

# Major Coastal Storm Tonight into Monday

## Decision Support Briefing #4

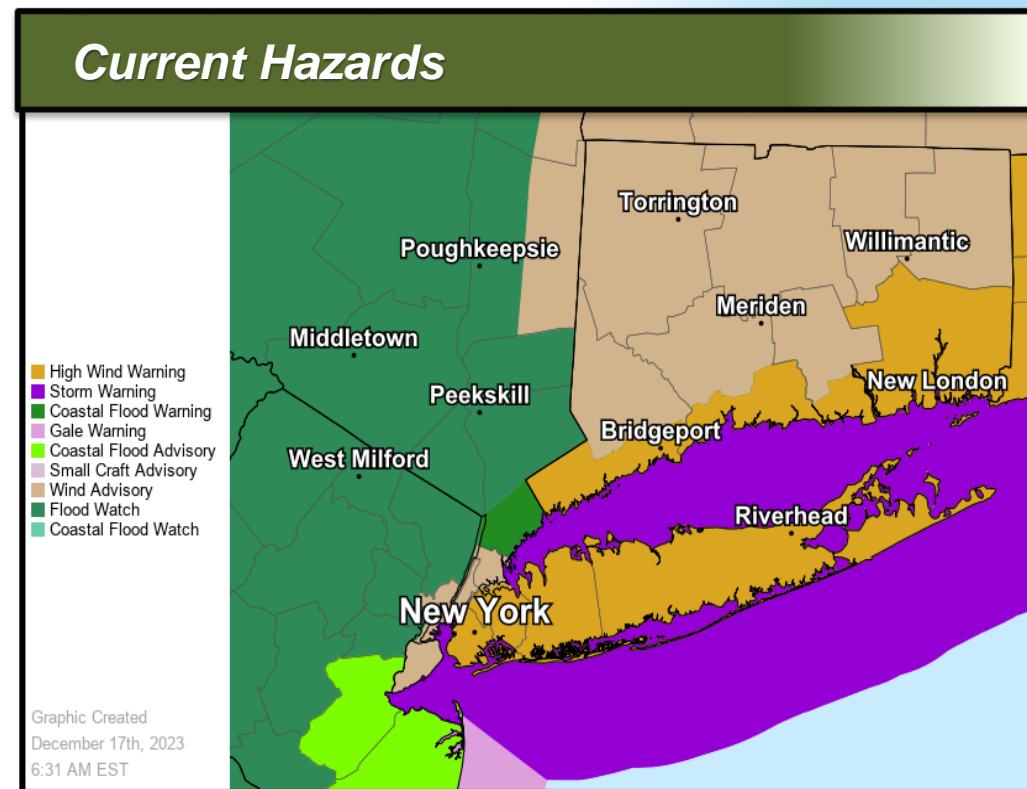
As of: 600 AM Dec 17, 2023

### What Has Changed?

- ✓ High Wind Warning issued for Brooklyn, Queens, Long Island, coastal Connecticut, and New London County
- ✓ Storm Warning issued for all coastal waters.

### Key Messages

- ✓ Widespread minor urban, poor drainage, and riverine flood threats tonight thru Monday morning.
- ✓ Minor to moderate flood threat of quick responding rivers. Moderate to major possible for a few spots.
- ✓ Widespread minor to moderate coastal flooding expected for much of the coast with Monday's afternoon high tide. Locally major possible.
- ✓ Widespread dune erosion and scattered overwashes likely for the ocean beachfront.
- ✓ Strong to damaging winds for the coast late tonight into Monday.
- ✓ Storm conditions likely on all waters tonight through Monday.



# Heavy Rain and Flash Flood Potential



## Current Convective and Flood Watches



### Forecast Challenges:

- ✓ Streamflows are generally running around the 75<sup>th</sup> percentile, with slightly above normal soil moisture increasing the threat for flood impacts.
- ✓ Heavy rainfall and runoff coinciding with times of high tide overnight and early Monday afternoon will likely exacerbate flood impacts along the coast and tidally affected river basins.

### Hazards:

- ✓ **Storm Total Rainfall:** Entire Area
  - ✓ 2 to 4" likely, locally 5" possible
  - ✓ Highest amounts favored across the interior N&W of NYC
  - ✓ Much of this will fall over 12 hours this evening into Mon AM
- ✓ **Rainfall Rates:**
  - ✓ Generally ¼ to ½"/hr for a 6-8 hr period late tonight into Mon AM

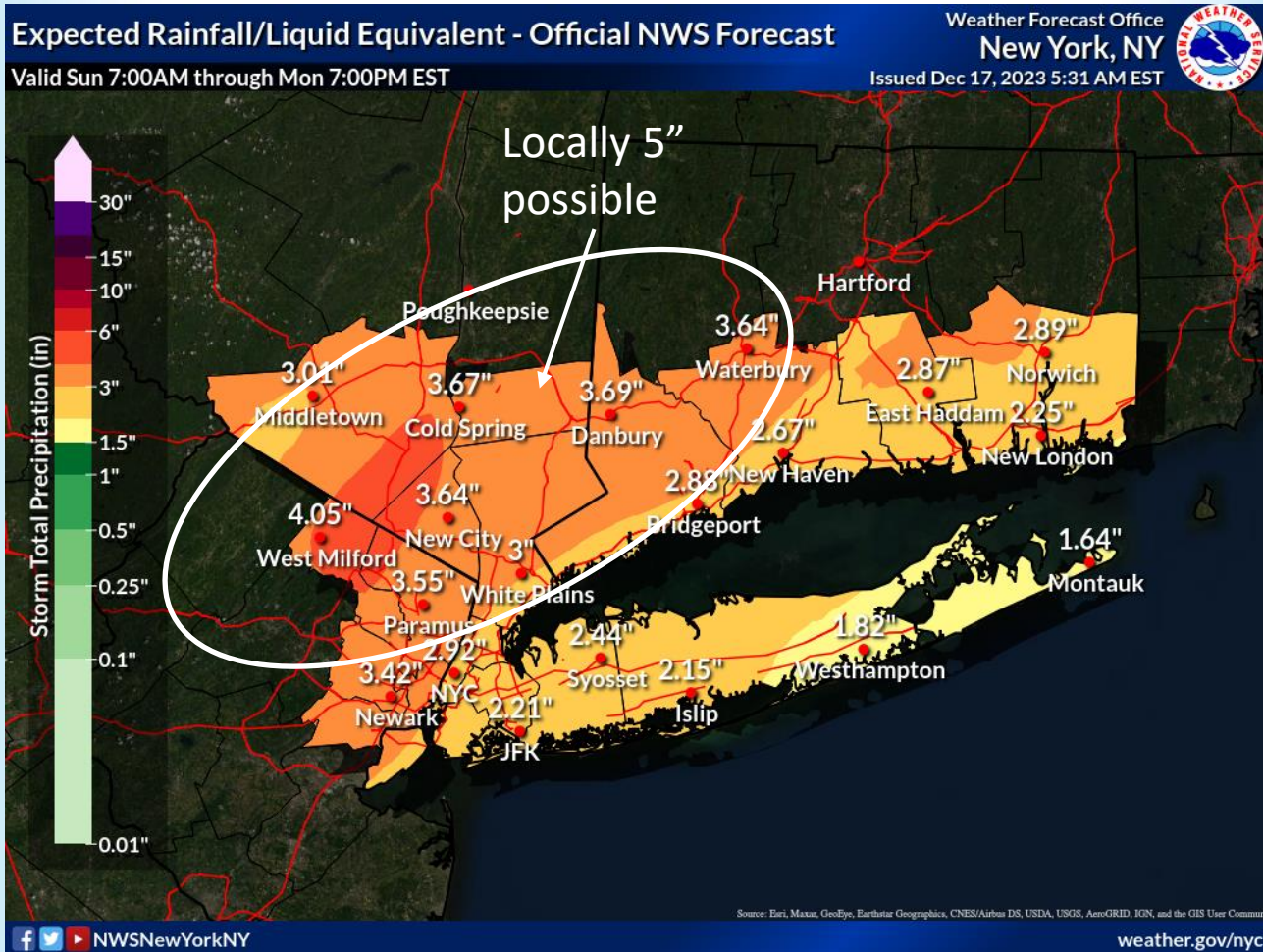
### Impacts:

- ✓ **Widespread minor urban and poor drainage flooding likely. Isolated to scattered flash flooding possible.** This may cause some disruptions to transportation, and isolated flooding of basements, first floors of residences and businesses, as well as some underground infrastructures.
- ✓ **Minor to moderate flooding likely along several quick responding small rivers and streams of NE NJ and Lower Hudson Valley. Reasonable worst case scenario of moderate to major flooding for a few quick responding rivers, particularly in NE NJ if greater than 3 1/2" of rainfall is realized.**
- ✓ **Significant rises expected along large stem rivers** with minor flooding possible across a few areas river Monday into Tuesday.
- ✓ **Heavy rainfall and runoff may coincide with times of high tide late tonight and early Monday afternoon, exacerbating flood impacts along the coast and tidally affected river basins.**

### Timing:

- ✓ Heaviest rainfall and impacts late this evening thru Monday morning.

# Official Rainfall Forecast

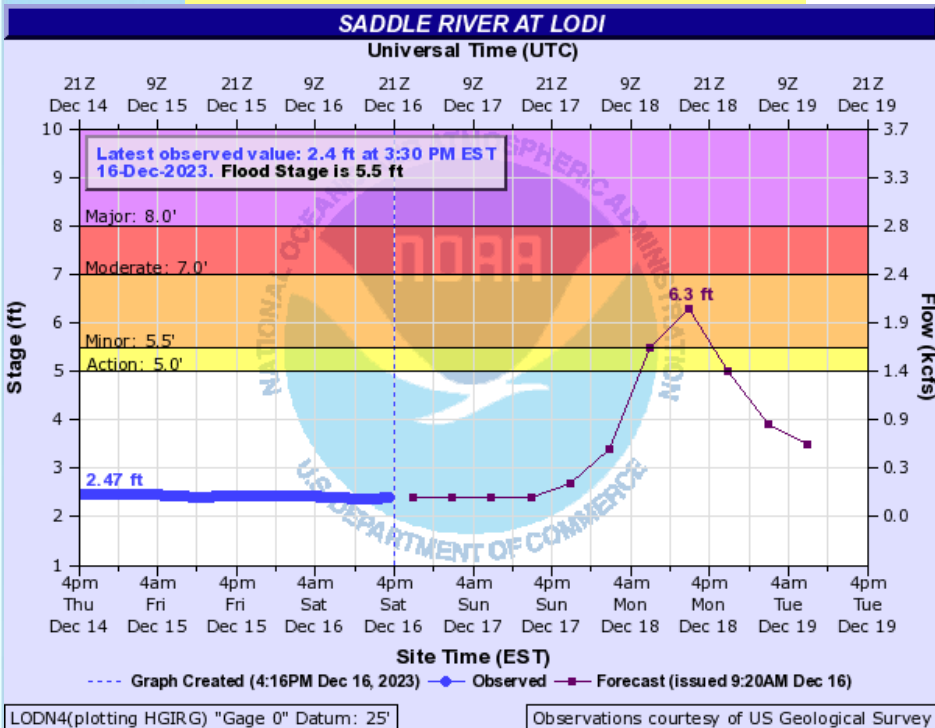


# Northeastern NJ River Flooding Potential

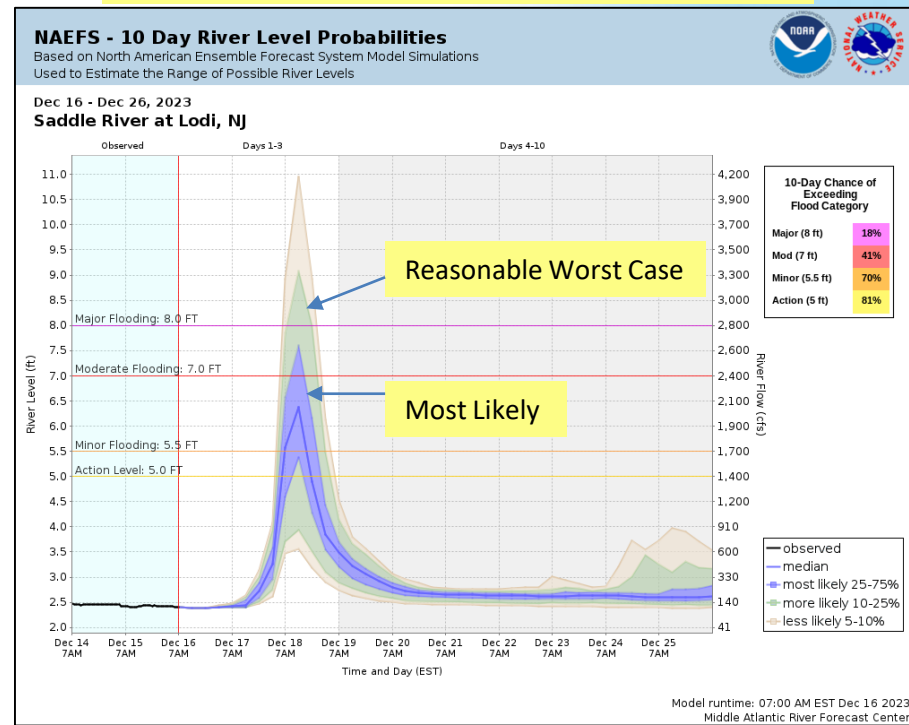
- ✓ **Minor to moderate flooding likely along several quick responding small rivers and streams of NE NJ.**
- ✓ Reasonable worst case scenario of moderate to major flooding for a few quick response rivers, if greater than 3 1/2" of rainfall is realized.

For more details...See here for the latest [river forecasts](#), impact catalogs, and [inundation maps](#).

## Official Forecast – Saddle River at Lodi



## Probabilistic Forecast -- Saddle River at Lodi

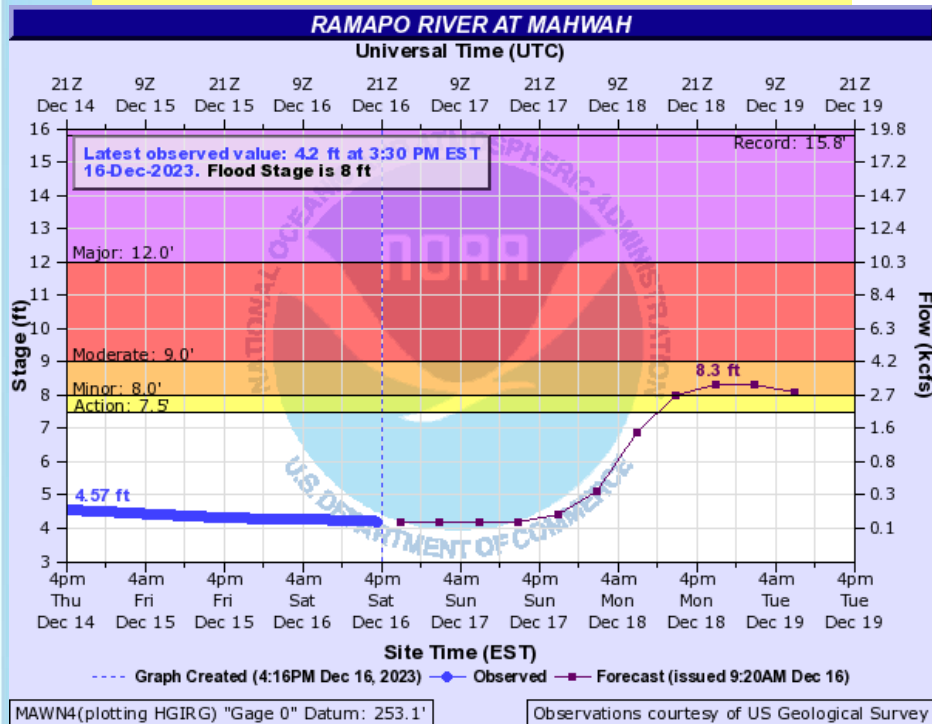


# Northeastern NJ River Flooding Potential

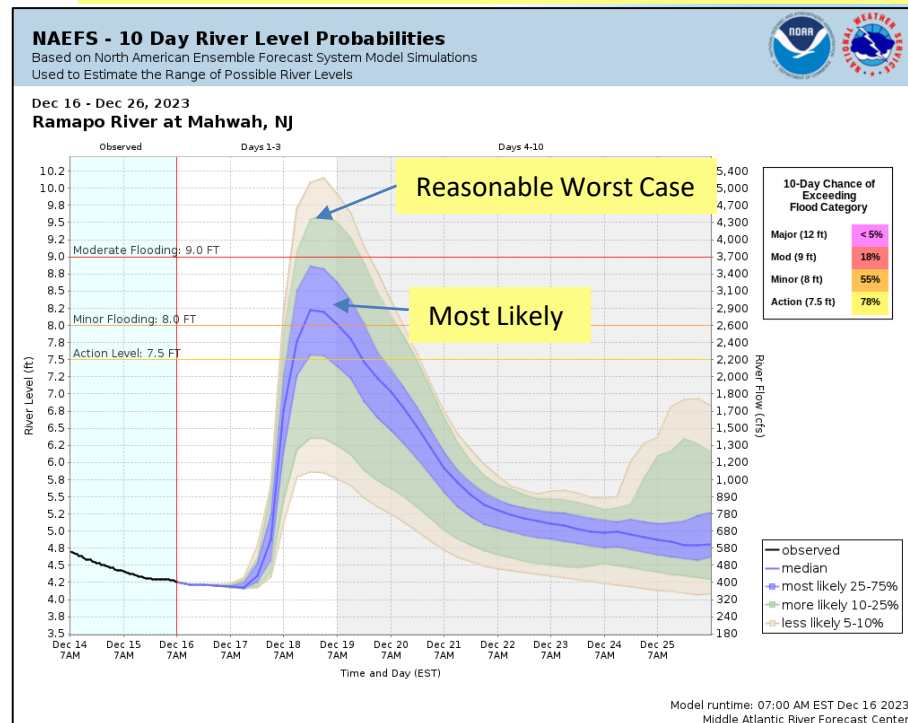
- ✓ **Minor to moderate flooding likely along several quick responding small rivers and streams of NE NJ.**
- ✓ Reasonable worst case scenario of moderate to major flooding for a few quick response rivers, if greater than 4" of rainfall is realized.

For more details...See here for the latest [river forecasts](#), impact catalogs, and [inundation maps](#).

## Official Forecast – Ramapo River at Mahwah NJ



## Probabilistic Forecast - Ramapo River at Mahwah NJ

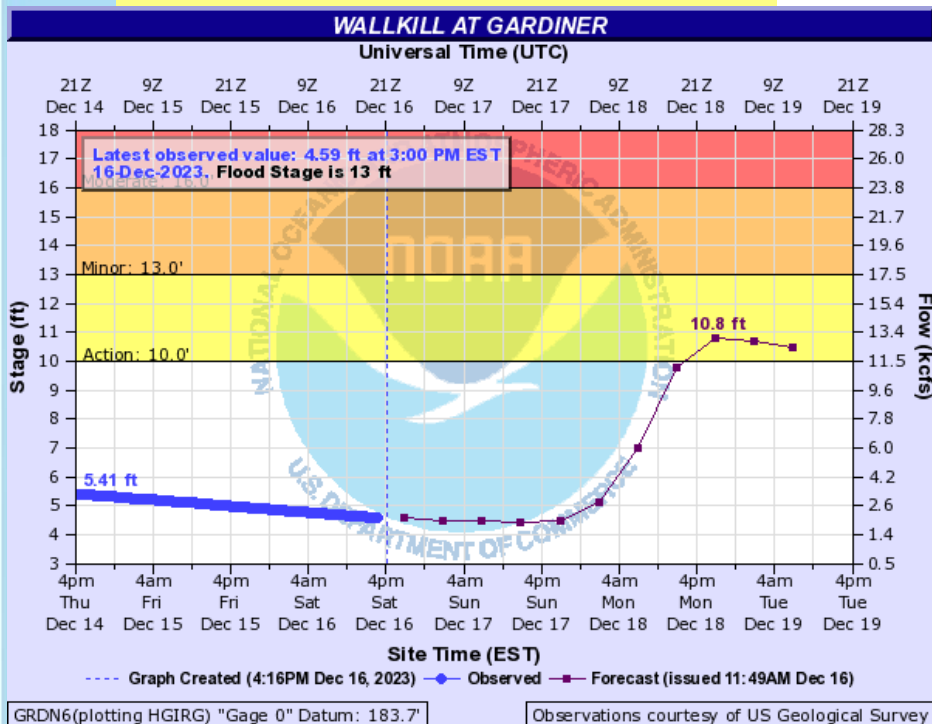


# Lower Hudson Valley River Flooding Potential

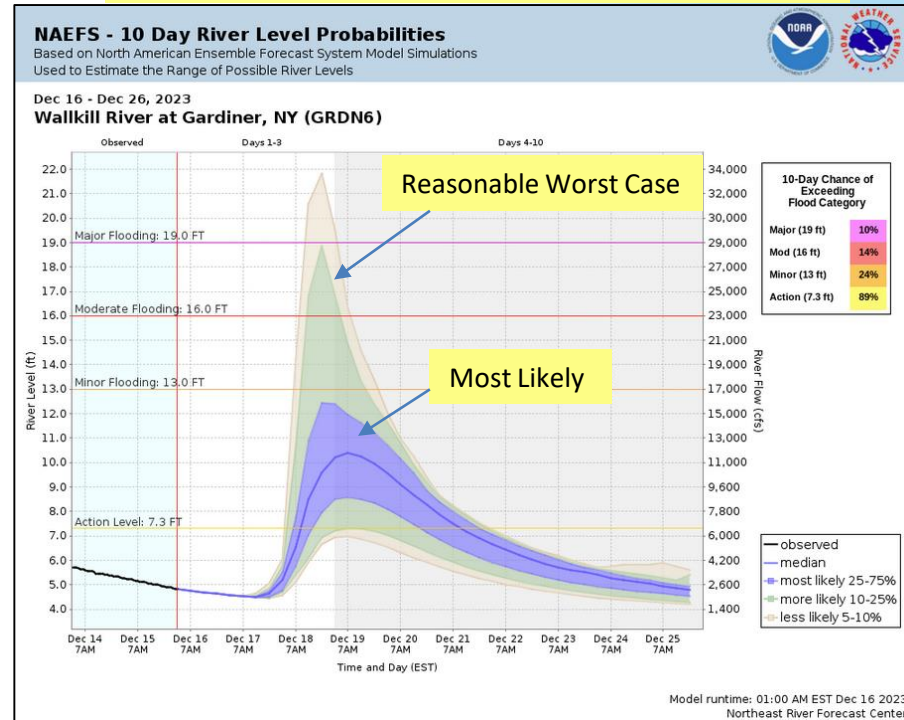
- ✓ Minor flooding likely along a few quick responding small rivers and streams, particularly Westchester County.
- ✓ Reasonable worst case scenario of moderate flooding for a few quick response rivers, if greater than 3 1/2" of rainfall is realized.

For more details...See here for the latest [river forecasts](#) and impact catalogs.

## Official Forecast – Walkill at Gardiner NY



## Probabilistic Forecast – Walkill at Gardiner NY



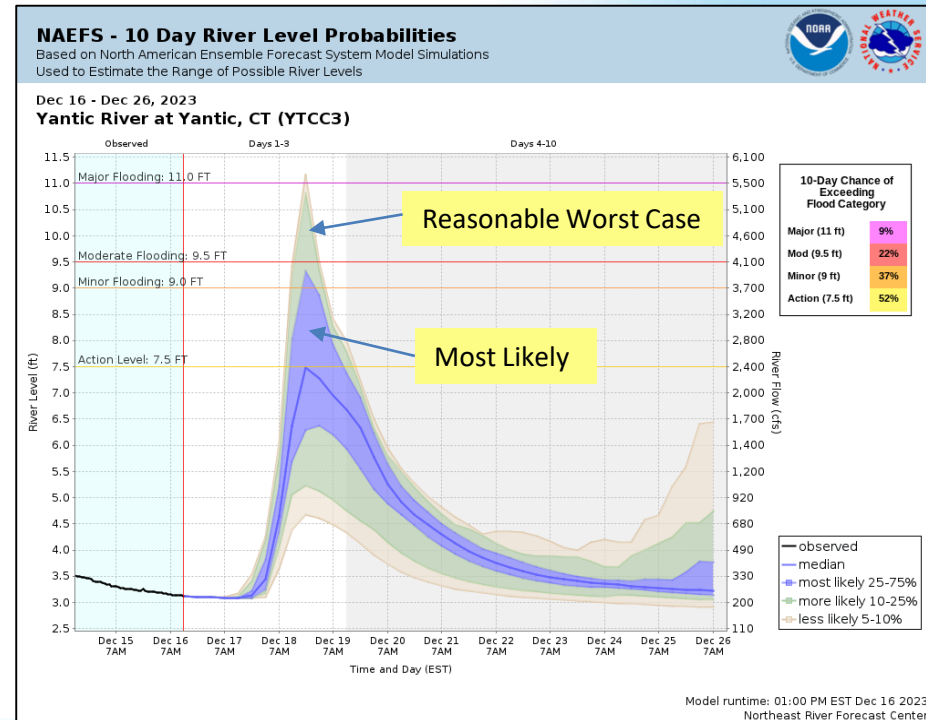
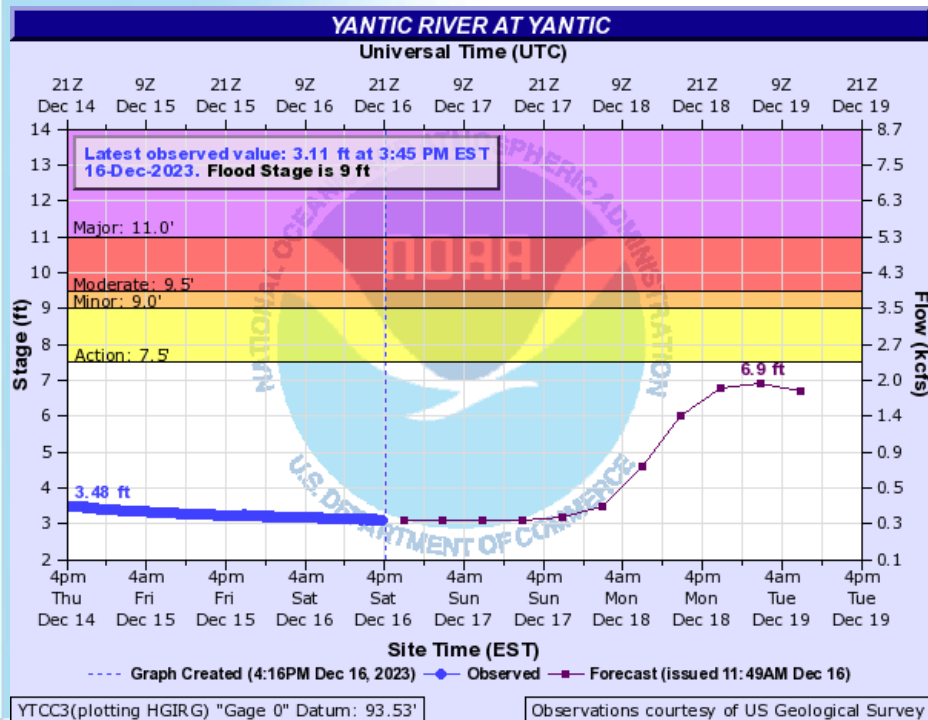
# Southern CT River Flooding Potential

- ✓ Minor flooding likely along a few quick responding small rivers and streams, particularly southwestern CT.
- ✓ Reasonable worst case scenario of moderate flooding for a few quick response rivers, if greater than 3 1/2" of rainfall is realized.

For more details...See here for the latest [river forecasts](#) and impact catalogs.

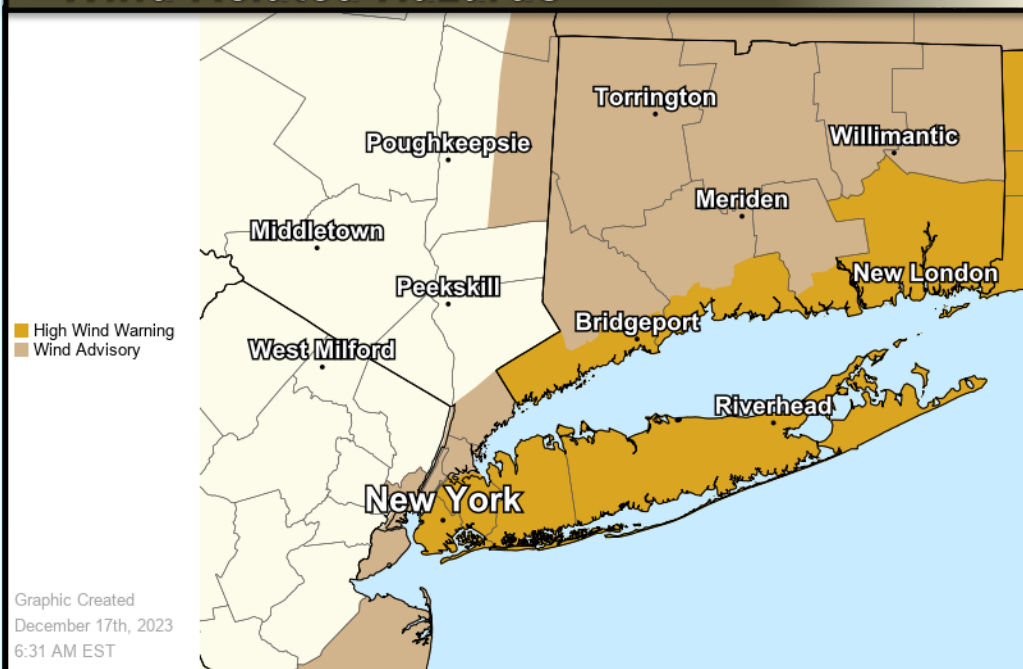
## Official Forecast – Yantic River at Yantic CT

## Probabilistic Forecast – Yantic River at Yantic CT



# Strong to Damaging Winds

## Wind Related Hazards



## Hazards and Impacts:

### High Wind Warning – Much of the coast

- ✓ **Peak Winds:** South to southeast winds of 25 to 40 mph with gusts to 60 mph. Highest across Long Island and southeastern CT. These strongest winds will likely be for a 4 to 6 hour period overnight into Monday morning.
- ✓ **Impacts:** Numerous tree limbs will likely be downed, as well as scattered trees and power lines. Scattered power outages likely. Poorly secured outdoor objects will be damaged or blown away.

### Wind Advisory

- ✓ **Peak Winds:** South to southeast winds of 20 to 30 mph with gusts 45 to 50 mph.
- ✓ **Impacts:** Scattered tree limbs will likely be downed, as well as isolated trees and power lines. A few power outages possible. Poorly secured outdoor objects will be damaged or blown away.

### Timing

- ✓ Late this evening through Monday morning.

## Forecast Challenges:

Slight shift in low track could allow for stronger winds farther inland into NE NJ and the Lower Hudson Valley.

Saturated soils may increase the downed tree impacts.



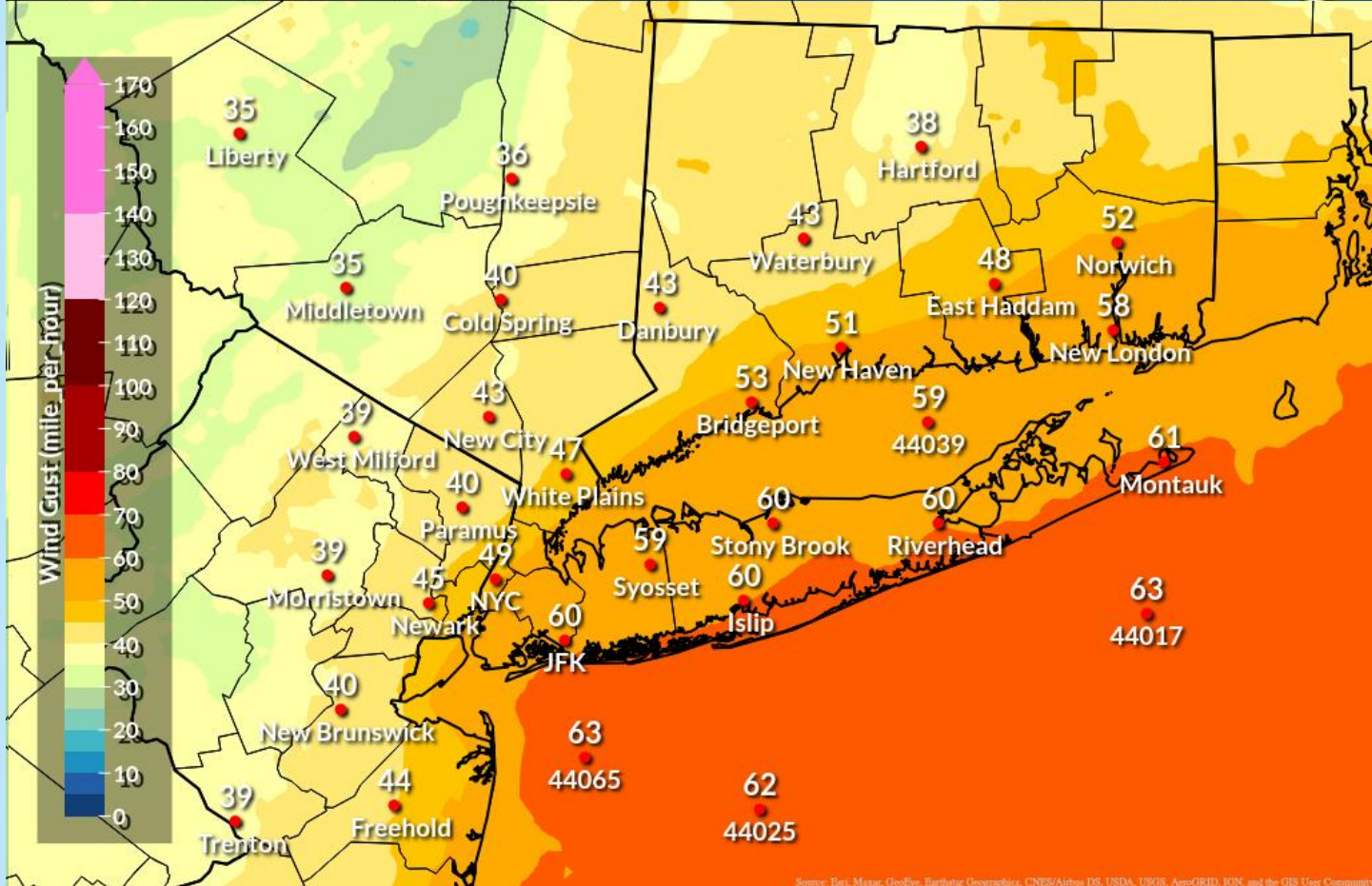
# Strong/Damaging Winds

## Sunday's Maximum Wind Gusts

Valid Sun Dec 17 7:00AM through Mon Dec 18 7:00AM EST

Weather Forecast Office  
New York, NY

Issued Dec 17, 2023 4:02 AM EST



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

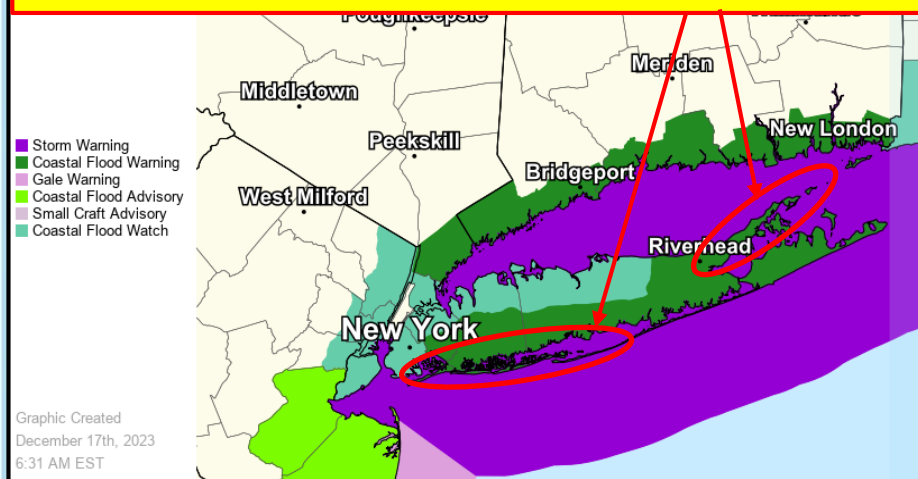
NWSNewYorkNY

[weather.gov/nyc](http://weather.gov/nyc)

# Coastal Flooding Hazard and Impacts

## Marine / Coastal Hazards

**Greatest threat areas for widespread moderate to locally major coastal flooding during Monday morning high tide (inundation of 2 to 2 1/2 ft, locally 3ft, above ground level)**



For the latest coastal flood forecasts (hydrographs and tables) and the tools to visualize the potential coastal impacts (zoomable potential inundation map, impact catalogs, climatology, etc.) in your area of concern please see to the [NWS New York, NY Coastal Flooding Page](#)

**Forecast Challenges:** Peak surge of 3 1/2 to 5 ft will likely be between high tidal cycles Monday morning. The timing of windshift late Monday morning versus early Monday afternoon will be critical for potential of major flooding 3 ft of inundation above ground. This may not be evident until Monday morning. Heavy rainfall and/or runoff coinciding with tonight's and Monday afternoon's high tide will exacerbate street and property flooding along the coast and tidally affected rivers

### Monday afternoon high tide

- ✓ **Coastal Flood Warning areas:** Widespread moderate (2 to 2 1/2 ft above ground) coastal flooding expected for S Queens, S Nassau and SW Suffolk, LI twin forks, coastal Westchester and much of coastal CT. **Potential for locally major coastal flooding (3 ft above ground) for the circled areas if wind shift occurs near or after the time of high tide.**
  - ✓ **Impacts** Numerous low-lying and shoreline roads are likely to be closed in the affected area, with adjacent properties taking on water. Scattered flooding of basements and first floors of low-lying residence possible. Cars will likely be damaged if not moved to higher ground. Flooding will also extend inland from the waterfront along tidally affected rivers.
- ✓ **Coastal Flood Watch areas:** **Minor to moderate coastal flooding (up to 2 ft above ground) likely for vulnerable areas along NY/NJ harbor, western LI Sound, and tidally affected rivers, particularly Hackensack and Hudson Rivers.**
  - ✓ **Impacts** Scattered low-lying and shoreline roads are likely to be closed in the affected area, with adjacent properties taking on water. Isolated flooding of basements and first floors of low-lying residence possible. Cars may be damaged if not moved to higher ground. Flooding will also extend inland from the waterfront along tidally affected rivers. Flooding will also extend inland from the waterfront along tidally affected rivers.

### Shoreline Hazards and Impacts:




- ✓ **12-16' breaking waves along the oceanfront, resulting in widespread dune base erosion and scattered overwashes with Mon afternoon high tide.**
- ✓ 3 to 5' along coastal CT, and 4 to 8' along Orient Point shoreline resulting in beach erosion, localized overwashes, and possible damage to shoreline structures with Mon early PM high tide.

### Timing:

- ✓ Minor flooding possible during the times of high tide tonight. Widespread moderate likely, locally major possible, around and near the times of high tide Mon afternoon.



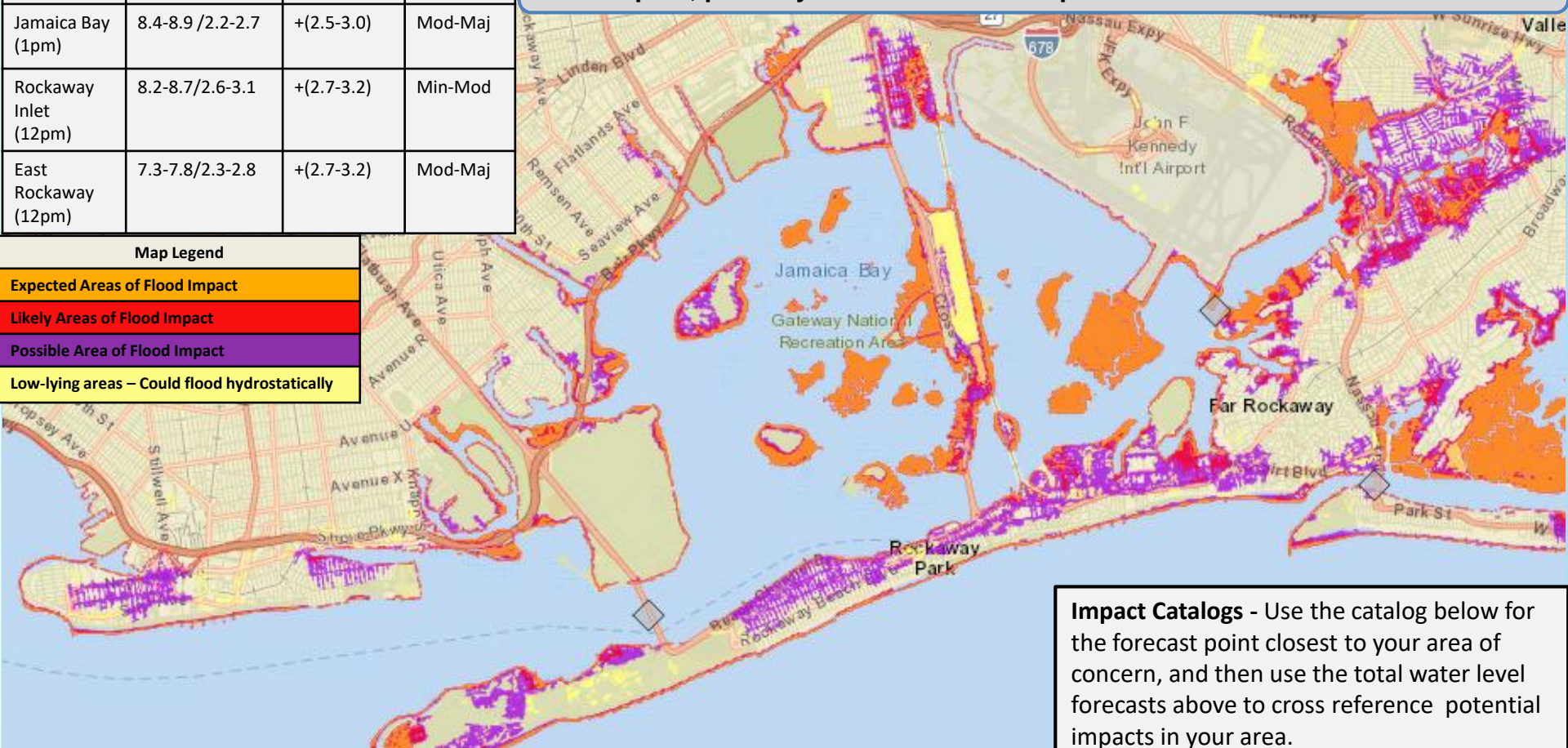
# Coastal Flooding Thresholds

	Minor (CF Advisory)	Moderate (CF Warning)	Major ( <b>Warning</b> )
Picture	 Westport	 Lindenhurst	 New Haven
Hazard	<ul style="list-style-type: none"> <li>• <b>Low threat of property damage...</b>and no direct threat to life.</li> <li>• <b>1 to 2 ft of inundation</b> in shoreline and vulnerable areas.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Elevated threat of property damage...</b>with a risk to life if one places themselves in unnecessary danger.</li> <li>• <b>2 to 3 ft of inundation</b> in shoreline and vulnerable areas.</li> <li>• Minor to no inundation of surrounding coastal communities.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Significant threat to life and property.</b></li> <li>• <b>3-5+ ft of inundation</b> in shoreline and other vulnerable areas.</li> <li>• Minor to moderate inundation (1 to 3 ft) of surrounding coastal communities that rarely experience coastal flooding.</li> </ul>
Impact	<ul style="list-style-type: none"> <li>• A few shoreline and vulnerable roadways and adjacent properties will experience shallow flooding.</li> </ul>	<ul style="list-style-type: none"> <li>• Several shoreline and vulnerable area home and businesses will experience water inside.</li> <li>• Several low-lying coastal and shoreline roads will be closed.</li> <li>• A few cars may take on water or even be destroyed.</li> </ul>	<ul style="list-style-type: none"> <li>• Evacuations will be necessary for the most vulnerable shoreline and coastal areas.</li> <li>• Many coastal communities will experience damage...with some shoreline and flood prone homes and businesses being destroyed.</li> <li>• Many cars will likely be submerged or washed away.</li> <li>• Several sections of nearshore roads and escape routes will be impassable and a few could be washed out.</li> <li>• Flood waters may extend well inland in low lying areas.</li> </ul>

# Coastal Flooding – Potential Flood Impact Areas

Forecast Location (High tide Time)	Peak Water Level (ft) (MLLW/MHHW)	Departure at high tide (ft)	Flood Impact
Jamaica Bay (1pm)	8.4-8.9 / 2.2-2.7	+(2.5-3.0)	Mod-Maj
Rockaway Inlet (12pm)	8.2-8.7 / 2.6-3.1	+(2.7-3.2)	Min-Mod
East Rockaway (12pm)	7.3-7.8 / 2.3-2.8	+(2.7-3.2)	Mod-Maj

The map below shows the potential extent of flood impact (water above ground) during the Monday afternoon high tides. Flooding will likely be as deep as 2 to 2 ½ ft in spots, possibly as much as 3 ft in spots.



Map Legend
Expected Areas of Flood Impact
Likely Areas of Flood Impact
Possible Area of Flood Impact
Low-lying areas – Could flood hydrostatically

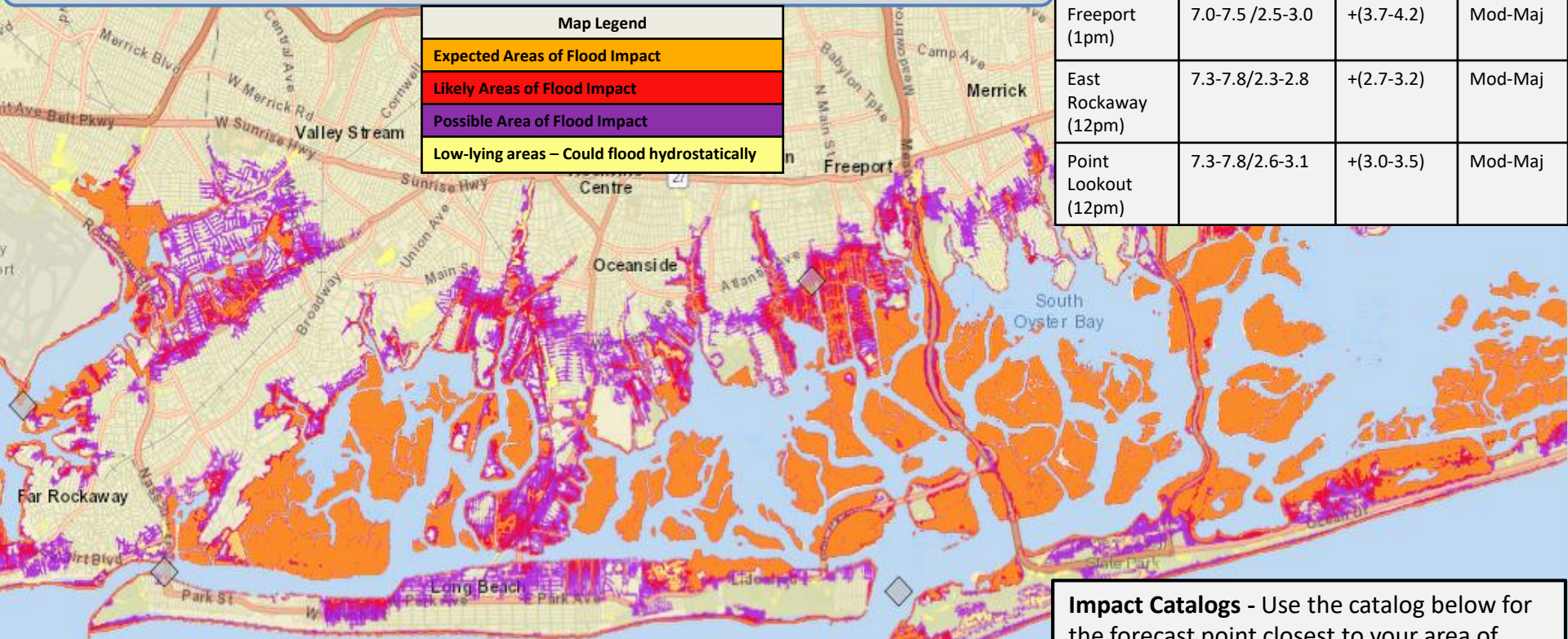
**Impact Catalogs** - Use the catalog below for the forecast point closest to your area of concern, and then use the total water level forecasts above to cross reference potential impacts in your area.

- [Jamaica Bay at Inwood](#)
- [East Rockaway](#)
- [Rockaway Inlet](#)

For the latest coastal flood forecasts (hydrographs and tables) and the tools to visualize the potential coastal impacts (zoomable potential flood impact map, impact catalogs, climatology, etc.) in your area of concern please go to the [NWS New York, NY Coastal Flooding Page](#)

# Coastal Flooding – Potential Flood Impact Areas

The map below shows the potential extent of flood impact (water above ground) during the Monday morning high tides. Flooding may be as deep as 2 to locally 3 ft in spots.



Map Legend
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Likely Areas of Flood Impact
Possible Area of Flood Impact
Low-lying areas – Could flood hydrostatically

Forecast Location (High tide Time)	Peak Water Level (ft) (MLLW/MHHW)	Departure at high tide (ft)	Flood Impact
Freeport (1pm)	7.0-7.5 / 2.5-3.0	+(3.7-4.2)	Mod-Maj
East Rockaway (12pm)	7.3-7.8 / 2.3-2.8	+(2.7-3.2)	Mod-Maj
Point Lookout (12pm)	7.3-7.8 / 2.6-3.1	+(3.0-3.5)	Mod-Maj

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- [Freeport](#)
- [East Rockaway](#)
- [Point Lookout](#)

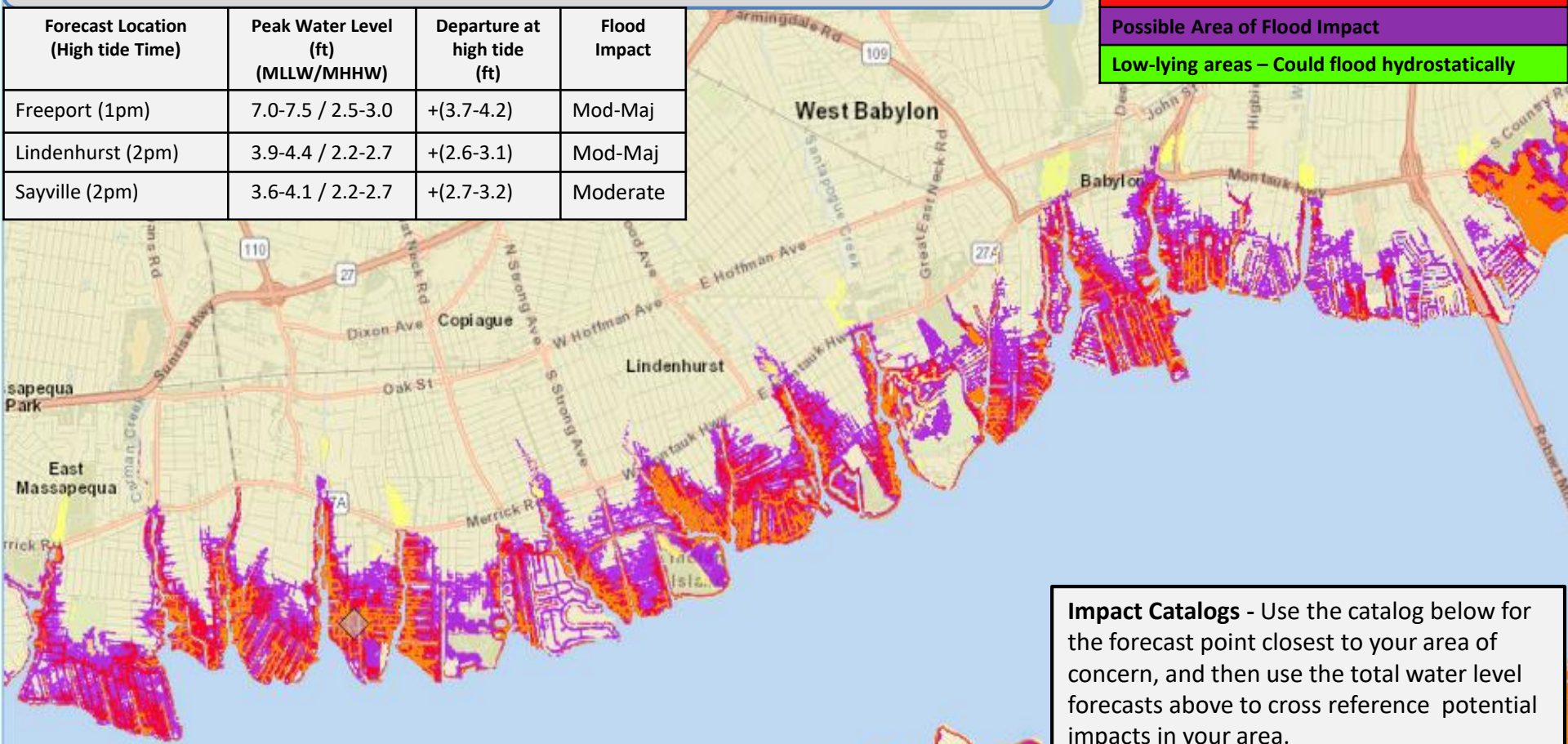
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Forecast Location (High tide Time)	Peak Water Level (ft) (MLLW/MHHW)	Departure at high tide (ft)	Flood Impact
Freeport (1pm)	7.0-7.5 / 2.5-3.0	+(3.7-4.2)	Mod-Maj
Lindenhurst (2pm)	3.9-4.4 / 2.2-2.7	+(2.6-3.1)	Mod-Maj
Sayville (2pm)	3.6-4.1 / 2.2-2.7	+(2.7-3.2)	Moderate

Map Legend
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Likely Areas of Flood Impact
Possible Area of Flood Impact
Low-lying areas – Could flood hydrostatically



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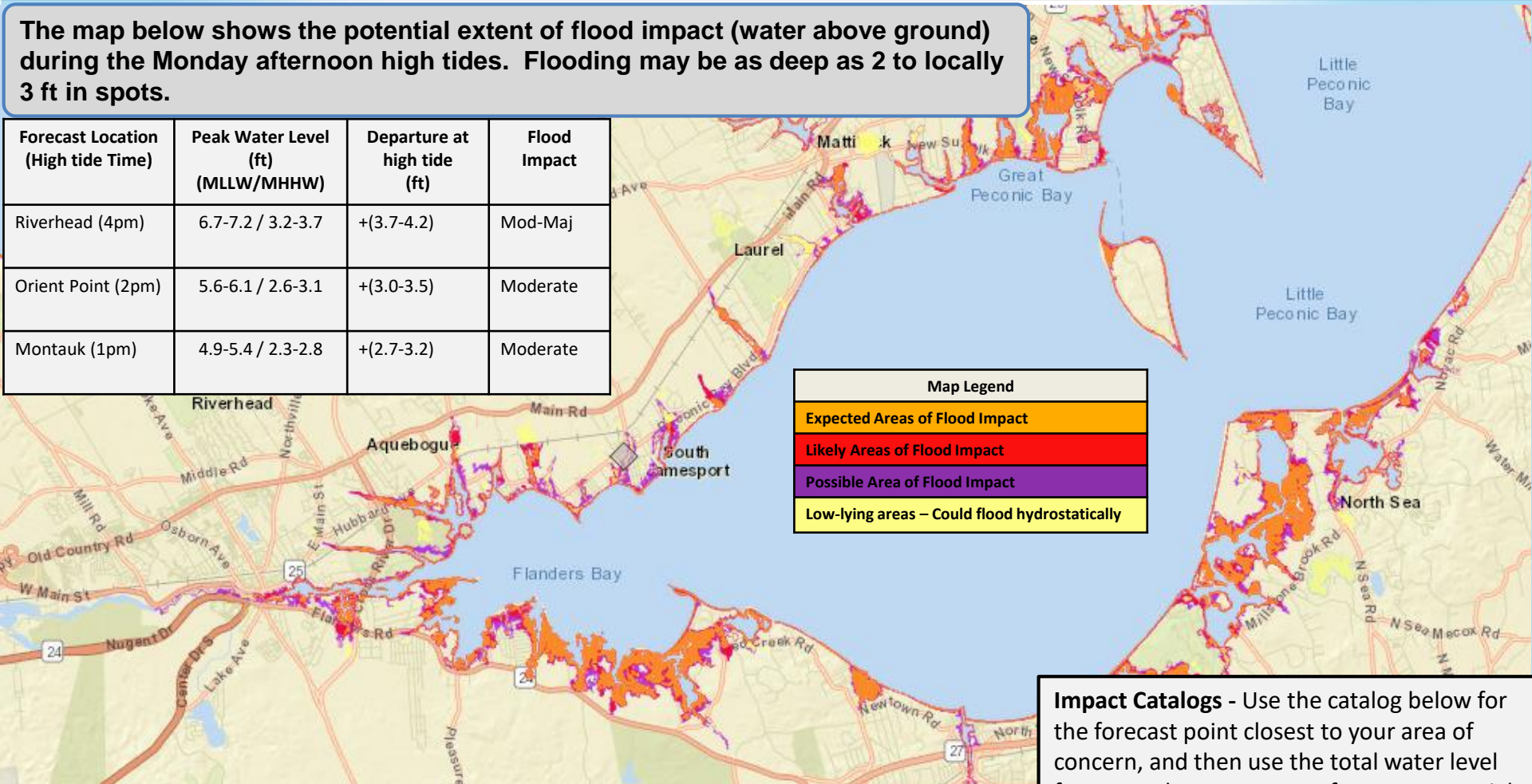
- [Freeport](#)
- [Lindenhurst](#)
- [Watch Hill](#)

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The map below shows the potential extent of flood impact (water above ground) during the Monday afternoon high tides. Flooding may be as deep as 2 to locally 3 ft in spots.

Forecast Location (High tide Time)	Peak Water Level (ft) (MLLW/MHHW)	Departure at high tide (ft)	Flood Impact
Riverhead (4pm)	6.7-7.2 / 3.2-3.7	+(3.7-4.2)	Mod-Maj
Orient Point (2pm)	5.6-6.1 / 2.6-3.1	+(3.0-3.5)	Moderate
Montauk (1pm)	4.9-5.4 / 2.3-2.8	+(2.7-3.2)	Moderate



Map Legend
Expected Areas of Flood Impact
Likely Areas of Flood Impact
Possible Area of Flood Impact
Low-lying areas – Could flood hydrostatically

**Impact Catalogs** - Use the catalog below for the forecast point closest to your area of concern, and then use the total water level forecasts above to cross reference potential impacts in your area.

- [Riverhead](#)
- [Orient Point](#)
- [Montauk](#)

For the latest coastal flood forecasts (hydrographs and tables) and the tools to visualize the potential coastal impacts (zoomable potential flood impact map, impact catalogs, climatology, etc.) in your area of concern please go to the [NWS New York, NY Coastal Flooding Page](#)

## Event Summary

- ✓ Widespread 2 to 4", locally 5", of rain likely late today through Monday morning. Minor urban, poor drainage and riverine flood threat during this time, with isolated to scattered flash flood threat.
- ✓ Threat for moderate flooding of quick responding rivers remains. Low threat for major flooding if high end of rainfall amounts are realized.
- ✓ Southerly winds 30 to 40 mph with gusts 55 to 60 mph likely for the coast late tonight into Monday, causing scattered tree and power impacts.
- ✓ Widespread moderate coastal flooding (2 to 2 ½ ft inundation above ground) for vulnerable coastal communities during the Monday afternoon high tide. Locally major (around 3 ft inundation above ground) is possible.
- ✓ 12 to 16 ft breaking surf causing widespread dune erosion and scattered overwashes likely for the ocean beachfront.
- ✓ Storm conditions likely on all waters tonight through Monday.

# Contact and Next Briefing Information



**Next Briefing**  
**When:** *Around 600 PM Sunday*  
**Method:** *Email*



**Web:**

<http://www.weather.gov/okx/>



**Phone (public):**

631-924-0517



**E-mail:**

[okx.operations@noaa.gov](mailto:okx.operations@noaa.gov)



**Facebook:**

<http://www.facebook.com/NWSNewYorkNY>



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<http://www.twitter.com/NWSNewYorkNY>



**YouTube:**

<https://www.youtube.com/user/NWSNewYorkNY>

**Disclaimer:** *The information contained within this briefing is time-sensitive, do not use after 6 PM Sunday (12/17/23).*