA 2000\) Local Mitigation Plans](#)

Following this page are the signed adoption resolutions of the County and all participating jurisdictions that have adopted this plan, authorizing municipal government staff to carry out the actions detailed herein.

**Signed resolutions of adoption by all participating jurisdictions shall be inserted following this page before the Final Plan is submitted to FEMA.**

## RESOLUTION

Jurisdiction: \_\_\_\_\_

Governing Body: \_\_\_\_\_

Address: \_\_\_\_\_

**WHEREAS**, the County of Nassau, with the support of outside consultants, has created the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan**, and the (Name of Jurisdiction) has reviewed and consulted with Nassau County regarding mitigation for the (Jurisdiction); and

**WHEREAS**, the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan**, effective 2007 and currently being submitted for Update in 2012, has been prepared in accordance with the Disaster Mitigation Act of 2000; and

**WHEREAS**, the (Name of Jurisdiction) is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the action in the Plan; and

**WHEREAS**, the (Name of Jurisdiction) has reviewed the Plan and affirms that the Plan will be updated no less than every five (5) years;

**NOW THEREFORE, BE IT RESOLVED**, by the (Governing Body) that the (Name of Jurisdiction) adopts the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan and the 2014 Plan Update** as this jurisdiction's Natural Hazard Mitigation Plan and resolves to execute the actions in the Plan.

**ADOPTED** this XXth day of Month, Year, at the meeting of the (Governing Body).

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

## RESOLUTION

Trustee One offered the following resolution, which was duly seconded by Trustee Two:

### **A RESOLUTION ADOPTING THE NASSAU COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN**

**WHEREAS**, the Emergency Manager has recommended to the Board that the (Jurisdiction) adopts the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan**, which was developed by the Nassau County Hazard Mitigation Planning Group in 2007, in consultation with experts, and is currently being submitted for Update in 2014; and

**WHEREAS**, the Board has reviewed the recommendation, and have determined it would be in the best interest of the (Jurisdiction) to adopt the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan and the 2014 Plan Update**.

**NOW THEREFORE BE IT RESOLVED**, that the Board be, and they hereby are, authorized to adopt the **Nassau County Multi-Jurisdictional Hazard Mitigation Plan and the 2012 Plan Update** on behalf of the (Jurisdiction).

**ADOPTED** this XXth day of Month, Year, at the meeting of the (Governing Body).

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

Jurisdiction: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_



## 1.2 BACKGROUND



On October 29, 2012, our communities suffered a disaster encompassing all of the long-held fears of any coastal region. An historic storm surge devastated thousands of homes, businesses, and forever changed life as our residents knew it along the shore. Our recovery will likely continue for years to come.

In the immediate aftermath of Sandy, what was clear to residents, business owners and community leaders alike was that as we rebuild, we must rebuild stronger and smarter. We must make our communities as resilient as our citizens.

The 2014 update to the Nassau County Multijurisdictional Hazard Mitigation Plan places a renewed focus on our collective resiliency. As the New York State 2100 Commission Report noted, building resilience "is a process not an outcome." Thus, stressed to our participants was that it is the planning process, rather than the planning document, that will help forge more resilient communities.

Mitigation does not eliminate a hazard, but can reduce or eliminate the risks it causes. Thus a goal of our update process was to prompt communities to think of hazard mitigation in ways they had not previously considered. As Superstorm Sandy provided a clear example of, mitigation does not mean

focusing exclusively on efforts to prevent the ocean or bay waters from coming. It means minimizing that waters' potential threat to life, its damage to our property, and its disruption of our basic services and care. It means taking away its ability to cause us significant harm.

This tactic can only succeed through action before hazards occur. Our communities are now adept at reacting to disaster. What we owe them are the tools to be proactive in order to lesson the event's impact.

As our residents and community leaders well know, the immediate aftermath of a disaster is not the time anyone wants to discuss long-term mitigation efforts. Communities want to recover and make themselves whole again. Citizens want to return home, and reopen their businesses. But as we've also learned, the failure to plan long-term and enact critical mitigation efforts during the ongoing recovery process will leave us just as vulnerable to the next disaster to strike. Just as Western states are attempting to shift focus from fighting wildfires to mitigating the damage they cause, we must place a renewed emphasis on reducing our vulnerability to certain hazards, not simply recovering from them.

Superstorm Sandy exposed Nassau's vulnerabilities on a scale never seen. It showed how a severe storm can impact not only the coastal communities, but impact communities that never before had much to fear from a coastal storm. It challenged our infrastructure and utilities, and our coordinated emergency services. It taught lessons in response and recovery, while truly hitting home the critical nature of mitigation. It taught how quickly a community and its key components can get back up and running when it is prepared, and that by simply being able to turn the lights and heat back on, a community can get back to work and begin to recover.

This Plan Update is the result of lessons learned from Superstorm Sandy, and extensive collaboration with wide-ranging stakeholders throughout Nassau County.

These stakeholders witnessed firsthand the importance of maintaining our essential services in the face of disaster, protecting our critical infrastructure, and keeping power supplied to our first responders and vulnerable populations. They can testify as to how keeping the lights on at village halls and community centers afforded citizens a gathering place to receive and share vital information. They are versed in the necessity to harden infrastructure, protect our vital roadways and transportation hubs, and elevate critical equipment to keep key utilities functioning.

As rising waters and dangerous storms continue to threaten the country's shoreline, Nassau County can – and should – be a model for coastal resiliency.

***“Building resilience will enable us to avoid unmanageable impacts, while managing the risks that the future will no doubt present.”***

***New York State 2100 Commission Report***

The Nassau County Multi-Jurisdictional Hazard Mitigation Plan was promulgated in February of 2007 in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) which provides the legal basis for FEMA planning requirements for State and local governments as a condition of mitigation grant assistance. Section 322, Mitigation Planning, of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (“the Stafford Act”), provides mandatory requirements and optional guidelines relative to mitigation planning. Section 322 stipulates the requirement for a State mitigation plan as a condition of disaster assistance, and establishes requirements for local mitigation plans. In order to apply for Federal aid for technical assistance and post-disaster funding, local jurisdictions must comply with DMA 2000 and its implementing regulations under (44 CFR Part 201.6). As a condition of ongoing compliance, the Nassau County Plan includes provision for monitoring, evaluating, and updating its contents on a 5-year cycle. This process is designed to:

1. Ensure that mitigation strategies are implemented according to the plan.
2. Provide the foundation for Nassau County’s community hazard mitigation programs.
3. Standardize the process for monitoring long-term hazard-related activities.
4. Integrate mitigation principles in daily job responsibilities and department roles across the County.
5. Maintain momentum through continuous engagement and collaboration in mitigation planning.

The Hazard Mitigation Plan Update process provides the opportunity to assess how well the procedures established in the previously approved plan worked and formulate requisite corrective actions going forward. This Plan Update has been prepared in accordance with the requirements of DMA 2000. It represents the collective efforts of citizens, elected and appointed government officials, business leaders, volunteers of non-profit organizations, and other stakeholders. While natural disasters cannot be prevented from occurring, the continued implementation of this Plan will gradually, but steadily, lessen the impacts associated with hazard events.

Nassau County OEM (NCOEM) announced the intent to renew the plan on its county website and social media platforms, including both Facebook and Twitter. The Nassau County Multi-Jurisdictional Hazard Mitigation Plan was developed by the Nassau County Hazard Mitigation Planning Group (the “Planning Group”), with support from outside consultants. The efforts of the Planning Group were headed by the Nassau County Office of Emergency Management’s Hazard Mitigation Plan Coordinator. The Nassau County Executive’s Office published a press release to announce the update meeting and to reinforce the importance of the plan’s renewal. On December 14, 2011, NCOEM met with NYS and FEMA Mitigation Grants and Planning Teams along with NYS and FEMA Branch I to discuss the Plan Update and its components and requirements to ensure a proper plan and product.

On February 2, 2012, the NCOEM hosted a Hazard Mitigation Plan Update Meeting at the Morrelly Homeland Security Center in Bethpage, New York. During this meeting, the NCOEM delivered a comprehensive hazard mitigation presentation to an eclectic group of county entities that included representatives of our towns, cities, villages, fire departments, police departments, hospitals, school districts, local colleges/universities, libraries, representatives from congressional offices, and private sector entities. The meeting also included representatives from entities such as National Weather Service, National Grid, the New York State Department of Design & Construction, Long Island Power Authority, and New York Power Authority.



The objectives of the meeting were (1) to stress the importance of adopting a unified hazard mitigation strategy, (2) to educate attendees about the role of the federal government, such as FEMA and the availability of HMGP funding, (3) to urge participating and newly interested entities to identify and/or re-evaluate potential hazards in their local jurisdictions, and (4) to respond to inquiries regarding the re-development of the plan. Individualized consultations with several entities have been ongoing since the beginning of the update process in order to address their respective concerns regarding the Plan and provide additional guidance relative to hazard identification. These consultations were broken up by disciplines that include: villages, hospitals, first responders, schools, towns, and cities. NCOEM consulted with its local jurisdictions via teleconferences and emails to advise them of the intentions to update the plan as well as advising the respective jurisdictions of the history and purpose of the Plan.

Hurricane Sandy – the second-costliest hurricane in United States history, impacting the entire eastern seaboard from Florida to Maine – inflicted particularly severe damage in Nassau County. The full extent of the storm will be measured well into the future and these findings will present opportunities to strategize mitigation actions associated with high winds, flooding and coastal erosion. A large number of municipal entities and individual citizens have applied for disaster assistance from a host of Federal and State agencies. FEMA Public Assistance grant requests are in development for many Nassau County communities at the same time this Plan update is being formulated. The formulation of hazard mitigation planning strategies will continue to evolve well into the future as environmental studies and analysis are completed by government, scientific, academic and private sector communities relative to Sandy. One of the primary objectives of this plan update is to serve as the programmatic vehicle to assist in the formulation and prioritization of mitigation projects as impact and future implications of Sandy events are better understood. The obvious goal in this undertaking is to harden facilities, infrastructure and individual residences to reduce the impact and potential damage from natural disasters in the future.

The events following Hurricane Sandy impacted outreach and planning efforts for several months following the event as much of the County community was fully engaged in disaster recovery efforts. The Planning Group fully agreed in July of 2013 to the execution of a re-constituted outreach effort to assist stakeholders in taking the next steps to develop Post-Sandy mitigation strategies and actions. A final concentrated effort was executed from October 2013 through February of 2014 to give all involved sufficient opportunity to provide input to the update.

The Planning Group held a series of hazard mitigation planning workshops in October and November 2013 to engage all stakeholders in the update process. This interactive presentation and discussion forum was held to outline planning fundamentals, review risk assessment parameters and collaborate on project development strategies. The Planning Group also held a series of individual meetings and teleconferences throughout 2013 to finalize comprehensive updates to the original plan.

Nassau County OEM communicates information relative to hazard mitigation planning and programs in the mitigation planning section of the Nassau County web site. In the Fall of 2011, the NCOEM initiated a process to renew the Plan. The Core Planning Group – comprised of the Town of Hempstead, Town of North Hempstead, and Town of Oyster Bay – met with NCOEM on November 10, 2011 to identify the various steps Nassau County needed to take to organize the villages, municipalities, and districts to discuss the renewal of the plan.

The hazard mitigation planning process consisted of the following key steps:

- Engaging with stakeholders in order to effectively and thoroughly research the full range of natural hazards in order to identify which hazards could affect the County;

- Identifying the location and extent of hazard areas;
- Identifying assets located within these hazard areas;
- Characterizing existing and potential future assets at risk;
- Assessing vulnerabilities to the most prevalent hazards; and
- Formulating and prioritizing goals, objectives, and mitigation actions to reduce or avoid long-term vulnerabilities to the identified hazards.

The spectrum of natural hazards that can affect Nassau County are as follows:

- Coastal erosion
- Wave action;
- Floods;
- Severe weather events such as Hurricanes, Tornadoes, and Winter Storms/Ice Storms;
- Extreme Winds;
- Earthquakes;
- Landslides; and
- Droughts.

After evaluating these hazards and the assets within the County to address them, the Planning Group developed a mitigation strategy to maximize disaster resiliency in Nassau along with procedures for monitoring, evaluating and updating the Plan to ensure that it remains a “living document.” Given recent events, including Hurricane Sandy, it is anticipated that further updates to the plan will occur as the various pieces of data from these events are analyzed as to how they impact the current mitigation strategies identified in this plan.

Draft versions of the Plan update have been made available online and in document repositories for all stakeholders including the general public to ensure ample opportunity to provide comment and/or amplifying information to continuously update the plan. The Final Plan will include copies of adoption resolutions as they are executed.





Questions, comments and requests for information on the Multi-Jurisdictional Hazard Mitigation Plan for Nassau County, New York, should be addressed to:

**Nassau County Office of Emergency Management**

510 Grumman Road West

Bethpage, New York 11714

**David Zatlin, Hazard Mitigation Plan Coordinator**

Office: (516) 573-0636

E-mail: [hazmitplan@nassaucountyny.gov](mailto:hazmitplan@nassaucountyny.gov)

## 1.3 ACKNOWLEDGEMENTS

The following entities participated in the development of this plan update by attending one or more meetings, coordinating directly with the Planning Group and/or providing information in support of the project throughout the update process:

Nassau County  
Town of Hempstead  
Town of Oyster Bay  
Town of North Hempstead  
City of Long Beach  
City of Glen Cove  
Village of Atlantic Beach  
Village of Bayville  
Village of Cedarhurst  
Village of Centre Island  
Village of Floral Park  
Village of Great Neck Plaza  
Village of Hewlett Harbor  
Village of Island Park  
Village of Kensington  
Village of Lake Success  
Village of Laurel Hollow  
Village of Lawrence  
Village of Lynbrook  
Village of Malverne  
Village of Manorhaven  
Village of Massapequa Park  
Village of Mineola  
Village of North Hills  
Village of Rockville Centre  
Village of Roslyn  
Village of Roslyn Harbor  
Village of Russell Gardens  
Village of Stewart Manor  
Village of Williston Park  
Oyster Bay Sewer District  
Greater Atlantic Beach Water District  
Belgrave Water Pollution Control District  
Garden City Park Water & Fire District  
Great Neck Alert Fire Company  
Great Neck North Water Authority  
Great Neck Water Pollution Control District  
Jericho Water District

Lawrence Cedarhurst Fire Department  
Locust Valley Water District  
Massapequa Water District  
Old Westbury Water District  
Oyster Bay Fire Company 1  
Oyster Bay Water District  
Port Washington Fire Department  
Port Washington Water Pollution Control District  
Roslyn Water District  
Seaford Fire Department  
Terry Farrell Fund  
Adelphi University  
East Rockaway School District  
Freeport School District  
Freidberg Jewish Community Center  
Lawrence High School  
Levittown Public Schools  
Locust Valley Central School District  
Long Beach City School District  
Massapequa School District  
Mill Neck Manor School  
Nassau BOCES  
Nassau Community College  
Hatzalah of the Rockaways & Nassau County  
Long Beach Medical Center  
Long Beach Nursing Home  
OHEL Children's Home & Family Services  
Parker Jewish Institute for Rehabilitation  
South Shore Association for Independent Living  
South Nassau Communities Hospital  
Catholic Health Services  
Catholic Charities  
Adults & Children with Learning & Development Disabilities  
Family Residences & Essential Enterprise  
SCO Family of Services  
United Cerebral Palsy Association of Nassau County  
Epic Long Island

The **Village of Freeport** pursued its own single-jurisdiction hazard mitigation plans and did not adopt the County plan. However, its officials did attend one or more meetings in support of the larger county-wide planning effort.

## 1.4 PURPOSE

This Nassau County Multi-Jurisdictional Hazard Mitigation Plan (the “Plan”) was originally developed by the Nassau County Hazard Mitigation Planning Group (the “Planning Group”), along with outside consultants in 2006-2007. In 2013-14, the Plan underwent an updating process to re-evaluate hazardous conditions in Nassau County. The Plan represents the collective efforts of citizens, elected and appointed government officials, business leaders, volunteers of non-profit organizations, and other stakeholders.

Through the development of this Plan, the Planning Group in collaboration with stakeholder groups across the County worked to identify natural hazards that could affect our communities along with an evaluation of the risks associated with these hazards. The primary purpose of this Plan update is to make Nassau County more disaster-resistant because the county has taken the initiative to recognize the benefits that can be gained by planning ahead and taking measures to reduce damages before the next disaster strikes.

## 1.5 ABOUT NASSAU COUNTY

Nassau County is located on the western portion of Long Island, New York. Long Island is the longest island in the United States, extending from New York City easterly about 118 miles in length and approximately 20 miles at its widest point. The Island is divided into four counties: Kings County, Queens County, Nassau County and Suffolk County. Nassau County is bounded by Queens County to the west, Suffolk County to the east, and is bordered by the Atlantic Ocean to the south and the Long Island Sound to the north. With the benefit of important location factors, principally highway and rail, Nassau County has been one of the fastest growing regions in the country. With a landmass of 286.69 square miles (183,680 acres) and 166.39 square miles of water, Nassau County serves a population of 1.3 million people (1,339,532). (Source: U.S. Census, 2010).

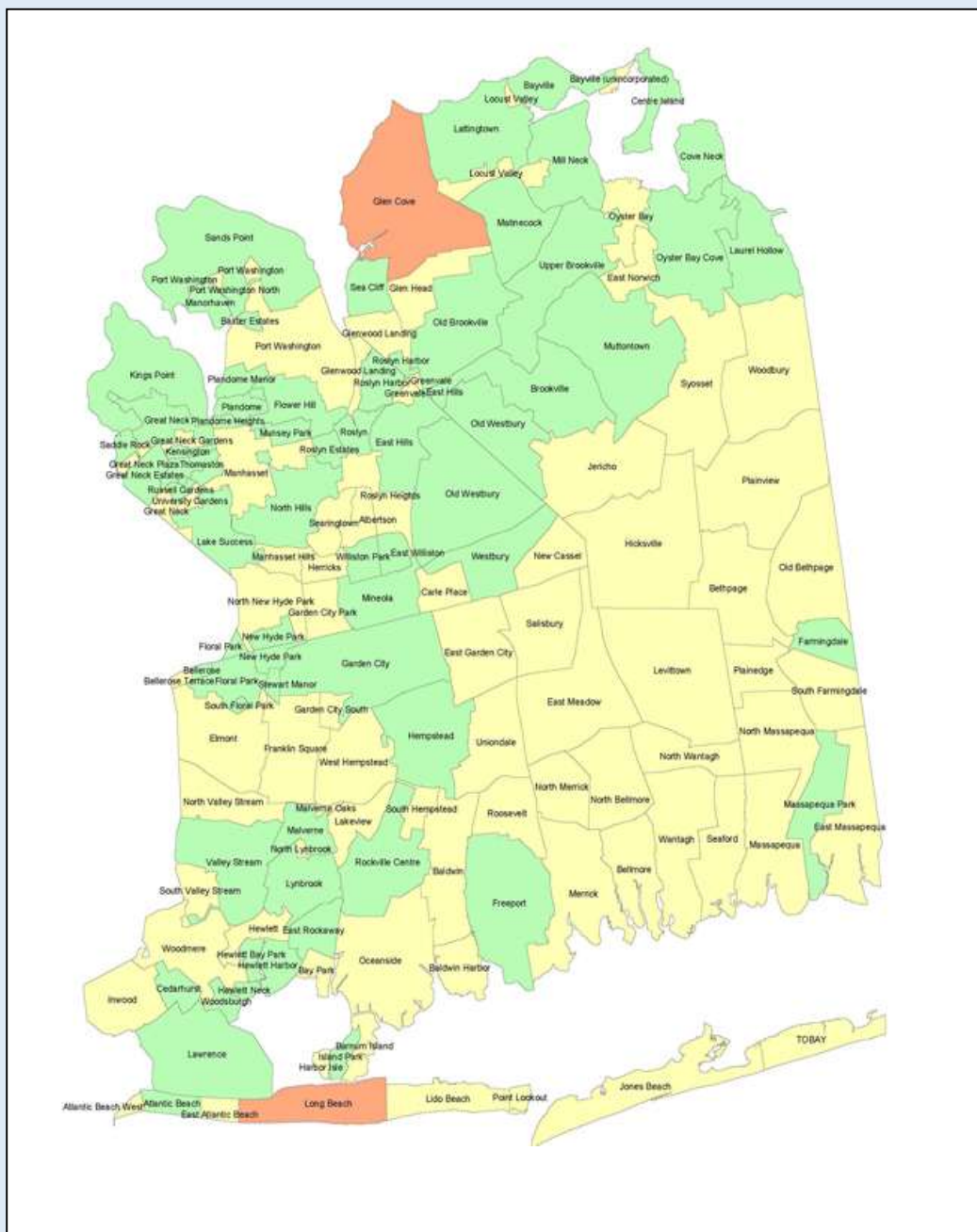
According to the U.S. Census, the population of Nassau County in 1990 was 1,287,348; whereas, in 2000 it grew to 1,334,544 – an increase of 3.5 percent over ten years. Table 1 shows County and Town population changes from 1970 through 2000. In 2010, the population grew to 1,339,532 – an increase of 0.4 percent.

Table 1  
Population Percentage  
Change: 1970-2010  
(Source: U.S. Census, 1970,1980, 1990,2000,2010)

Municipality	1980	1990	2000	2010	1980- 2000	1990- 2000	2000- 2010	% Change 1980-	% Change 1990-	% Change 2000-	Housing
Nassau	1,321,582	1,287,348	1,334,544	1,339,532	12,962	47,196	4,988	1.0%	3.5%	0.4%	468,346
Hempstead	738,517	725,639	755,924	759,757	17,407	30,285	3,833	2.30%	4.17%	0.5%	252,286
North Hempstead	218,624	211,393	222,611	226,322	3,987	11,218	3,711	1.79%	5.30%	1.7%	81,961
Oyster Bay	305,750	292,657	293,925	293,214	-11,825	1,268	-711	-11.00%	0.43%	-0.2%	101,493

According to the 1990 U.S. Census, the population density per square mile of land in Nassau County was 4,489 persons per square mile; whereas, in the 2000 U.S. Census, there were 4,655 persons per square mile – an increase of 244 more persons per square mile. In the 2010 U.S. Census, there were 4,704 persons per square mile – this accounts for an increase of 49 more persons per square mile.

In Nassau County, there are two (2) cities, three (3) towns and sixty-four (64) incorporated villages. They are the Cities of Glen Cove and Long Beach; Towns of Hempstead, North Hempstead, and Oyster Bay; and Villages of Atlantic Beach, Bellerose, Cedarhurst, East Rockaway, Floral Park, Freeport, Garden City, Hempstead, Hewlett Bay Park, Hewlett Harbor, Hewlett Neck, Island Park, Lawrence, Lynbrook, Malverne, Mineola, New Hyde Park, Rockville Centre, South Floral Park, Stewart Manor, Valley Stream, Woodsburgh, Baxter Estates, East Hills, East Williston, Flower Hill, Great Neck, Great Neck Estates, Great Neck Plaza, Kensington, Kings Point, Lake Success, Manorhaven, Munsey Park, North Hills, Old Westbury, Plandome, Plandome Heights, Plandome Manor, Port Washington North, Roslyn, Roslyn Estates, Roslyn Harbor, Russell Gardens, Saddle Rock, Sands Point, Thomaston, Westbury, Williston Park, Bayville, Brookville, Centre Island, Cove Neck, Farmingdale, Lattingtown, Laurel Hollow, Massapequa Park, Matinecock, Mill Neck, Muttontown, Old Brookville, Oyster Bay Cove, Sea Cliff, and Upper Brookville.



**Map of Nassau County, New York**

Source: Nassau County Website



Nassau County's largest natural waterways – the Long Island Sound and the Atlantic Ocean – support a thriving local tourism, housing, economic and recreation base. Combined with the County's close proximity and transportation linkages to New York City, Nassau County is both a point of origin and a destination place for thousands of commuters and visitors each day.

Off the northern coast of Nassau County are offshore islands, mainland wetlands and offshore waters, bays and coves, including Little Neck Bay, Manhasset Bay and Hempstead Harbor which are the waters that constitute part of Long Island Sound between New York and Connecticut. These bays, along with the Long Island Sound, are referred to as the Northern Bays. Further east is Oyster Bay Harbor which borders the Suffolk County bays.

The Northern Bays and Oyster Bay Harbor are primarily an aquatic habitat complex with relatively small areas of land as a result of densely urbanized, heavily populated communities. In these waters, high concentrations of fish and wildlife can be found, including such species as waterfowl, American black duck, Canadian goose, marine shellfish, finfish (striped bass, scup, bluefish, winter flounder and blackfish, for example) and hard-shelled clam beds. Oyster Bay Harbor is possibly the most oyster-producing water body in the State of New York, and possibly the region. American oysters are common in these waters.

## **FEMA DISASTER DECLARATIONS**

Disaster declarations, for the county or counties affected by a disaster, are declared by the President of the United States under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act"). FEMA then manages the entire process, including making federally-funded assistance available in declared areas; coordinates emergency rescue and response efforts; provides emergency resources; and provides other related activities/funding in the process of aiding citizens and local governments in a nationally-declared disaster. Tables 2 and 3 provide a summary of disaster and emergency declarations for the State of New York, with an indication as to whether Nassau County was part of the declared area.

Table 2 New York State Major Disaster Declarations: 1954 - 2013 (Source: FEMA, online at <a href="http://www.fema.gov/news/disasters_state.fema?id=36">http://www.fema.gov/news/disasters_state.fema?id=36</a> )				
Year	Date	Disaster Type	Disaster #	Was Nassau County Declared? (Y/N/UNK)
2013	07/12	Severe Storms and Flooding	4129	N
2013	04/23	Severe Winter Storm and Snowstorm	4111	Y
2012	10/27	Hurricane Sandy	4085	Y
2011	09/13	Remnants of Tropical Storm Lee	4031	N
2011	08/31	Hurricane Irene	4020	Y
2011	06/10	Severe Storms, Flooding, Tornadoes, and Straight-line Winds	1993	Y
2011	02/18	Severe Winter Storm and Snowstorm	1957	Y
2010	10/14	Severe Storms, Tornadoes, and Straight-line Winds	1943	N
2010	04/16	Severe Storms and Flooding	1899	Y
2009	12/31	Severe Storms and Flooding Assoc. w/ Ida	1869	Y
2009	09/01	Severe Storms and Flooding	1857	N

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2009	03/04	Severe Winter Storm	1827	N
2007	08/31	Severe Storm, Flooding, and Tornado	1724	N
2007	07/02	Severe Storms and Flooding	1710	N
2007	04/24	Severe Storms and Inland and Coastal Flooding	1692	N
2006	12/12	Severe Storms and Flooding	1670	N
2006	10/24	Severe Storms and Flooding	1665	N
2006	07/01	Severe Storms and Flooding	1650	N
2005	04/19	Severe Storms and Flooding	1589	N
2004	10/01	Tropical Depression Ivan	1565	N
2004	10/01	Severe Storms and Flooding	1564	N
2004	08/03	Severe Storms and Flooding	1534	N
2003	08/29	Severe Storms, Tornadoes and Flooding	1486	N
2003	05/12	Ice Storm	1467	N
2002	05/16	Earthquake	1415	N
2002	03/01	Snowstorm	1404	N
2001	09/11	Terrorist Attack	1391	Y
2000	07/21	Severe Storms	1335	N
1999	09/19	Hurricane Floyd	1296	Y
1998	09/11	Severe Storms	1244	N
1998	07/07	Severe Storms and Flooding	1233	N
1998	06/16	New York Severe Thunderstorms and Tornadoes	1222	N
1998	01/10	Severe Winter Storms	1196	N
1996	12/09	Severe Storms/Flooding	1148	UNK
1996	11/19	Severe Storms/Flooding	1146	UNK
1996	01/24	Severe Storms/Flooding	1095	UNK
1996	01/12	Blizzard	1083	UNK
1993	04/02	World Trade Center Explosion	984	UNK
1992	12/21	Coastal Storm, High Tides, Heavy Rain, Flooding	974	UNK
1991	09/16	Hurricane Bob	918	UNK
1991	03/21	Severe Storm, Winter Storm	898	UNK
1987	11/10	Severe Winter Storm	801	UNK
1987	05/15	Flooding	792	UNK
1985	10/18	Hurricane Gloria	750	UNK
1985	03/22	Snow Melt, Ice Jams	734	UNK
1985	03/20	Flooding	733	UNK
1984	09/25	Severe Storms, Flooding	725	UNK
1984	04/17	Coastal Storms, Flooding	702	UNK
1977	02/05	Snowstorms	527	UNK
1976	09/03	Hurricane Belle	520	UNK
1976	07/21	Severe Storms, Flooding	515	UNK
1976	06/29	Flash Flooding	512	UNK
1976	03/19	Ice Storm, Severe Storms, Flooding	494	UNK
1975	10/02	Severe Storms, Heavy Rain, Landslides, Flooding	487	UNK
1974	07/23	Severe Storms, Flooding	447	UNK
1973	07/20	Severe Storms, Flooding	401	UNK
1973	03/21	High Winds, Wave Action, Flooding	367	UNK
1972	06/23	Tropical Storm Agnes	338	UNK
1971	09/13	Severe Storms, Flooding	311	UNK

<p align="center">Table 2 New York State Major Disaster Declarations: 1954 - 2013 (Source: FEMA, online at <a href="http://www.fema.gov/news/disasters_state.fema?id=36">http://www.fema.gov/news/disasters_state.fema?id=36</a>)</p>				
1970	07/22	Heavy Rains, Flooding	290	UNK
1969	08/26	Heavy Rains, Flooding	275	UNK
1967	10/30	Severe Storms, Flooding	233	UNK
1965	08/18	Water Shortage	204	UNK
1963	08/23	Heavy Rains, Flooding	158	UNK
1962	03/16	Severe Storm, High Tides, Flooding	129	UNK
1956	03/29	Flood	52	UNK
1955	08/22	Hurricane, Floods	45	UNK
1954	10/07	Hurricanes	26	UNK

<p align="center">Table 3 New York State Emergency Declarations: 1974 – 2013</p>				
Year	Date	Emergency Type	Emergency #	Was Nassau County Declared? (Y/N/UNK)
2013	04/23	Severe Winter Storm and Snowstorm	4111	Y
2012	10/27	Hurricane Sandy	3351	Y
2011	09/08	Remnants of Tropical Storm Lee	3341	N
2011	08/26	Hurricane Irene	3328	Y
2008	12/18	Severe Winter Storm	3299	N
2007	02/23	Snow	3273	N
2006	10/15	Snow Storm	3268	N
2005	09/30	Hurricane Katrina Evacuation	3262	Y
2004	03/03	Snow	3195	N
2003	08/23	Power Outage	3186	Y
2003	03/27	Snowstorm	3184	Y
2003	02/26	Snowstorm	3173	N
2002	01/01	Snowstorm	3170	N
2000	12/04	Snow Storm	3157	N
2000	10/11	Virus Threat	3155	Y
1999	09/18	Hurricane Floyd	3149	N
1999	03/10	Winter Storm	3138	N
1999	01/15	Winter Storm	3136	N
1993	03/17	Severe Blizzard	3107	N
1980	05/21	Chemical Waste, Love Canal	3080	N
1978	08/07	Chemical Waste, Love Canal	3066	N
1977	01/29	Snowstorms	3027	N
1974	11/02	Flooding (NYS Barge Canal)	3004	N

The northern sections of Nassau County are less densely populated than the southern sections of Nassau County. Generally, the more commercialized areas in Nassau County are located in centrally-located highly-developed marketable areas along major highway routes and shopping malls. Some of these areas are: Mitchell Field/Roosevelt Field; Town of Oyster Bay/Long Island Expressway; Lake Success/New Hyde Park; Mineola/Garden City; Great Neck Peninsula; and the Village of Hempstead. Other areas of commercial properties are located

outside these large commercially-developed parts of the County in: the Villages of Rockville Center and Valley Stream; the City of Glen Cove; and the unincorporated areas of Bethpage and Port Washington.

## **INFRASTRUCTURE IN NASSAU COUNTY**

### **WATER**

Nassau County has 49 public water systems. Of these, 44 are community water systems, and 5 are non-community water systems. Water is supplied via natural rainfall, which is filtered down into aquifers and supplied to residents' homes through their respective water system.

### **PUBLIC HEALTH**

Twelve hospitals, 21 dialysis centers, and 35 nursing facilities located throughout the County. Nassau University Medical Center is a specialty hospital, providing treatment to burn victims through their burn unit. Long Beach Medical Center suffered extensive flood damage from Hurricane Sandy. As of 2014, it was in the process of a merger and reorganization under Oceanside-based South Nassau Communities Hospital.

### **GOVERNMENT**

There are 14 county government-owned and operated facilities throughout Nassau County that are considered symbolic and essential in maintaining the continuity of government. The most critical facilities are as followed.

- The Correctional Facility;
- Supreme Court;
- County Court;
- 1<sup>st</sup> through 4<sup>th</sup> District Courts;
- Family Court;
- The Old Court House;
- Teddy Roosevelt County Office Building in Mineola;
- The Juvenile Detention Center;
- The Ralph G. Caso County Executive Building;
- Public Safety Center
- Police Headquarters in Mineola.

## DEFENSE INDUSTRIAL BASE

Nassau County is host to active military installations.

## RECREATION and ENTERTAINMENT

Nassau County is home to 22 parks and recreation facilities, along with 18 museums and preserves, with a total of 5,600 acres. There is a vast mix of parks ranging from large, highly-trafficked, offering a variety of outdoor activities (with full-time park staff), to smaller parks with a single athletic field or small “green” area. There are also museums and preserves that provide a sampling of the typical ecosystems found on Long Island (Prairie-Hempstead Plains and Upland Forest). The Prairie-Hempstead Plains in the Town of Hempstead in Nassau County is the only remaining example of “unique” grassland community that was, historically, the largest sandplain grassland on the East Coast. The vegetation of the sandplain grasslands contains bushy rockrose and other rare plant species, including green milkweed, flax-flowered nutrush, stargrass and slender beadgrass. (Source: U.S. Wildlife Service, *National Conservation Training Center*.)

The 17,000-seat Nassau Coliseum in Uniondale is home to the New York Islanders professional hockey team, as well as the site of many large concerts, NCAA Tournament games, and other events. The reincarnation of the New York Cosmos professional soccer team and the New York Lizards professional lacrosse team both play their home contests in the 12,000-seat Shuart Stadium on the campus of Hofstra University in Hempstead.

There are also numerous large shopping malls (i.e., Roosevelt Field Mall), movie theatres, and other entertainment venues throughout Nassau County, including the 15,000-seat Nikon Theatre at Jones Beach State Park in Wantagh. The world-class beaches within Nassau County have hosted numerous national and international competitions in volleyball, surfing and boat racing.





## TOURISM

Nassau County has a robust tourism industry. The County experiences thousands of domestic and international visitors on a per annum basis.

## INFORMATION and TELECOMMUNICATIONS

Nassau County has several commercial telecommunication hubs, including both primary and secondary processing stations. Loss of a telecommunications component in Nassau County reduces the County's ability to communicate regionally, nationally, and internationally; and would impact emergency response and preparedness capabilities; and economic productivity.

## EMERGENCY SERVICES

Nassau County has four policing centers, 21 village Police Departments, and 71 Fire Departments, which are broken down into nine battalions. In addition to these, there are the following major emergency services locations:

- Police Operations Center/Public Safety Center  
1194 Prospect Avenue  
Westbury, NY 11590
- Office of Emergency Management  
510 Grumman Road West  
Bethpage, NY 11714

There are also six Volunteer Ambulance Corps consisting of the following resources:

- 15 Ambulances
- 8 Chiefs cars
- 321 total personnel

## ENERGY

PSEG-Long Island and National Grid Corporation provide Nassau County residents their respective gas and electricity at this time. National Grid owns and operates the gas system; on the electric side, PSEG owns the transmission & distribution (T&D) system, and the system is operated and maintained under contract by National Grid. National Grid also owns and operates the electric power plants, which supply energy to the PSEG customers. In addition, several cables crossing Long Island Sound allow PSEG to import power from the north, when economically advantageous, and there are several independent power producers as well. Finally, the Villages of Freeport and Rockville Centre own and operate their own small electric systems, using their own generation or purchased power to serve their municipalities. Key energy assets are briefly mentioned below for additional clarification.



- Electric Generation. In addition to the two municipalities, the primary generators of electricity in

Nassau County are:

E F Barrett Station – Island Park  
Glenwood Station – Glenwood Landing

- Electric Transmission & Distribution. The key assets in the electric T&D system are the substations. The most important are:

East Garden City  
Newbridge Road  
Plainview Shore Road  
Glenwood Landing  
Lake Success  
Freeport  
Rockville Centre  
Westbury (Neptune Regional Transmission System)

- Gas Distribution. The primary supply to the gas system in Nassau County is at the gate station in Long Beach. Other key regulator stations in the distribution system are located in Garden City, Inwood and Lake Success.

## TRANSPORTATION

Nassau County has 23 major roadways and thoroughfares and two major bridges that support traffic to and from surrounding communities within the County. The Long Island Expressway runs through the entire County. There are five major State thoroughfares that run through Nassau County, with six additional bridges that impact traffic traveling in all directions. These State thoroughfares include Northern State Parkway, Meadowbrook Parkway, Wantagh Parkway, Loop Parkway and Hempstead Turnpike. In addition, there are six bridges on three of these State thoroughfares. Loss of any of these roadways/ thoroughfares would severely curtail traffic and negatively impact traffic flow on other routes.

The Long Island Rail Road (LIRR) holds the distinction of being the busiest railroad in North America. It carries an average of 290,000 passengers each weekday on 735 daily trains. The LIRR system is comprised of nine branches, stretching from the eastern tip of Montauk, Long Island to Penn Station in the heart of Manhattan, approximately 120 miles away; all of these trains pass through Nassau County.

The LIRR has seven major rail stations that provide service in Nassau County. They are: Hicksville, Westbury, Freeport, Valley Stream, Mineola, Great Neck, and Hempstead.

Several bus lines also operate in Nassau County; these lines typically involve a lease or an operating agreement between Nassau County and Veolia Transportation. Through the operating agreement, a network is established that links 96 communities via 51 routes in Nassau County, western Queens and eastern Suffolk Counties, including 45 railroad stations, 4 major subway stations and 7 major shopping malls. Fleet: 317 buses traveling 30,729 daily miles, serving 3,400 bus stops.

## MEDIA

Nassau County is served by *Newsday*, News12, Fios1 News, several area radio stations, and numerous weekly-published community newspapers.

The Emergency Alert System (EAS) is covered primarily by News 12 and *Newsday*, as well as WKJY and WHLI.