

**Dannel P. Malloy**  
GOVERNOR  
STATE OF CONNECTICUT

November 20, 2018

The Honorable Donald J. Trump  
President of the United States  
The White House  
Washington, D. C.

Through: Mr. Douglas F. Wolcott, Jr.  
Acting Deputy Regional Administrator  
FEMA Region 1  
99 High Street  
Boston, MA 02110-2132

Dear Mr. President:

Under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. §§ 5121-5207 (Stafford Act), and implemented by 44 CFR § 206.36 (major disaster declaration requests), I request that you declare a major disaster for Middlesex and New London Counties in the State of Connecticut as a result of severe rainstorms and flooding that occurred on September 25-26, 2018, which is the incident period. I am also requesting Hazard Mitigation Assistance statewide, including the tribal lands of the Mashantucket Pequot and Mohegan Tribal Nations.

Specifically, I am requesting Public Assistance (PA), categories A through G for the counties of Middlesex and New London. Preliminary expenses tabulated by type and amount are articulated in Enclosure B. They indicate a FEMA Preliminary Damage Assessment (PDA) of over \$6.285 million, exceeding the statewide threshold of \$5.361 million by at least 17%, at over \$900,000. This number does not yet include the state agency damages in Middlesex and New London Counties, which are still being verified at this time, but are estimated at over \$250,000.

In response to the situation, I took appropriate action under state law and the State Response Framework was activated (the State's emergency plan) on September 25.

## State, Local and Volunteer Actions in Response to Heavy Rain and Flooding

On September 25, 2018, Connecticut was struck by an extremely heavy rainfall event that went largely un-forecasted by the majority of the weather computer models. As the event unfolded, the National Weather Service issued flash flood warnings. Severe flooding caused extensive damage across a wide area of southern and eastern Connecticut.

Homes, businesses, vehicles, and particularly roads, bridges, and culverts suffered heavy damage. A total of 4 to 8.5 inches fell in an 18-hour period across portions of Connecticut with rainfall rates ranging from 1 to 3 inches per hour. To put this storm into perspective, the Yantic River in Norwich reached a stage of 12.53 feet. The NWS flood stage is 9.0 feet and the major flood stage is 11.0 feet. This recording is the sixth highest stage every recorded on the Yantic River, which has a period of recording back to 1932. See **Attachment 1**, Storm Summary Report.

During and immediately following the storm, the State's emergency plan was executed. Emergency Management at the state and local levels worked to assist municipalities with flooding-related issues including dozens of vehicle extraction and neighborhood flooding. Towns utilized their Local Emergency Operations Plans, town-to-town mutual aid, and river/dam alerting protocols to protect residents. At least six municipalities reported activating their emergency operations centers. Schools were cancelled in towns most affected by the flooding, including Lebanon. Mandatory evacuations of over 100 homes were ordered in Clinton, with approximately 30 homes inaccessible with inundation due to water rise from the rainfall and increased flows from a local dam, the Kelsey Town Road Dam, which reached Level 3 Alert status, which calls for evacuations in both Clinton and nearby Westbrook. State police reported landslides, washed out or impassible roads, and closed or collapsed bridges in the affected areas. The Town of Hamden reported about 50 road locations that were flooded, requiring barricades to restrict traffic from entering flooded streets.

Due to the fast work of emergency responders, people trapped in flooded vehicles or locations were rescued without any reported serious injuries or fatalities.

## Effects of Severe Storm and Scope of Damage

Extensive storm damage to infrastructure occurred in municipalities in Middlesex and New London Counties in municipalities experiencing the tremendous rainfall in a short period of time. For example, the Town of Clinton in Middlesex County, with a population of 13,260, has FEMA-verified public damages of \$1.3 million. East Haddam, a town of 9,126, as FEMA-verified public damage of over \$3.79 million.

In addition to the damages estimated as eligible for possible FEMA disaster assistance by the FEMA staff assessing the damage, stream embankment damages for temporary and permanent breach repairs and stabilization associated with Indian River in Clinton, which

may be eligible for either US Army Corps of Engineers or Natural Resources Conservation Services (NRCS) funding is estimated at an additional \$5.2 million. Similarly, the towns of Clinton, Chester, and Killingworth experienced over \$310,000 in additional damages that may be eligible for FHWA assistance. The damages to the infrastructure in these towns was incredibly costly.

In the days following the storms, DESPP/DEMHS sent out an Initial Damage Assessment to affected towns to determine if it appeared that the damages warranted a joint Preliminary Damage Assessment (PDA.) The data collected indicated that a joint PDA for PA was appropriate. The joint PDA was conducted in Middlesex and New London Counties, beginning on November 5<sup>th</sup>.

### Recent Disaster History

The State of Connecticut recently received a Presidential major disaster declaration for tornadoes and straight line wind severe storms which occurred on May 15, 2018. In addition, over the last 12 months, state and local agencies, as well as non-governmental organizations have been working together with FEMA Region 1 to address the needs of arrivals from Puerto Rico and other islands in the wake of Hurricanes Irma and Maria. Currently, 1,244 households representing 2,842 people living in Connecticut are registered with FEMA for disaster assistance. At my direction, we convened the Governor's Unified Command shortly after the hurricanes and effectively treated this disaster as our disaster. The state has provided more than 1700 hotel nights to Puerto Rican families, as well as disaster case management and recovery coordination, which includes regular Situation Reports, and Unified Command and Disaster Case Management calls. We coordinated assistance to hundreds of families, including those who have been or were at one time living in hotels under the FEMA Transitional Sheltering Assistance (TSA) program—which ended in September. The State has worked, and will continue to work, to ensure that each and every household has a safe place to live. Job training, English language training, and continued disaster case management is also being provided.

Additionally, the State has been working with FEMA and other federal and state agencies on the slow-moving disaster of crumbling foundations, particularly in eastern Connecticut. Home foundations are failing as a result of the ratio of the mineral pyrrhotite, mixing with water and air, in the concrete. Over 500 homes have identified the problem, with up to 30,000 potentially affected. The cost to replace a foundation is estimated at as much as \$100,000 or more. In addition to state solutions, we have been working with FEMA Region 1 to bring in the United States Army Corps of Engineers to assist with inspection checklists, quarry testing and potentially remediation solutions.

Finally, in early March, 2018, Connecticut experienced a series of four strong winter storms in less than 3 weeks, which brought down trees and wires, caused power outages, and, in at least

one county, dumped record snow. Although the storms did not meet the FEMA thresholds, the cleanup from each of these storms represented a significant cost to Connecticut municipalities, including the towns that were subsequently hit by this September 25 flooding.

Infrastructure Damage:

Based on the preliminary damage assessment, the vast majority of public damage (over \$6.114 million) is Category C, road system. This infrastructure damage includes damages to roads, bridges, and culverts.

Concluding Statement

I certify that for this major disaster, the state and local governments will assume all applicable non-federal shares of costs required by the Stafford Act. Preliminary estimates of the types and amounts of federal disaster assistance needed under the Stafford Act are provided in tables attached as Enclosures B and C. I am also submitting the required major disaster declaration request form.

I have designated William J. Hackett as the Governor's Authorized Representative (GAR) and Brenda M. Bergeron as the State Coordinating Officer (SCO) for this request, with Brenda M. Bergeron as the alternate GAR and Dana Conover as the alternate SCO. They may provide further information or justification on my behalf, as requested or required.

Thank you for your consideration of this request.

Sincerely,



Dannel P. Malloy

Cc: William J. Hackett, DESPP Commissioner  
Brenda M. Bergeron, DESPP/DEMHS Legal Advisor

Enclosures:

OMB No. 1660-0009/FEMA Form 010-0-13  
B: Public Assistance  
C: Requirements for Other Federal Agency Programs

Attachment 1: Storm Summary Report





**ENCLOSURE C TO MAJOR DISASTER REQUEST**

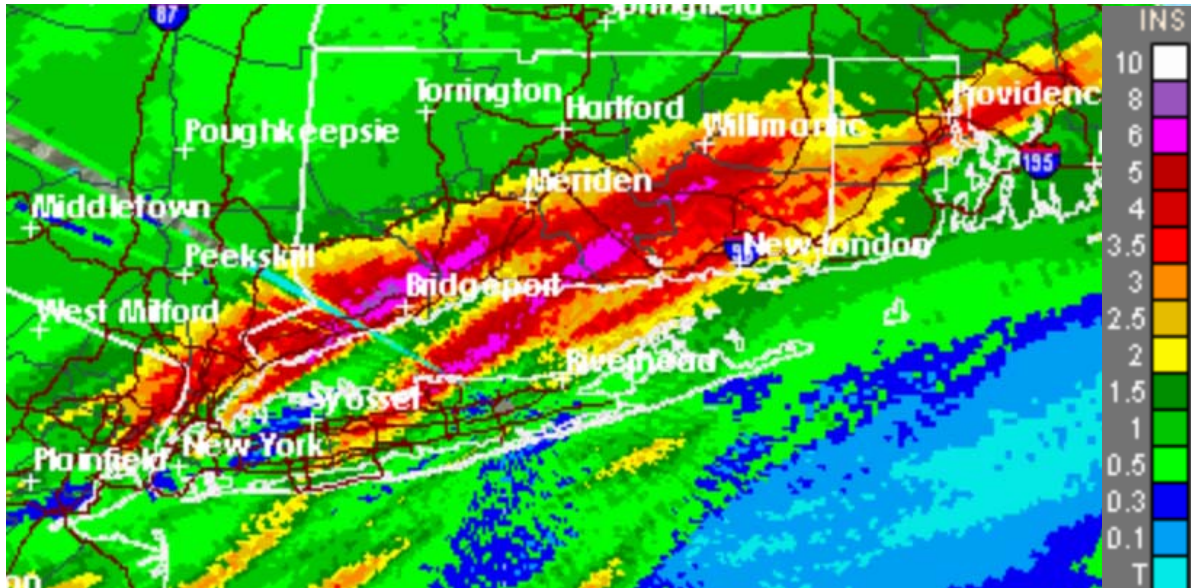
Estimated Assistance from Other Federal Agency Programs

County	SBA Home Loans	SBA Business Loans	FSA Loans	NRCS	FHWA	USACE	BIA	OTHER
Middlesex	N/A	N/A	TBD	TBD	TBD	TBD	N/A	
New London	N/A	N/A	TBD	TBD	TBD	TBD	N/A	
Totals								

*Note: Provide numbers and amounts, as appropriate.*



## ATTACHMENT 1: STORM SUMMARY REPORT



National Weather Service Radar Rainfall Estimate September 25 - 26, 2018

# TORRENTIAL DOWNPOURS AND MAJOR FLOODING September 25 - 26, 2018

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## Executive Summary

On September 25, 2018 southern Connecticut was impacted by an extremely heavy rainfall event that was largely un-forecasted by most computer models. The National Weather Service issued flash flood warnings as the event unfolded. However, flood damage was unavoidable and extensive and heavy damage was reported in nearly a dozen towns. Damage was reported to homes, businesses, vehicles, roads and bridges across a wide area of southern and eastern Connecticut. Evacuations and water rescues were conducted in several towns.

A total of 4" – 8.5" of rain fell in an 18-hour period across portions of Connecticut with rainfall rates ranging from 1" – 3" per hour. The intensity of the rainfall increased with each passing hour in many locations, which overwhelmed numerous catch basins in approximately 40 towns. The runoff quickly filled and then overflowed streams and rivers causing major flooding on several rivers and streams.

## Weather Event Summary

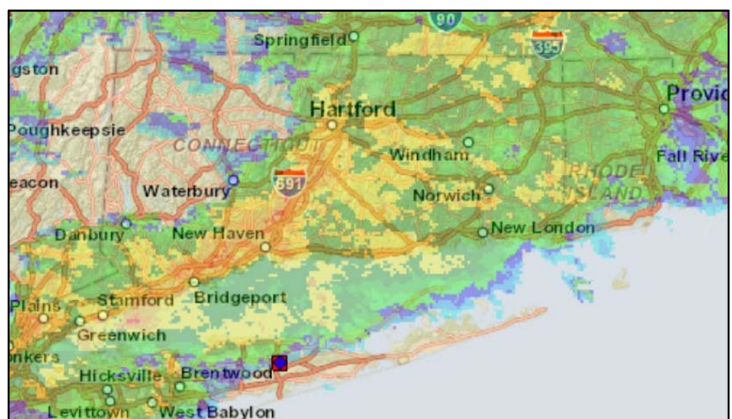
At noontime on September 25, 2018, a large complex of very heavy showers and a few thunderstorms located north of New York City began moving into southwestern CT. Flood advisories were issued by the National Weather Service (NWS) Office at Brookhaven, Long Island at 12:02 PM for the southern half of Fairfield, New Haven, Middlesex and New London Counties. At 12:58 PM, a flash flood warning was issued for southwestern Fairfield County. At 2:00 PM, the HRRR model indicated that over 6" of rainfall would occur in a thin band across central Fairfield County over the next 6 hours. The HRRR model as well as the GFS and NAM models forecasted a total of 1" – 2" of rainfall farther to the east over Middlesex and New London Counties later in the evening.

During the period from 2:00 – 5:00 PM, heavy rainfall spread eastward and rainfall rates up to 3" per hour occurred. The NWS expanded the flash flood warning to cover the rest of Southern Fairfield County at 3:15 PM and east into Northern New Haven County at 4:45 PM. DEMHS issued an external weather update to all towns at 4:00 PM. Small rivers and streams rose very quickly and major urban flooding was reported in several towns.

NWS Radar Picture at 2:00 PM



NWS Radar Picture at 5:00 PM

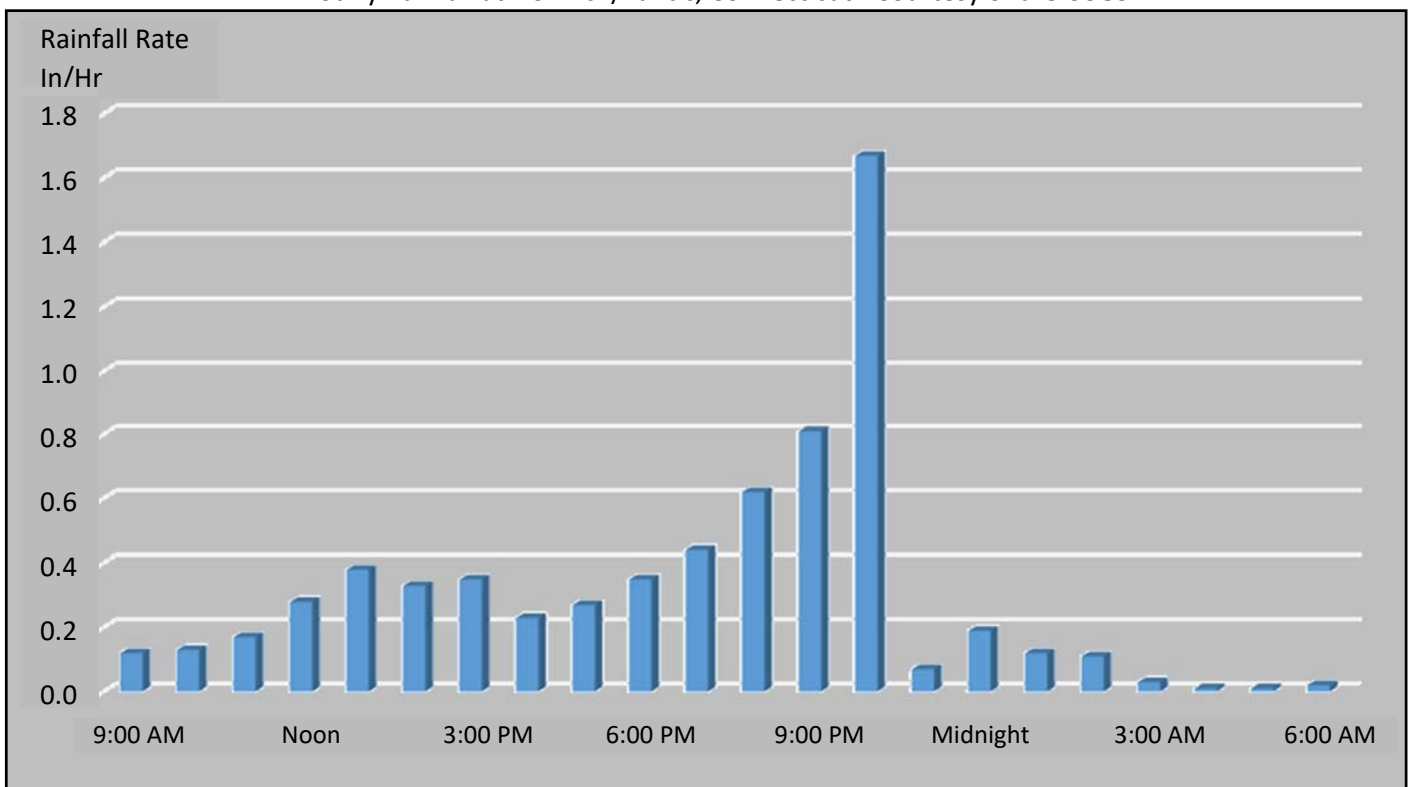


## Attachment #1: Storm Summary Report

During the period from 5:00 – 10:00 PM, the bands of very heavy rainfall held together (which was not forecasted by either the HRRR, GFS or NAM models) and moved into southeastern CT. The NWS issued a flash flood warning for southwestern New Haven County at 5:50 PM and for most of Middlesex County at 6:31 PM. At 7:36 PM the NWS expanded the flash flood warnings to the east and issued warnings for eastern Middlesex and western New London Counties.

Rainfall rates up to 2" per hour began occurring in Middlesex and New London Counties. Rivers, streams and urban areas quickly began flooding. The severity of the flooding was aggravated by two factors; 1) rain earlier in the day had saturated the soils and filled brooks and streams nearly to bank-full, and 2) the hourly rainfall rates (see graph below) increased each hour for 6 consecutive hours between 5:00 – 10:00 PM. This increase in rates did not give catch basins, streams or rivers any opportunity to recover.

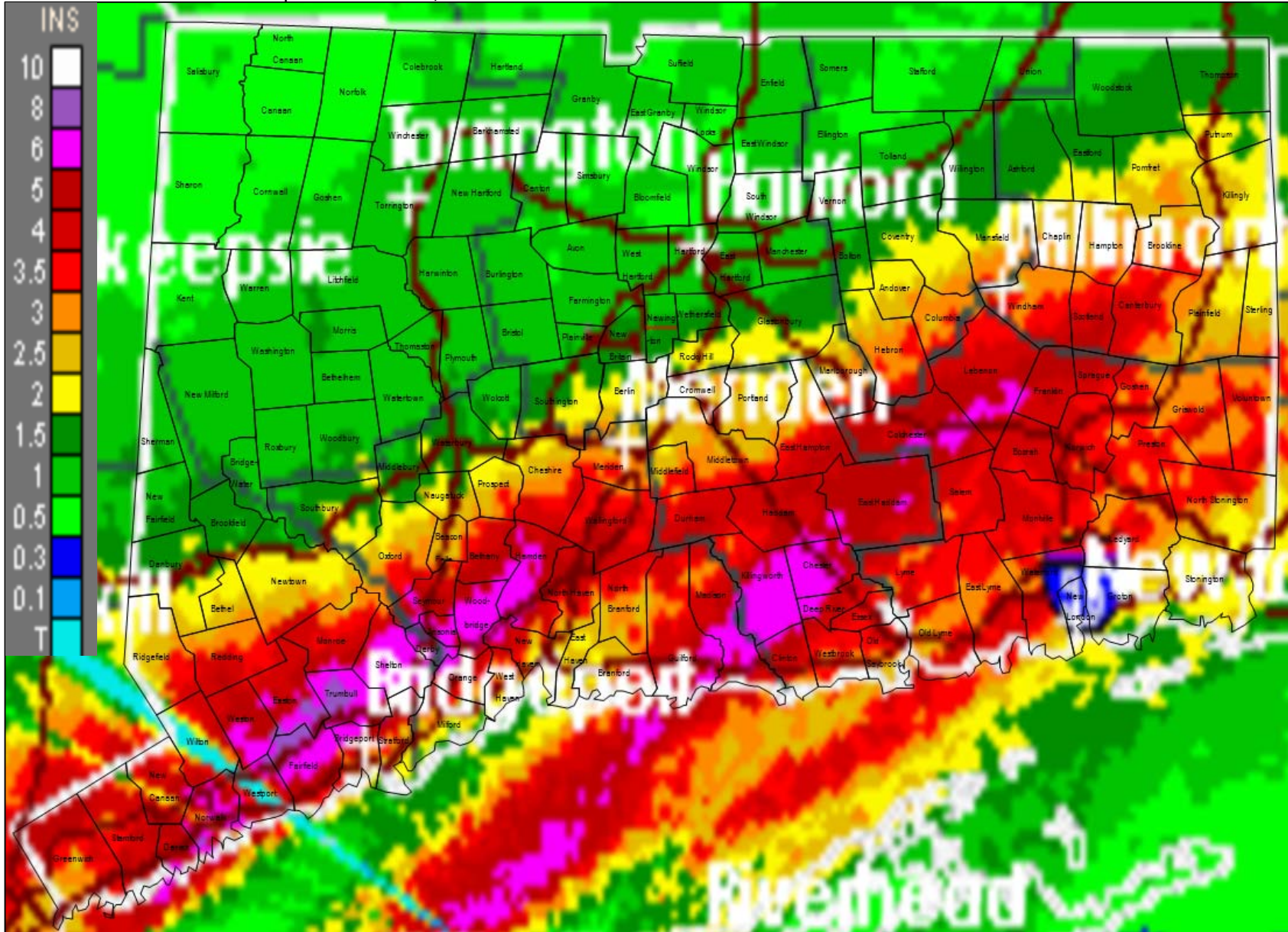
Hourly Rainfall at Norwich/Yantic, Connecticut - Courtesy of the USGS



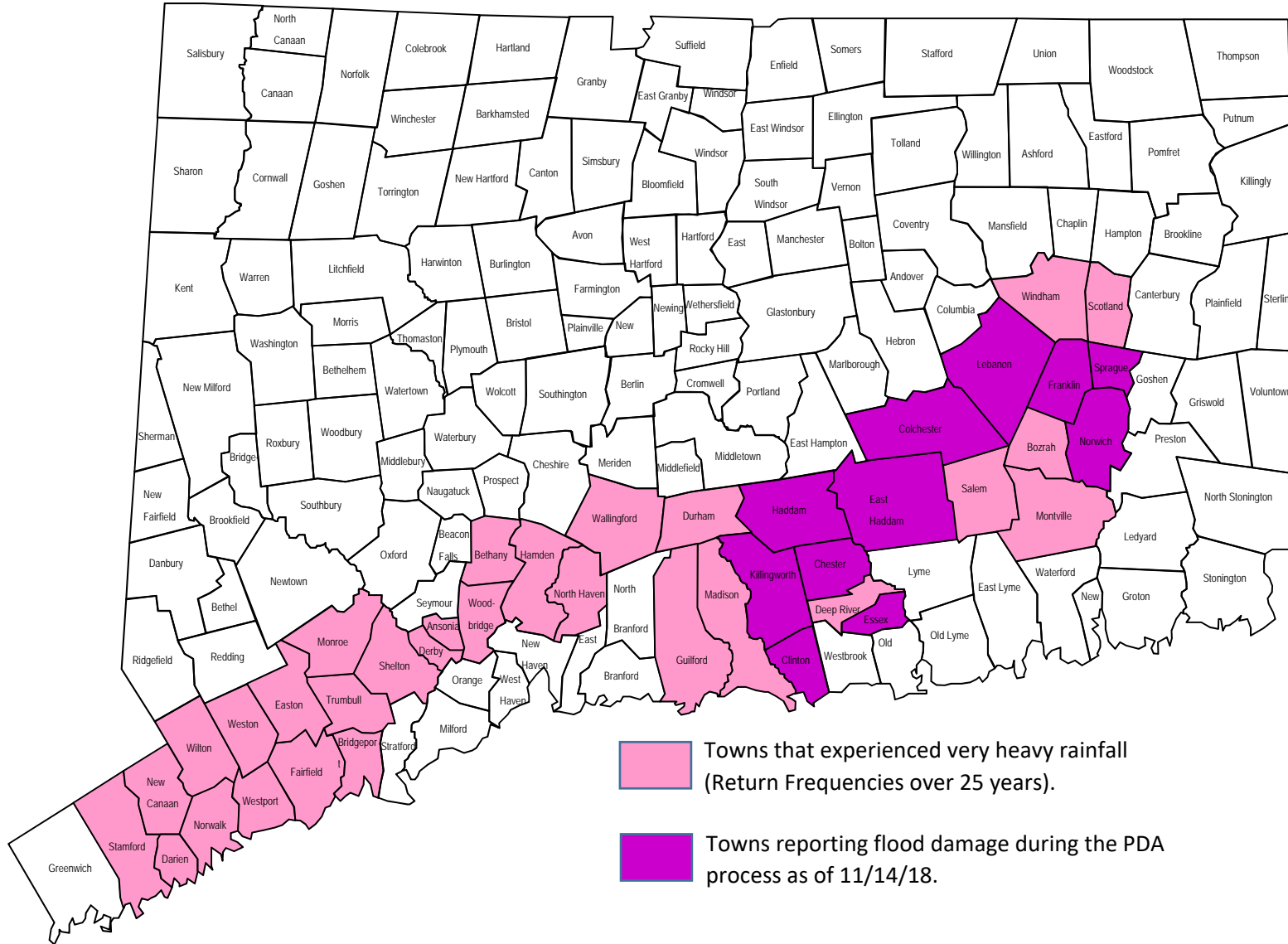


Attachment #1: Storm Summary Report

Radar Estimated Rainfall for September 25 – 26, 2018



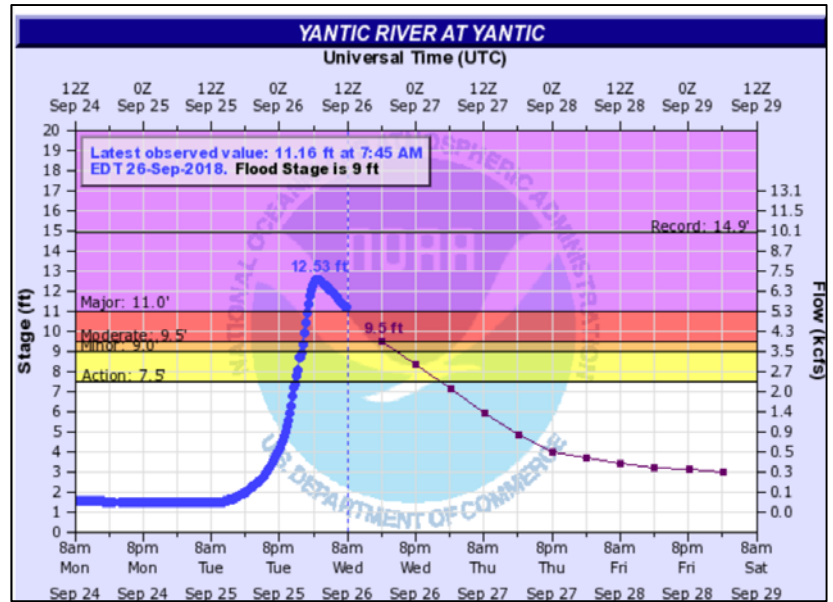
## Attachment #1: Storm Summary Report



## Attachment #1: Storm Summary Report

Rivers and streams with Times of Concentration (TOCs) less than 6 hours were the most vulnerable to flooding during this event. The TOC is the time it takes for runoff to flow from the headwaters of a river to an outlet such as another river or the ocean. The graph to the right shows the very rapid rise that occurred on the Yantic River in Norwich, Connecticut. The Yantic reached its sixth highest stage ever recorded at 12.53 feet.

Other small rivers such as Sasco Brook in Westport and the Indian River in Clinton also experienced major flooding.

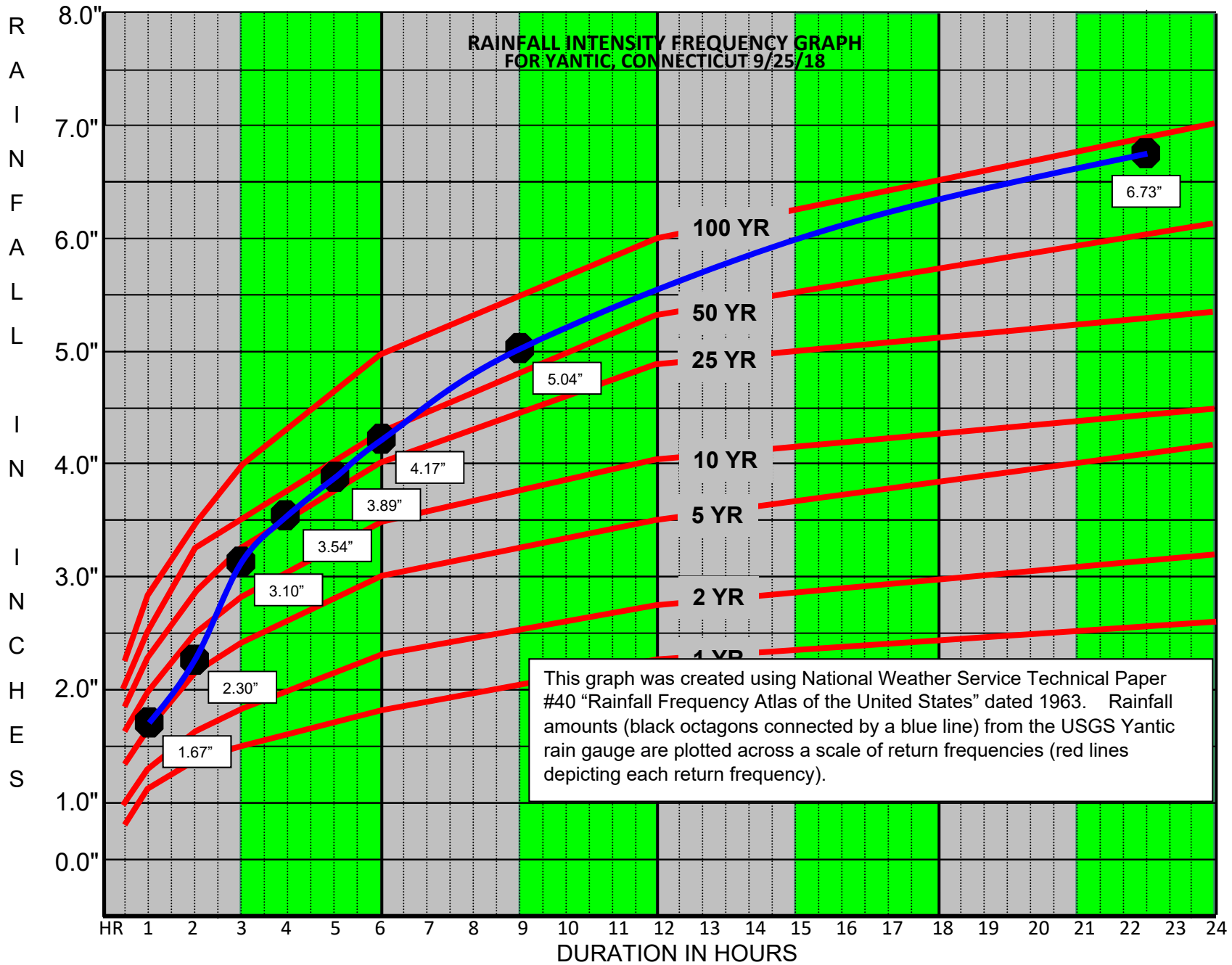


### Return Frequency Analysis

The rainfall return frequencies based on Technical Paper #40 (see graph on the next page) ranged from 5 to 95 years depending on the location and duration of the rainfall. The individual TOCs of the rivers and streams impacted by this rainfall event were a critical factor that either aggravated or mitigated flooding. The most vulnerable rivers and streams had TOCs between 3 – 6 hours. Rivers and streams such as Sasco Brook in Westport, the Indian River in Clinton and the Yantic River in Norwich all have TOCs in the 3 – 6 hour range and all experienced major flooding. Flood return frequencies ranged from 10 – 25 years on the smaller rivers and streams. Note: Flood return frequencies are normally lower than rainfall return frequencies because some of the rainfall is absorbed by the soil and does not flow immediately into a river or stream.

Smaller brooks with TOCs of less than 3 hours generally experienced flooding with a return frequency between 5 – 25 years. Several towns reported damage to bridges and road washouts.

Moderate to major urban flooding was also reported. Multiple evacuations and water rescues occurred.



Attachment #1: Storm Summary Report



DEPARTMENT OF HOMELAND SECURITY  
Federal Emergency Management Agency  
**REQUEST FOR PRESIDENTIAL DISASTER DECLARATION**  
**MAJOR DISASTER OR EMERGENCY**

OMB Control Number 1660-0009  
Expires 09/30/2019  
1. Request Date 11/20/2018

**Burden Disclosure Notice**

Public reporting burden for this form is estimated to average 9 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting the form. This collection of information is required to obtain a benefit. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street SW, Washington, DC 20472, Paperwork Reduction Project (1660-0009). **NOTE: Do not send your completed form to this address.**

Completion of this form including applicable attachments satisfies legal requirements for emergency and major disaster declaration requests under 42 U.S.C. §§ 5170 and 5191, respectively, as implemented at 44 C.F.R. §§ 206.35 and 206.36. Failure to use this form may result in a failure to meet these requirements and/or a delay in processing the request.

2a. Name of State (as defined in Stafford Act 102, 42 U.S.C. § 5122) or Indian tribal government requesting declaration.  
  
Connecticut

2b. Population (as reported by 2010 Census) or estimated population of Indian tribal government's damaged area(s). 3.6 Million

3. Governor's or Tribal Chief Executive's Name  
Dannel P. Malloy

4. Designation of State or Tribal Coordinating Officer upon declaration (if available) and phone number  
Brenda M. Bergeron, 860-685-8541

5. Designation of Governor's Authorized Representative or Tribal Chief Executive Representative upon declaration (if available) and phone number  
William J. Hackett, 860-685-8541

6. Declaration Request For:  Major Disaster (Stafford Act Sec. 401)  Emergency (Stafford Act Sec. 501 (a))

7. Incident Period: Beginning Date 9/25/2018 End Date 9/26/2018 or  Continuing

*If requesting a "continuing" incident period, enclose an official statement from a qualified Federal Government agency acknowledged as a national authority in a specific incident field (e.g., United States Geological Survey for seismic incidents, the National Weather Service for flooding).*

7b. Type of Incident (Check all that apply)

- Drought  Earthquake  Explosion  Fire  Flood  Hurricane  Landslide  Mudslide  
Severe Storm  
 (rain, high water, wind-driven, rain, hail, lightning)  Snowstorm (Must include Enclosure D: Historic and Current Snowfall Data)  Straight-Line Winds  
 Tidal Wave  Tornado  Tropical Depression  Tropical Storm  Tsunami  Volcanic Eruption  Winter Storm  
 Other (please specify) \_\_\_\_\_

8. Description of damages (Short description of impacts of disaster on affected area and population). Include additional details in enclosed Governor's or Tribal Chief Executive's cover letter.

On September 25-26, 2018, Connecticut was affected by heavy rains at historic rates that caused extensive flood damage to infrastructure including to bridges, roads, and culverts particularly in Middlesex and New London Counties.

9. Description of the nature and amount of State and local or Indian tribal government resources which have been or will be committed. Include additional details in enclosed Governor's or Tribal Chief Executive's cover letter.

State and local resources were coordinated to respond to and recover from the effects of this disaster. Mutual aid resources assisted with rescues associated with floods and blocked or destroyed roads. The State Response Framework was activated, as well as local emergency operations plans and local emergency operations centers.



10. Joint Preliminary Damage Assessment\*

Individual Assistance    Dates Performed    Requested \_\_\_\_\_    Start \_\_\_\_\_    End \_\_\_\_\_

Individual Assistance Accessibility Problems (Areas that could not be accessed, and why)  
N/A

Public Assistance    Dates Performed    Requested 10/18/2018    Start 11/5/2018    End 11/19/2018

Public Assistance Accessibility Problems (Areas that could not be accessed, and why)  
N/A

11. Programs and Areas Requested

Individual Assistance  N/A     Individuals and Households Program     Crisis Counseling Program     Disaster Unemployment Assistance  
 All     Disaster Case Management     Disaster Legal Services     Small Business Administration (SBA) Disaster Assistance

For the following jurisdictions, specify programs and areas (counties, parishes, independent cities; for Indian tribal government, list tribe(s) and/or tribal area(s)) If additional space is needed, please enclose additional documentation.

For States, identify Federally-recognized Tribes in the requested counties (if applicable).  
N/A

Please see **Enclosure A: Supplemental Information for Individual Assistance** for additional information in support of this request\*.

\*Not Required for Emergency Declaration Request

11. Programs and Areas Requested (Continued)

Public Assistance  N/A  Debris Removal (Category A)  Emergency Protective Measures (Category B)  Permanent Work (Categories C-G)\* (not available for Emergency Declaration Requests)

For the following jurisdictions, specify programs and areas (counties, parishes, independent cities; for Indian tribal government, list tribe(s) and/or tribal area(s)). If additional space is needed or your request includes different categories of work for different jurisdictions; please enclose additional documentation.

For States, identify Federally-recognized Tribes included in the requested counties (if applicable).

Please see **Enclosure B: Supplemental Information for Public Assistance** for additional information in support of this request\*.

**Indemnification for Debris Removal Activity**

I do not anticipate the need for debris removal.

I anticipate the need for debris removal, which poses an immediate threat to lives, public health and safety. Pursuant to Sections 403 and 407 of the Stafford Act, 42 U.S.C. §§ 5170b & 5173, the State or Indian tribal government agrees to indemnify and hold  harmless the United States of America for any claims arising from the removal of debris or wreckage for this disaster. The State or Indian tribal government agrees that debris removal from public and private property will not occur until the landowner signs an unconditional authorization for the removal of debris.

**Request for Direct Federal Assistance**

I do not request direct Federal assistance at this time.

I request direct Federal assistance for work and services to save lives and protect property, and:

a. I request the following type(s) of assistance:

b. List of reasons why State and local or Indian tribal government cannot perform, or contract for, required work and services.

c. In accordance with 44 C.F.R. § 206.208, the State or Indian tribal government agrees that it will, with respect to direct Federal assistance: (1) Provide without cost to the United States all lands, easements, and rights-of-ways necessary to accomplish the approved work; (2) Hold and save the United States free from damages due to the requested work, and shall indemnify the Federal Government against any claims arising from such work; (3) Provide reimbursement to FEMA for the non-Federal share of the cost of such work in accordance with the provisions of the FEMA-State or FEMA-Tribe Agreement ; and (4) Assist the performing Federal agency in all support and local jurisdictional matters.

**Request for Snow Assistance**

N/A  I request snow assistance.

Snow assistance for the following jurisdictions (Specify counties, independent cities or tribes and/or tribal areas).

Please see **Enclosure D: Historic and Current Snowfall Data** for additional information in support of this request\*.

\*Not Required for Emergency Declaration Request

11. Programs and Areas Requested (Continued)

Hazard Mitigation\*  Statewide OR

For the following specific counties, parishes, independent cities or tribes and/or tribal areas.

12. Mitigation Plan Information\*

a. Mitigation Plan Expiration Date 1/08/2019 b. Type of Plan  Enhanced  Standard

13. Other Federal Agency Programs

I do not anticipate requirements from Other Federal Agencies  I do anticipate requirements from Other Federal Agencies

Please see **Enclosure C: Requirements for Other Federal Agency Programs** for additional information in support of this request\*.

14. Findings and Certifications

I certify the following:

- a. I have determined that this incident is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local government or Indian tribal government and that supplementary federal assistance is necessary.
- b. In response to this incident, I have taken appropriate action under State or tribal law and have directed the execution of the State or Tribal Emergency Plan on 9/25/2018 in accordance with the Stafford Act.
- c. The State and local governments, or Indian tribal government will assume all applicable non-Federal share of costs required by the Stafford Act.

15. List of Enclosures and Supporting Documentation

Cover Letter  Enclosure A (Individual Assistance)\*  Enclosure B (Public Assistance)\*  
 Enclosure C (Requirements for Other Federal Agency Programs)  Enclosure D (Historic and Current Snowfall Data)  
 Additional Supporting Documentation State Exhibits 1

  
\_\_\_\_\_  
Governor's or Tribal Chief Executive's Signature

Nov 20 2018  
\_\_\_\_\_  
Date

If anyone except the Governor or Tribal Chief Executive signs this document, please provide the documentation that establishes that this individual has the legal authority to act on behalf of the Governor or Tribal Chief Executive.

\*Not Required for Emergency Declaration Request