



US Army Corps of Engineers  
BUILDING STRONG®

# Hurricane Henri 22

For Planning Purposes Only!

WASHINGTON, DC  
07:55:54  
21 Aug 2021

CHICAGO  
06:55:54  
21 Aug 2021

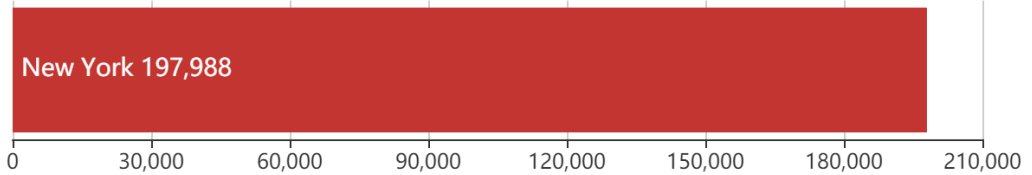
LOS ANGELES  
04:55:54  
21 Aug 2021

<https://go.usa.gov/xFs28>

Updated as of 21 Aug 2021 (6:55 AM Central Daylight Time)

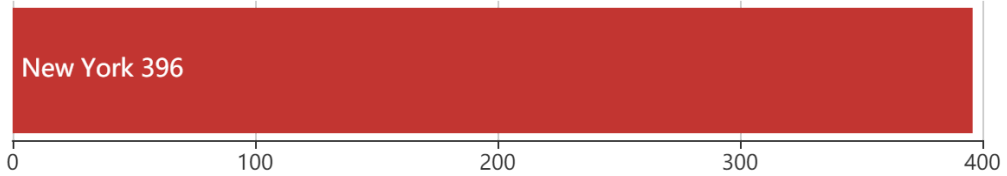
## Debris

198K  
cu. yd.



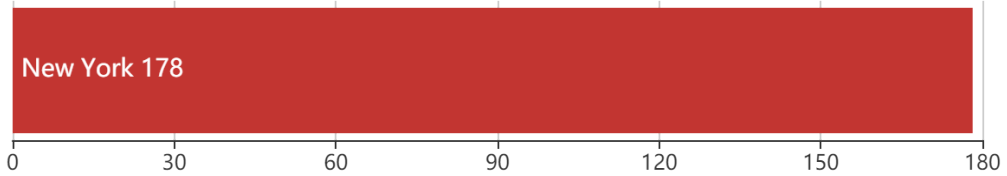
## Est. Temp. Roofing

396  
units



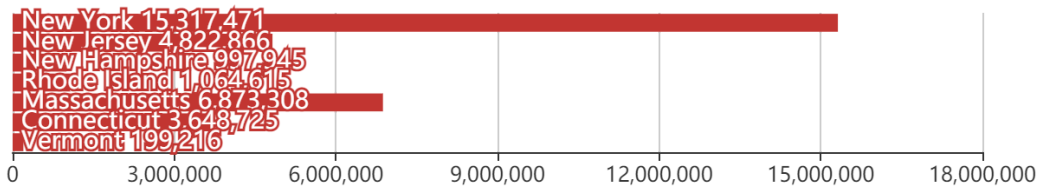
## Act. Temp. Roofing

178  
units



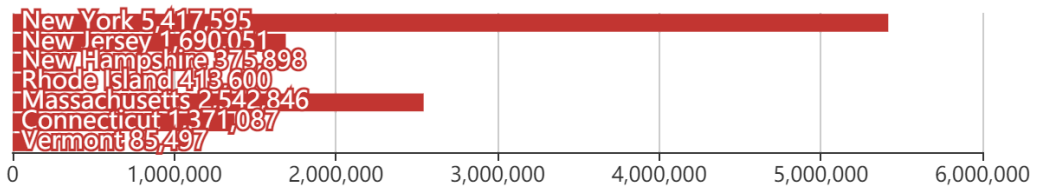
## Population

32.9M  
people



## Households

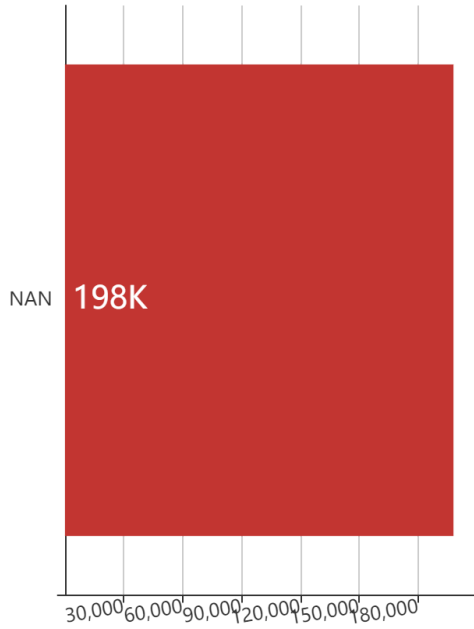
11.9M  
households



## Mission Model Summary

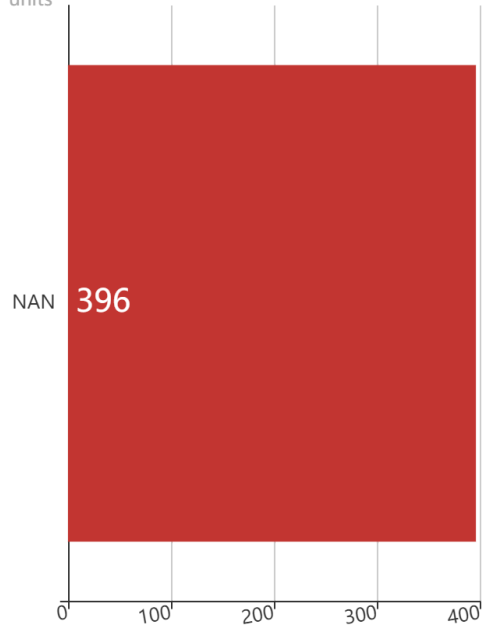
### Debris By USACE District

cu. yd.

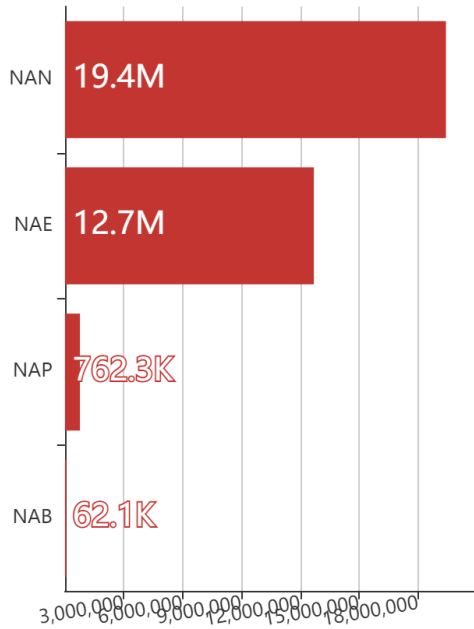


### Est. Temp. Roofing By USACE District

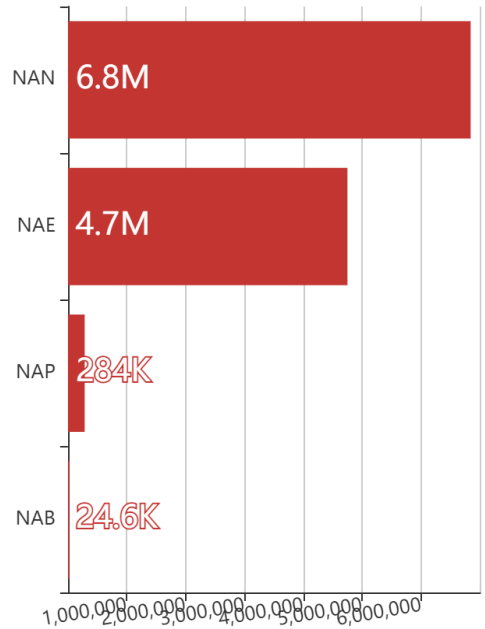
units



### Population By USACE District



### Households By USACE District



## Critical Infrastructure Summary

### Total

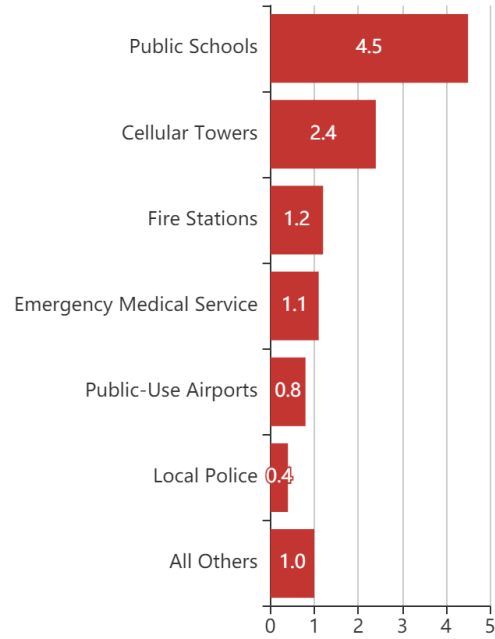


### Power Requirements



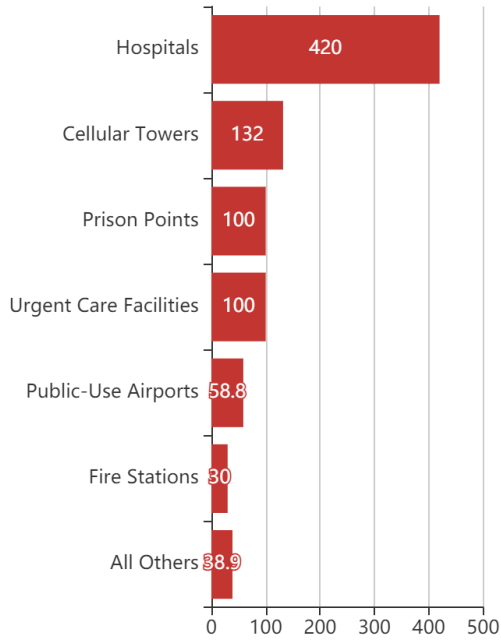
### Generators

By Generator Count



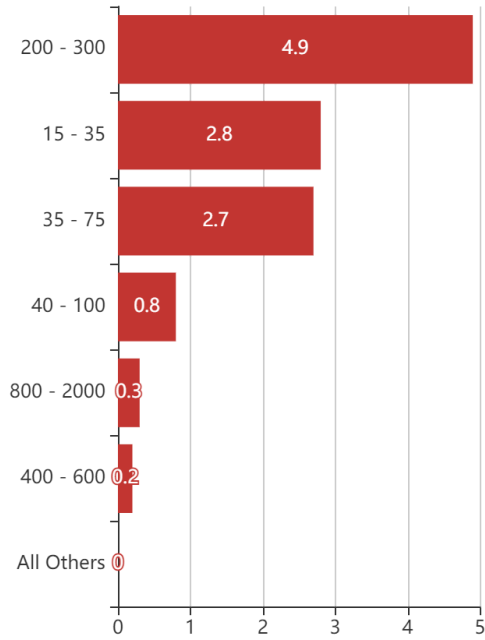
### Generators

By Power Requirement



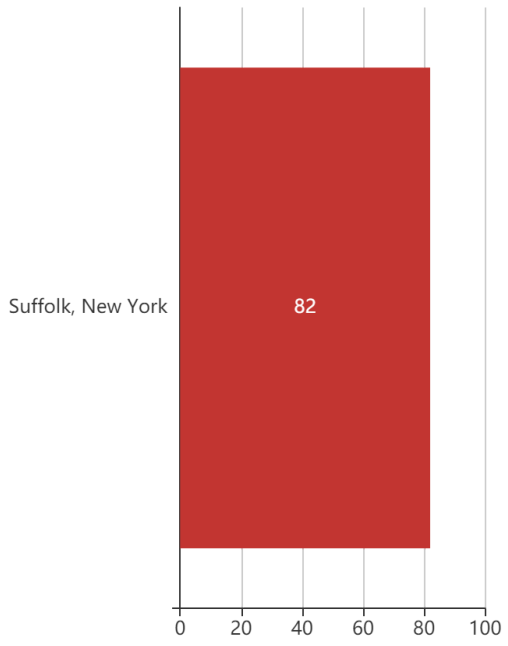
### Generators

By Range



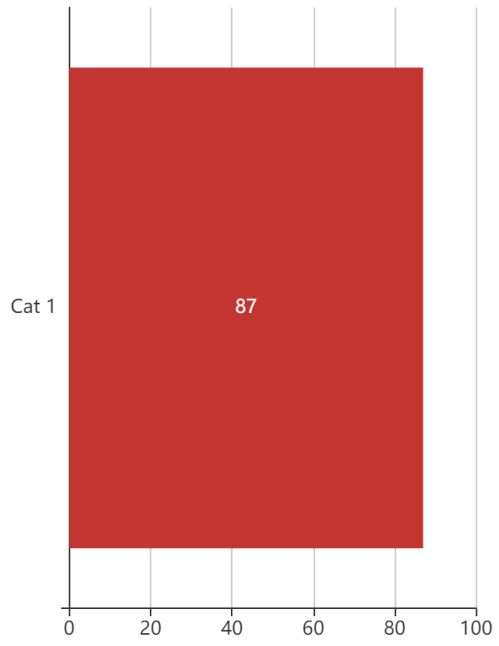
### Structures

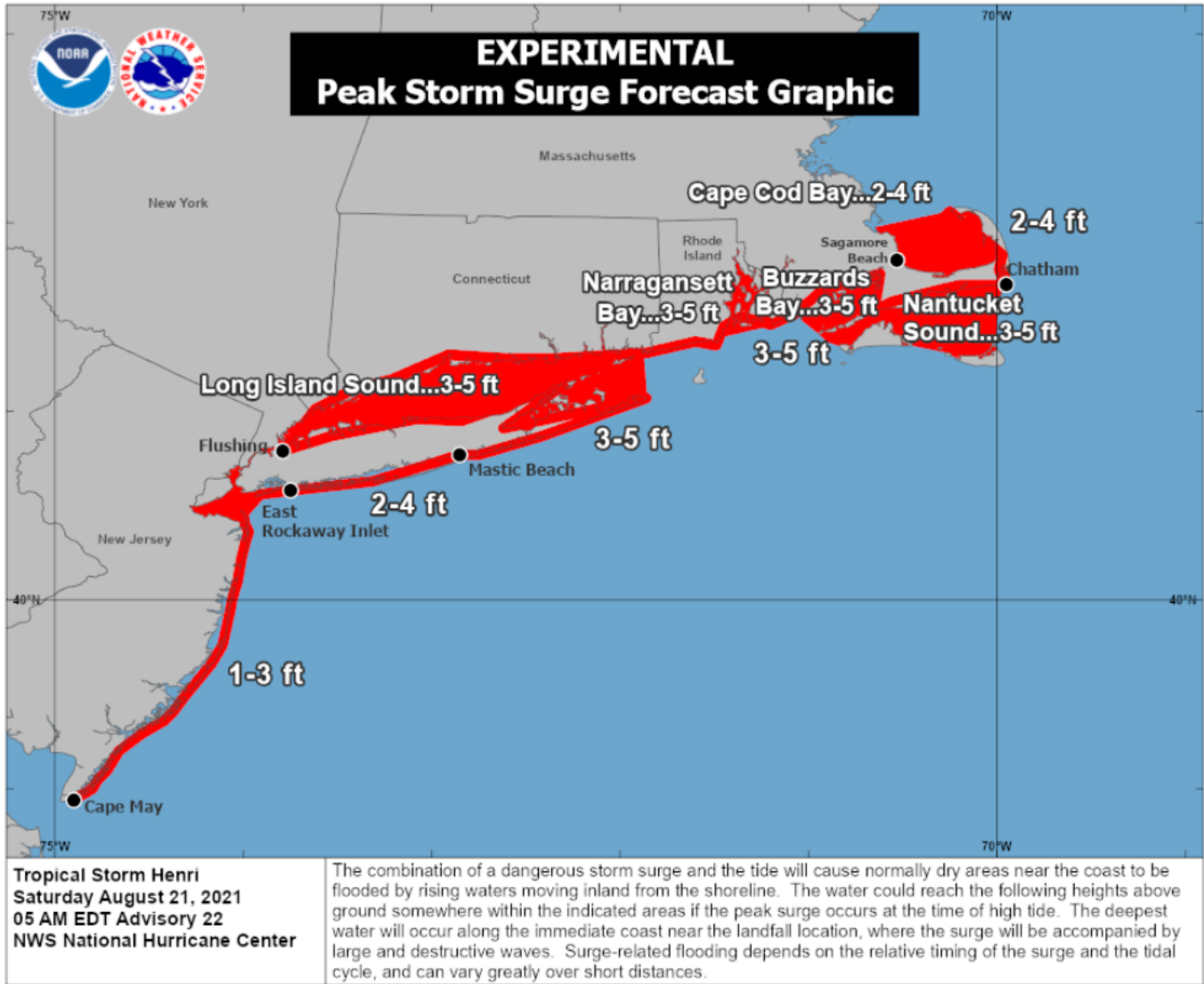
By County



### Structures

By Intensity







# Key Messages for Tropical Storm Henri

## Advisory 22: 5:00 AM EDT Sat Aug 21, 2021

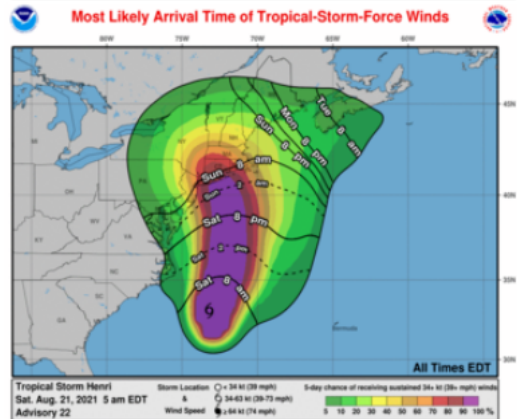
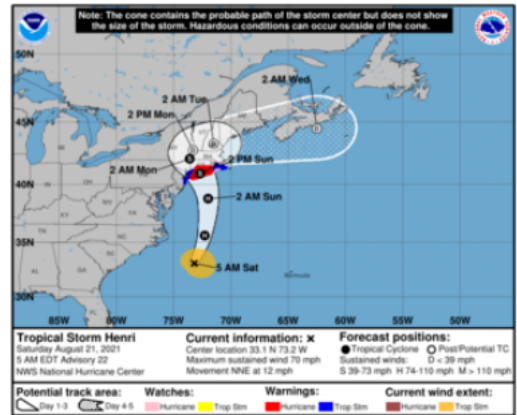


1. Dangerous storm surge inundation is expected to begin late tonight or Sunday in portions of Long Island, Connecticut, Rhode Island, and southeastern Massachusetts, where a Storm Surge Warning has been issued. Dangerous storm surge is possible beginning late tonight or Sunday in western portions of Long Island and Connecticut in the Storm Surge Watch area. Residents in these areas should follow any advice given by local officials.

2. Hurricane conditions are expected to begin late tonight or Sunday in portions of Long Island and Connecticut, where a Hurricane Warning has been issued. Hurricane conditions are possible late tonight or Sunday across portions of Rhode Island.

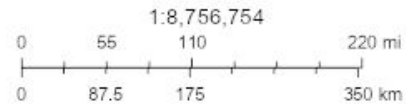
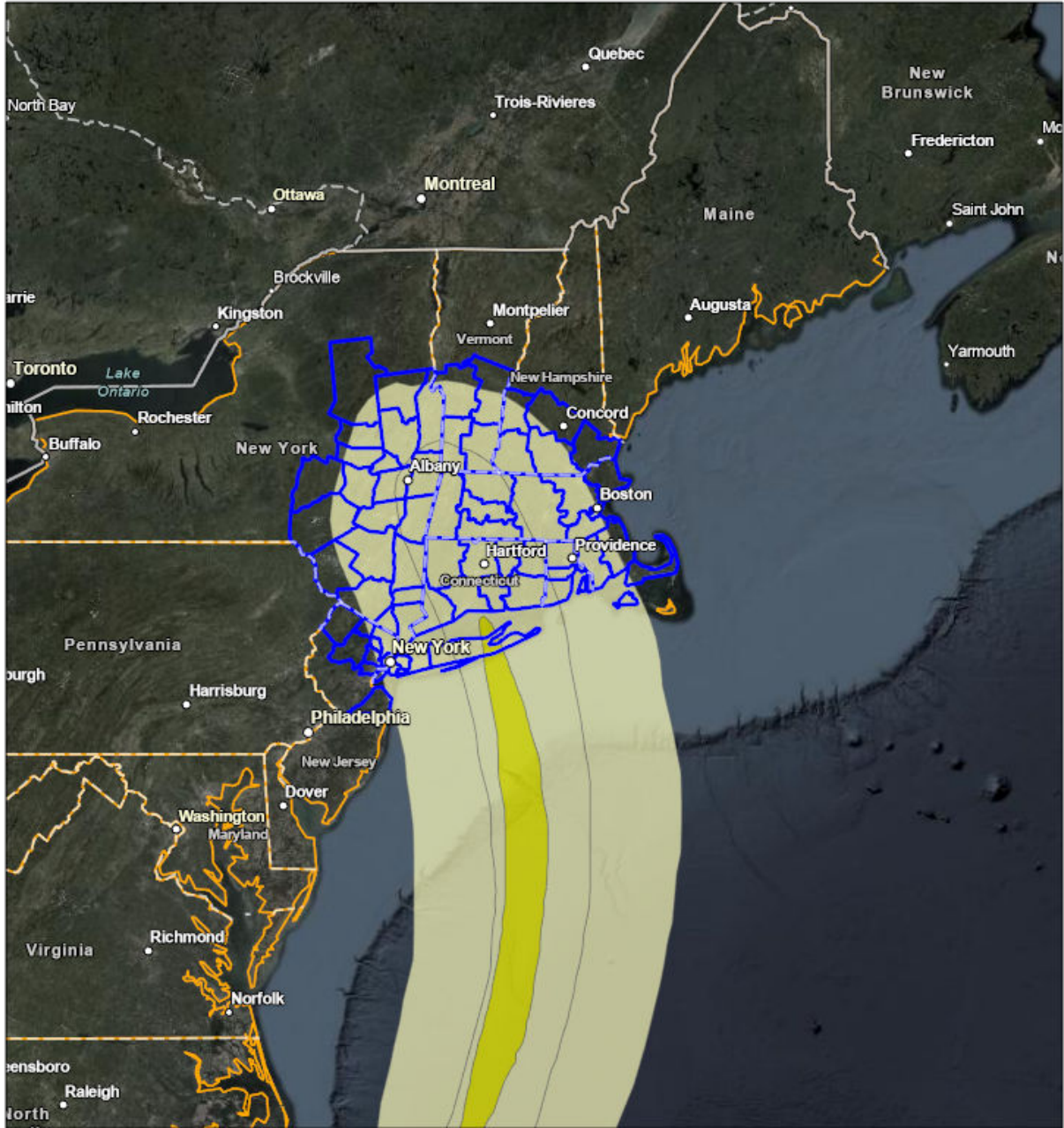
3. Heavy rainfall may lead to considerable flash, urban, and small stream flooding, along with the potential for widespread minor and isolated moderate river flooding, over portions of Long Island, New England, southeast New York and northern New Jersey.

4. Swells from Henri will continue to affect much of the east coast of the U.S. through the weekend. These swells could cause life-threatening surf and rip currents.



For more information go to [hurricanes.gov](https://hurricanes.gov)

[Click Here for a Printer Friendly Copy](#)



Source: NOAA, Esri, NOAA/NOS/OCS nowCOAST, NOAA/NWS/NHC, NOAA/NWS/CPHC, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Created by SimSuite

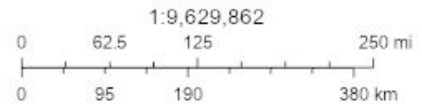


# Debris



## Debris

-  < 100,000 cubic yards
-  100,000 - 249,000 cubic yards



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Created by SimSuite

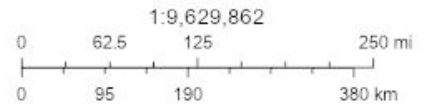


# Est. Temp. Roofing



Est. Temp. Roofing

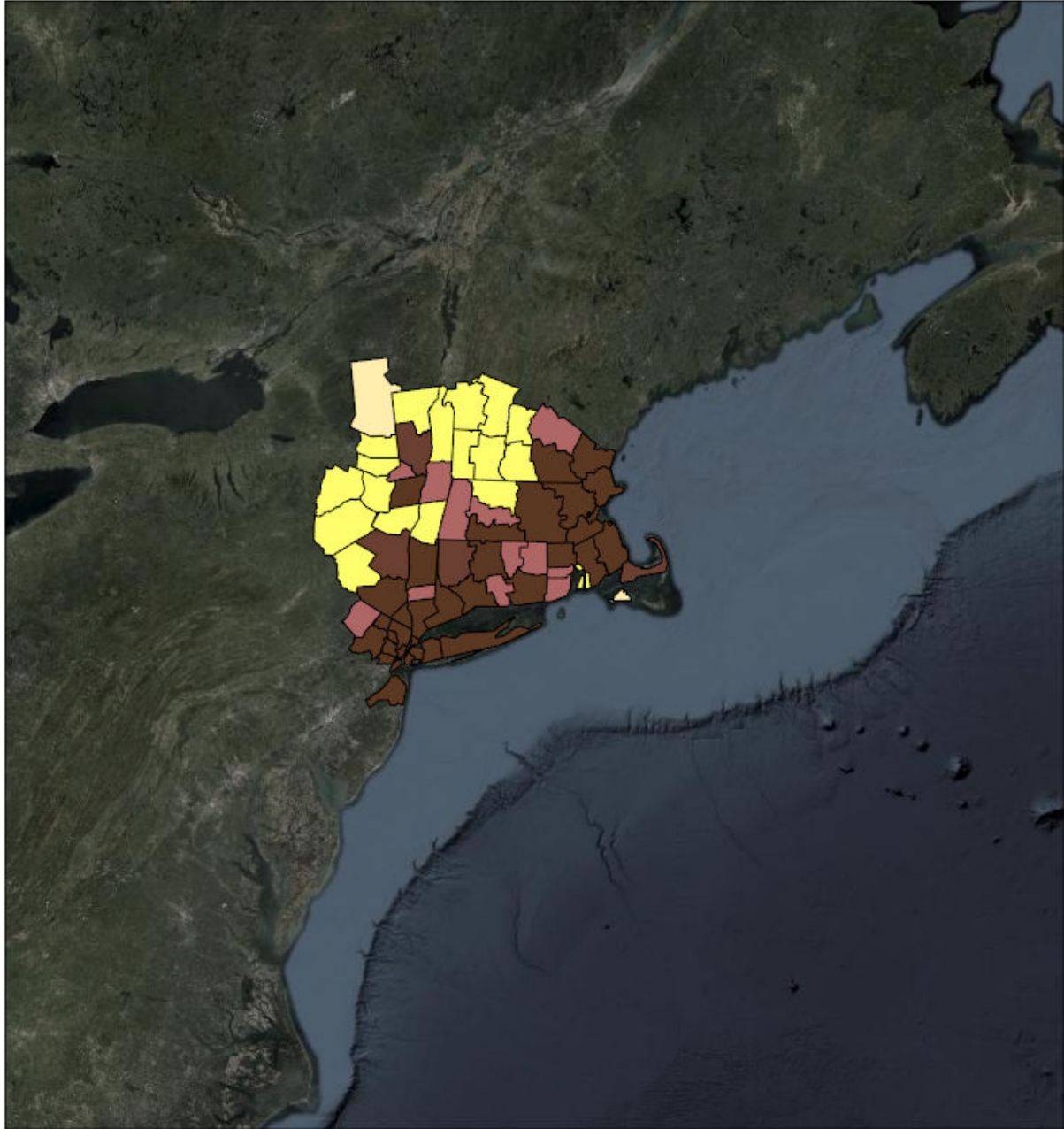
 < 2,000 units



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

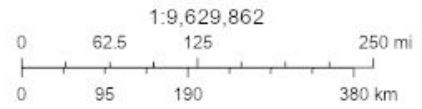
Created by SimSuite

# Population



## Population

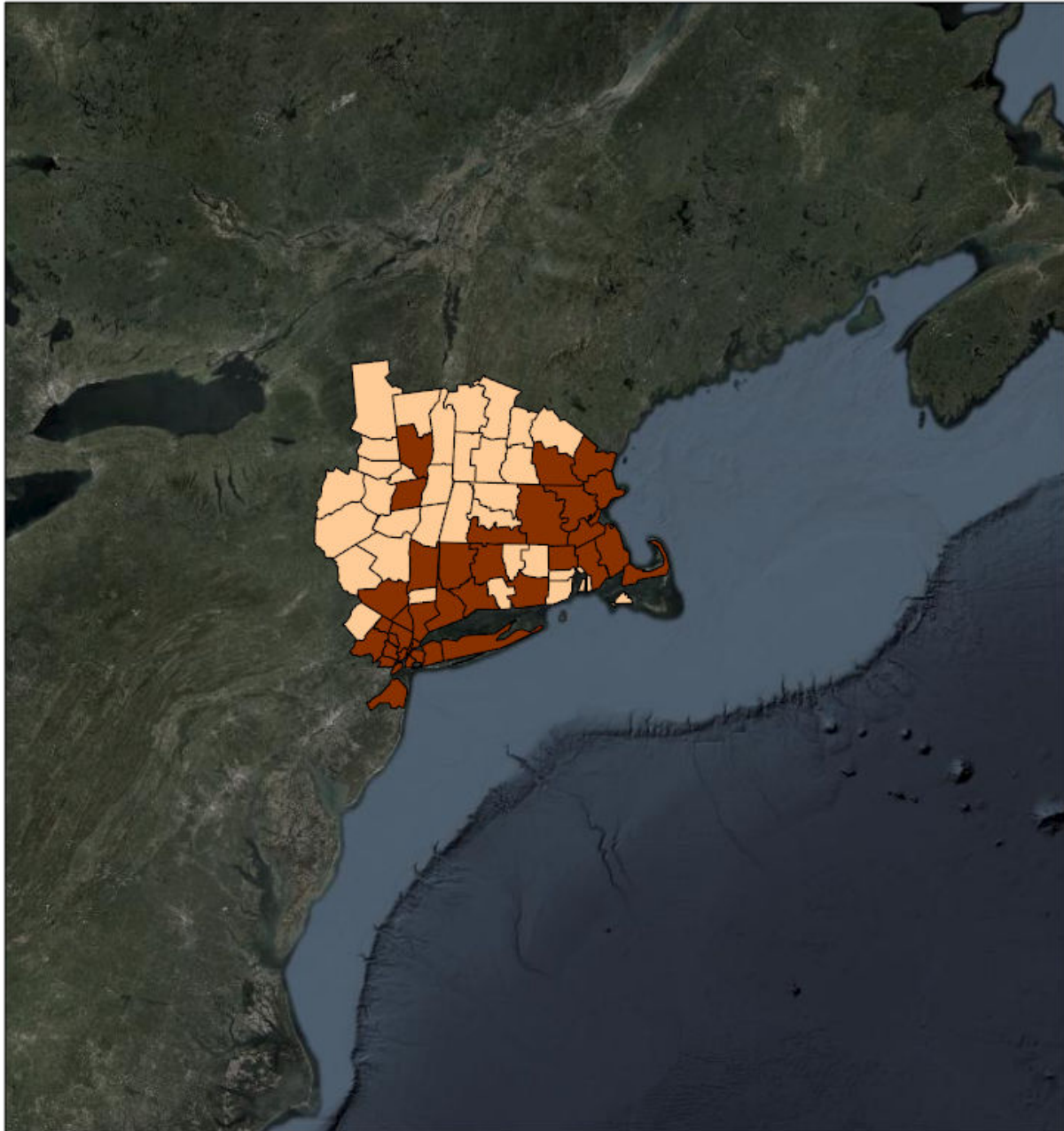
- < 25,000 persons
- 25,000 - 99,000 persons
- 100,000 - 174,999 persons
- 175,000 - 249,000 persons



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

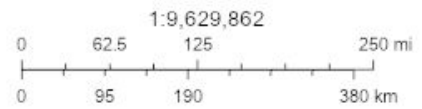
Created by SimSuite

# Households



## Households

- < 7,500 Households
- 15,000 - 24,999 Households
- 25,000 - 49,999 Households



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Created by SimSuite

## Mission Summary



The mission models account for storm surge and wind damage only, but do not account for other related storm hazards that may affect the mission estimates.

Mission Summary	
Total Counties	71
Debris (cu. yd.)	197,988
Est. Temp. Roofing (units)	396
Act. Temp. Roofing (units)	178
Population	32,924,146
Households	11,896,574

Population Distribution	
Tropical Storm	27,676,403
Category 1	231,139

CONNECTICUT	Yds of Debris (0)	Est. Roof Units (0)	Act. Roof Units (0)	Population (3,648,725)	Households (1,371,087)
Fairfield	0	0	0	964,796	335,545
Hartford	0	0	0	906,357	350,854
Litchfield	0	0	0	187,185	76,640
Middlesex	0	0	0	166,528	67,202
New Haven	0	0	0	873,829	334,502
New London	0	0	0	276,496	107,057
Tolland	0	0	0	154,772	54,477
Windham	0	0	0	118,762	44,810

MASSACHUSETTS	Yds of Debris (0)	Est. Roof Units (0)	Act. Roof Units (0)	Population (6,873,308)	Households (2,542,846)
Barnstable	0	0	0	223,733	95,755
Berkshire	0	0	0	128,457	56,091
Bristol	0	0	0	564,846	213,010
Dukes	0	0	0	17,359	7,368
Essex	0	0	0	787,418	285,956
Franklin	0	0	0	70,837	30,462
Hampden	0	0	0	476,058	179,927
Hampshire	0	0	0	164,464	58,702
Middlesex	0	0	0	1,602,184	580,688
Norfolk	0	0	0	702,913	257,914
Plymouth	0	0	0	523,823	181,126
Suffolk	0	0	0	774,572	292,767
Worcester	0	0	0	836,644	303,080

<b>NEW HAMPSHIRE</b>	<b>Yds of Debris (0)</b>	<b>Est. Roof Units (0)</b>	<b>Act. Roof Units (0)</b>	<b>Population (997,945)</b>	<b>Households (375,898)</b>
Cheshire	0	0	0	76,576	30,204
Hillsborough	0	0	0	416,672	155,466
Merrimack	0	0	0	151,549	57,069
Rockingham	0	0	0	308,863	115,033
Sullivan	0	0	0	44,285	18,126

<b>NEW JERSEY</b>	<b>Yds of Debris (0)</b>	<b>Est. Roof Units (0)</b>	<b>Act. Roof Units (0)</b>	<b>Population (4,822,866)</b>	<b>Households (1,690,051)</b>
Bergen	0	0	0	950,113	335,730
Essex	0	0	0	807,352	283,712
Hudson	0	0	0	689,758	246,437
Monmouth	0	0	0	638,272	233,983
Morris	0	0	0	505,067	180,534
Passaic	0	0	0	518,361	166,785
Sussex	0	0	0	147,826	54,752
Union	0	0	0	566,117	188,118

<b>NEW YORK</b>	<b>Yds of Debris (197,988)</b>	<b>Est. Roof Units (396)</b>	<b>Act. Roof Units (178)</b>	<b>Population (15,317,471)</b>	<b>Households (5,417,595)</b>
Albany	0	0	0	316,846	126,251
Bronx	0	0	0	1,468,348	483,449
Columbia	0	0	0	64,714	25,906
Delaware	0	0	0	46,551	19,898
Dutchess	0	0	0	301,774	107,965
Fulton	0	0	0	55,943	22,554
Greene	0	0	0	49,876	19,823
Hamilton	0	0	0	4,593	2,262
Kings	0	0	0	2,688,928	916,856
Montgomery	0	0	0	51,147	20,272
Nassau	0	0	0	1,368,111	448,528
New York	0	0	0	1,664,404	763,846
Orange	0	0	0	390,634	125,925
Otsego	0	0	0	62,062	24,620
Putnam	0	0	0	101,614	35,041
Queens	0	0	0	2,385,994	780,117
Rensselaer	0	0	0	162,365	64,702
Richmond	0	0	0	483,941	165,516
Rockland	0	0	0	328,296	99,242
Saratoga	0	0	0	234,223	88,296
Schenectady	0	0	0	157,894	62,886
Schoharie	0	0	0	32,274	13,166
Suffolk	197,988	396	178	1,517,429	499,922
Sullivan	0	0	0	77,508	30,139
Ulster	0	0	0	185,613	71,049
Warren	0	0	0	66,980	27,990
Washington	0	0	0	63,674	24,142
Westchester	0	0	0	985,735	347,232

<b>RHODE ISLAND</b>	<b>Yds of Debris (0)</b>	<b>Est. Roof Units (0)</b>	<b>Act. Roof Units (0)</b>	<b>Population (1,064,615)</b>	<b>Households (413,600)</b>
Bristol	0	0	0	49,181	19,150
Kent	0	0	0	166,449	68,645
Newport	0	0	0	83,346	34,911
Providence	0	0	0	639,055	241,717
Washington	0	0	0	126,584	49,177



<b>VERMONT</b>	<b>Yds of Debris (0)</b>	<b>Est. Roof Units (0)</b>	<b>Act. Roof Units (0)</b>	<b>Population (199,216)</b>	<b>Households (85,497)</b>
Bennington	0	0	0	37,178	15,470
Rutland	0	0	0	61,778	25,984
Windham	0	0	0	44,143	19,290
Windsor	0	0	0	56,117	24,753

## Critical Infrastructure

Summary			
Total Critical Facilities		87	
Power Requirements (kW)		2,031.2	
Range (kW)			
Communications	# FED Gen Req	Range (kW)	Req kW
AM Antennas (2)	0.1	35 - 75	5.5
Cellular Towers (4)	2.4	35 - 75	132.0
FM Antennas (4)	0.2	35 - 75	11.0
Education	# FED Gen Req	Range (kW)	Req kW
Private Schools (5)	0.0	200 - 300	0.0
Public Schools (15)	4.5	200 - 300	1,125.0
Colleges and Universities (0)	0.0	200 - 300	0.0
Emergency Services	# FED Gen Req	Range (kW)	Req kW
911 Call Centers (0)	0.0	15 - 35	0.0
Emergency Medical Service (11)	1.1	15 - 35	27.5
Fire Stations (12)	1.2	15 - 35	30.0
Service Providers (0)	0.0	0 - 0	0.0
Healthcare	# FED Gen Req	Range (kW)	Req kW
Nursing Homes (1)	0.1	35 - 100	10.1
Hospitals (1)	0.3	800 - 2000	420.0
Urgent Care Facilities (2)	0.4	200 - 300	100.0
Military	# FED Gen Req	Range (kW)	Req kW
Air National Guard (ANG) Sites (1)	0.0	15 - 35	0.0
Army National Guard (ARNG) Sites (1)	0.0	15 - 35	0.0
National Security Government Military Facilities (11)	0.0	15 - 35	0.0
Law Enforcement	# FED Gen Req	Range (kW)	Req kW
Prison Points (1)	0.2	400 - 600	100.0
Local Police (4)	0.4	15 - 35	10.0
State Police (1)	0.1	15 - 35	1.3
Correctional Facilities (0)	0.0	400 - 600	0.0
State and Local EOC	# FED Gen Req	Range (kW)	Req kW
Local Emergency Operations Centers (0)	0.0	15 - 40	0.0
State Emergency Operation Centers (EOCs) (0)	0.0	15 - 35	0.0

<b>State Facilities</b>	<b># FED Gen Req</b>	<b>Range (kW)</b>	<b>Req kW</b>
Governors Mansion (0)	0.0	100 - 200	0.0
Major State Government Building (0)	0.0	100 - 200	0.0

<b>Transportation</b>	<b># FED Gen Req</b>	<b>Range (kW)</b>	<b>Req kW</b>
Ports (3)	0.0	600 - 1200	0.0
Amtrak Stations (0)	0.0	100 - 300	0.0
Bus Stations (1)	0.0	100 - 300	0.0
Intermodal Terminal Facilities (0)	0.0	100 - 300	0.0
Railroad Stations (0)	0.0	100 - 300	0.0
Public-Use Airports (7)	0.8	40 - 100	58.8

<b>Water</b>	<b># FED Gen Req</b>	<b>Range (kW)</b>	<b>Req kW</b>
Water Treatment Facilities (0)	0.0	800 - 2000	0.0
Wastewater Treatment Plants (0)	0.0	800 - 2000	0.0

## COVID-19

#	County	Cases
1	Kings	298,855
2	Queens	291,385
3	Suffolk	210,935
4	Nassau	193,731
5	Bronx	192,066
6	New York	150,046
7	Middlesex	141,256
8	Westchester	134,833
9	Bergen	109,069
10	Fairfield	104,359
11	Providence	102,857
12	Essex	101,029
13	Essex	98,355
14	Suffolk	97,190
15	New Haven	96,671
16	Hudson	91,328
17	Hartford	88,969
18	Monmouth	81,094
19	Worcester	80,488
20	Richmond	80,249
21	Passaic	75,540
22	Union	74,265
23	Bristol	70,305
24	Norfolk	57,396
25	Hampden	55,218
26	Morris	52,309
27	Plymouth	51,580
28	Orange	50,837
29	Rockland	48,569
30	Hillsborough	37,783
31	Dutchess	31,087
32	Albany	26,017
33	Rockingham	25,458
34	New London	23,907
35	Kent	19,560
36	Saratoga	16,580
37	Litchfield	15,288
38	Barnstable	15,043
39	Ulster	14,749

40	Sussex	14,649
41	Schenectady	13,996
42	Middlesex	13,534
43	Rensselaer	11,955
44	Windham	11,348
45	Putnam	11,081
46	Washington	10,725
47	Merrimack	10,121
48	Tolland	10,121
49	Hampshire	9,525
50	Newport	7,434
51	Sullivan	7,092
52	Berkshire	7,051
53	Bristol	5,352
54	Fulton	4,607
55	Montgomery	4,459
56	Columbia	4,235
57	Cheshire	4,145
58	Warren	4,036
59	Otsego	3,679
60	Greene	3,568
61	Washington	3,353
62	Franklin	2,728
63	Delaware	2,583
64	Rutland	2,430
65	Bennington	2,194
66	Sullivan	2,011
67	Schoharie	1,820
68	Windsor	1,638
69	Windham	1,508
70	Hamilton	341
71	Dukes	0