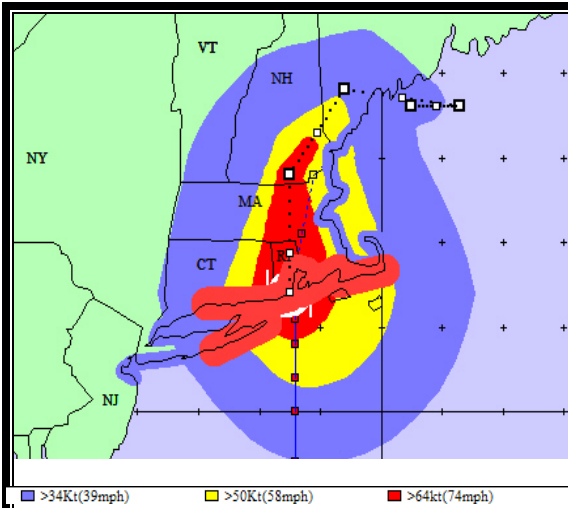




Office of Infrastructure Protection

New England Area Hurricane Analysis Summary



Storm Characteristics

- Category 3 hurricane scenario for exercise support
- Maximum sustained winds > 125 mph
- Estimated storm surge of 12 feet
- Landfall in Rhode Island
- Major cities most impacted: Providence, RI and Boston, MA

| | | Population | |
|---|---|----------------|--|
| Population within Potential Surge Zones (depth of water estimated in residential areas) | 11+ feet | 114,000 | |
| | 9-10 feet | 100,000 | |
| | 6-8 feet | 150,000 | |
| | 1-5 feet | 346,000 | |
| Population Impacted by Potential Power Outages (widespread power outages expected in CT, RI, and MA, localized outages expected in the rest of New England) Times to restoration are after damage assessment | Affected | > 5,000,000 | |
| | 6-7 days | 80% restored | |
| | 18-20 days | Fully restored | |
| Estimated Economic Impacts | | | |
| Direct costs for business interruptions | \$6-12 billion | | |
| Total costs for business interruptions | \$26 billion | | |
| Property damage | > \$5 billion | | |
| Facilities of Interest | | | |
| Agriculture Research Facilities (potential for wind damage but storm surge not predicted to threaten critical facilities) | <ul style="list-style-type: none"> • Plum Island Animal Disease Research Center; Long Island, NY <ul style="list-style-type: none"> ○ DHS operated Biosafety Level 3 facility ○ Potential catastrophic consequence of accidental release (GAO estimate) | | |
| Expected Major Airport Closures | <ul style="list-style-type: none"> • Boston, MA, Logan Int'l • Providence, RI, TF Green Int'l • Hartford, CT, Bradley Int'l | | |
| Significant Dams (high storage capacity and nearby defense industrial base assets) | <ul style="list-style-type: none"> • East Brimfield Dam; Worcester, MA • Westville Dam; Worcester, MA • West Thompson Dam; Windham, CT | | |
| Major Wastewater Treatment Facilities (impacted by storm surge) | <ul style="list-style-type: none"> • Bridgeport West Inc.; Bridgeport, CT • Bay Park Sewage Plant; East Rockaway, NY • New Bedford Facility; New Bedford, MA • Stamford Plant; Stamford, CT | | |

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Impacts by Infrastructure Sector

| Infrastructure | Level | Impacts |
|---------------------------|-------|--|
| Ag: Production | L | <ul style="list-style-type: none"> Impacts not nationally significant |
| Ag: Research Facilities | M | <ul style="list-style-type: none"> Plum Island facilities expected to experience wind damage |
| Banks & Finance | L | <ul style="list-style-type: none"> No long-term impacts expected due to backup systems |
| Chemical: Plants | L | <ul style="list-style-type: none"> Minor impacts expected |
| Commercial Facilities | L | <ul style="list-style-type: none"> Impacts not nationally significant |
| Dams | M | <ul style="list-style-type: none"> Slow-moving storm will result in heavy rainfall and potential overtopping of some dams Expect water to be released from dams in preparation for heavy rainfall Consequences of dam failure catastrophic but low risk of failure |
| Defense Industrial Base | M | <ul style="list-style-type: none"> Significant defense industrial base assets are located in area Impacts expected, but the specifics are unknown |
| Emergency Services | M | <ul style="list-style-type: none"> Emergency response delays expected due to transportation, electrical power, and telecommunications disruptions Communications disruptions could impact 911 service |
| Energy: Electric Power | H | <ul style="list-style-type: none"> Widespread power outages expected in CT, MA, RI, and MA – potential for >5,000,000 people to experience power outages Localized outages expected in the rest of the New England area 80% restoration expected within 6-7 days following damage assessment Full restoration may take 18-20 days following damage assessment |
| Energy: Natural Gas | L | <ul style="list-style-type: none"> No major impacts expected for natural gas pipelines or LNG sites including the Everett LNG Terminal |
| Energy: Petroleum | L | <ul style="list-style-type: none"> No significant refinery or pipeline impacts expected Some refineries (NJ) may go offline <1 wk as a precaution |
| Government Facilities | L | <ul style="list-style-type: none"> Impacts not nationally significant |
| Information Technology | L | <ul style="list-style-type: none"> Impacts not nationally significant |
| National Monuments | L | <ul style="list-style-type: none"> Impacts not nationally significant |
| Nuclear Facilities | L | <ul style="list-style-type: none"> Millstone, Seabrook, and Pilgrim power plants may shut down ahead of or during the storm |
| Postal & Shipping | M | <ul style="list-style-type: none"> Expect delays due to transportation impacts |
| Hospitals & Nursing Homes | M | <ul style="list-style-type: none"> Evacuations and potential closure of some facilities in impacted area will increase demand on neighboring regional facilities |
| Telecomm: Wireline | H | <ul style="list-style-type: none"> Expect damage to telecommunications infrastructure (poles and overhead lines) especially in CT, MA, and RI Restoration of full service may take weeks |
| Telecomm: Wireless | M | <ul style="list-style-type: none"> Winds expected to damage many cellular towers A power outage of > 4 hours will drain cell tower backup batteries causing the towers to power down |
| Transport: Road/Rail | H | <ul style="list-style-type: none"> Ground transportation impacts due to flooding and debris |
| Transport: Airports | H | <ul style="list-style-type: none"> Flooding of runways at Logan International Airport, Boston Airport closures in RI, CT, and MA expected and could result in delays and cancellations nationally |
| Transport: Seaports | M | <ul style="list-style-type: none"> Expect damage or disruption at several ports and marine facilities having commercial and/or military importance Port facilities closures expected in RI, CT, and MA |
| Water: Drinking Water | M | <ul style="list-style-type: none"> 126 potable water treatment plants serving >10,000 people could experience power outages lasting longer than 4 days Likely need for boil orders and/or bringing water into the area Loss of water supply could impact fire fighting capabilities |
| Water: Wastewater | M | <ul style="list-style-type: none"> 41 wastewater treatment plants (with average daily flows >10 MGD) are predicted to have power outages exceeding 4 days |

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