



COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE GOVERNOR
HARRISBURG

THE GOVERNOR

June 22, 2018

The Honorable Donald J. Trump
President of the United States
The White House
Washington, DC 20001

Through: Ms. MaryAnn Tierney
Administrator
FEMA Region III
Philadelphia, PA 19106

Dear Mr. President:

Under the provisions of Section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5170 (Stafford Act), and implemented by 44 CFR § 206.36, I request that you declare a major disaster for the Commonwealth of Pennsylvania (the Commonwealth) as a result of meteorological conditions that established a nearly continuous series of storms with an anomalously high moisture supply during the period of February 15, 2018 through April 24, 2018. The excessive precipitation caused over fifty (50) devastating embankment failures and landslides in the Commonwealth's Allegheny and Westmoreland counties. The official recording site at the Pittsburgh International Airport (PIT) tallied 12.55" of liquid precipitation resulting in an oversaturation of soils, which is 187% of average precipitation measurements for the Pittsburgh region during the same period, February 15, 2018 through April 24, 2018.

The Pennsylvania Emergency Management Agency (PEMA) continues to conduct initial damage assessments to gather data. To date, the damage totals for this event have reached \$22,347,548. *See* Enclosure B. I have determined the disaster is of such severity and magnitude that effective response is beyond the capabilities of the Commonwealth, and supplementary federal assistance is necessary. I am specifically requesting a major disaster declaration for a "Severe Storm," "Landslide," and "Flood," including all categories of work available under Public Assistance for Allegheny and Westmoreland counties. The requested counties in the Commonwealth have met the per capita threshold for supplementary federal assistance. The Commonwealth reserves the right to add additional counties to this request. Finally, I request that all sixty-seven (67) counties be considered for the Hazard Mitigation Grant Program.

I. STATE OF EMERGENCY

On June 4, 2018, I declared a disaster emergency in Allegheny and Westmoreland counties located in the Commonwealth due to an active weather pattern creating a series of storms that produced snow and rapid, heavy rainfall, over a nearly continuous and pro-longed period of time, resulting in devastating embankment failures and landslides. As part of this emergency declaration, I directed appropriate response action be taken, and the Commonwealth's Emergency Operations Plan be executed.

The active weather pattern, February 15, 2018 through April 24, 2018, resulting in devastating embankment failures and landslides generated significant life-safety issues requiring a variety of critical resource and support needs, such as: rescue and evacuation of stranded residents from their homes to emergency shelters; support of local shelter operations; transportation of emergency workers; and emergency communications.

II. HEAVY RAIN, SNOWMELT, SEVERE FLASH FLOODING, AND LANDSLIDES

An active weather pattern established a nearly continuous series of storms with an anomalously high moisture supply during the period of February 15 through April 24, 2018. During this period the official recording site at the PIT tallied 12.55" of rain and melted snow – a staggering 187% of average precipitation measurements for the region during the same period, February through April. This excessive precipitation with limited breaks between storms allowed for oversaturation of soils in the Pittsburgh region – a significant trigger for devastating embankment failures and landslides.

The antecedent conditions to the emergency declaration period were rather wet. January 2018 recorded 4.28" of rain and melted snow at PIT, all of which melted and began saturating soils in western Pennsylvania. This rain amount is well above the 2.70" January average and resides in the top 15% of the wettest January in the 147-year record period for PIT. In addition, the first fourteen days of February tacked on 1.84" of rain and snowmelt, with measurable precipitation falling on all but three of these dates, further saturating soils.

February is typically the second driest month on average for the Pittsburgh area, so record precipitation is notably unusual. Regardless, February 2018 continued exceptionally wet, ending with a record 7.04" of rain and melted snow – which is 295% of the average for February. The new record exceeds the previous record set in 1887 by over 0.50". Of the 7.04" of rain, 5.19" fell in the second half of the month with two significant multiple day events of rain and snow:

- February 14-17: 3.14"
- February 22-25: 2.04"

Dozens of devastating embankment failures and landslides were triggered following each of the multiple-day February precipitation events. Prior to 2018, no three-day or four-day rainfall event exceeded 3.0" during the month of February. Historically, PEMA found these rare heavy rain events spanning at least three consecutive days correlate with similar occurrences, specifically embankment failures and landslides in December 1942, January 2004, and January 2005. The most recent previous occurrence of numerous embankment failures and widespread landslides in February is in 1891, which is Pittsburgh's third wettest February on record at 6.09". This illustrates two points:

- Embankment failures and widespread landslides are rare during the winter months.
- There is a high correlation between extreme precipitation and devastating embankment failures and widespread landslides in the Pittsburgh region.

March featured several freeze and thaw cycles which allowed the surplus moisture to remain in soils. Then, the active weather pattern continued from late March through mid-April, with additional storms maintaining elevated soil moisture values which correlate with additional embankment failures and widespread landslides. During the 29-day period from March 27 through April 24, 2018, only five days had no measurable precipitation.

The unusually wet pattern for the Pittsburgh region over the first few months of the year correlates with dozens of embankment failures and widespread landslides that resulted in damages. Although severe storms or tropical systems may cause shallow embankment failures and landslides in a short period, the soil moisture conditions which lead to deep-seated, devastating landslides can require a longer time to form. The record

precipitation in the first part of 2018 for the Pittsburgh region shows a slow development due to a relentless weather pattern which had a cumulative impact.

III. IMPACT ON THE COMMONWEALTH

The impact on the Commonwealth from this event can be examined from different perspectives, for example, human resources and infrastructure.

A. Human Resources

This event required state and local resources, including state and local road crews and equipment, and countless hours of staff time to ensure the health, welfare, and safety of Commonwealth citizens and property. The closure and slowing of transportation routes caused a ripple effect in the lack of access to timely emergency service response and access to other basic facilities.

In addition, Voluntary Organizations Active in a Disaster (VOAD) provided resources and conducted activities in response to this event. For example:

- American Red Cross, Salvation Army, United Way, and local fire departments provided shelter support to over 10 Allegheny county residents displaced by the embankment failures and landslides. To date, four residents still require sheltering assistance.
- Pennsylvania VOADs provided material and personnel support to Emergency Support Function 6 (Mass Care) and Emergency Support Function 8 (Public Health) with shelter support and clean-up crews for residential properties. Additionally, these volunteers maintained communications and interagency coordination between PEMA's Commonwealth Response Coordination Center (CRCC) and member organizations for delivery of emergency assistance.

B. Infrastructure

The Commonwealth's infrastructure was also severely impacted by this disaster emergency. Transportation route closures affecting both state and local highways and roads through both urban and rural areas of the Commonwealth additionally taxed emergency management efforts at state and local levels.

Pennsylvania counties used crews from local roads and public works departments for traffic management. These crews incurred additional costs and severely depleted local supplies of road closure signs, and other materials.

IV. IMPACT ON THE COUNTIES

A. Allegheny County (See Enclosure D for Allegheny County Impact Statement)

Overall: The prolonged, heavy rainfall in Allegheny County caused embankment failures, landslides, and flash flooding which severely impacted transportation infrastructure and washed away roadways, berms, and guiderails, making roadways either a single lane or totally impassable. Drainage infrastructure was overwhelmed and compromised; specifically, numerous sanitary sewer lines were damaged or destroyed. Many of the thirty (30) affected local municipalities have a small number of households, but experienced relatively high amounts of dollar damages. Examples include: Pitcarin Borough which has 1,675 households, and experienced over \$3.5 million in damages; Reserve Township which has 1,575 households, and experienced over \$3.3 million in damages; and Kennedy Township which has 2,917 households, and experienced over

\$1 million in damages. Allegheny County has a per-capita threshold of \$4,501,921, and experienced over four times this amount with \$20 million in damages.

Road Systems: Forty-three separate roadways were severely damaged or destroyed making travel routes impassable or dangerous.

Residential Structures: Over 50 residential structures have been affected by the embankment failures and landslides, with 14 being destroyed.

Actions Taken: In Allegheny County, local officials and emergency responders evacuated citizens from at-risk embankment failure and landslide areas, and monitored and compiled preliminary damage estimates. Emergency responders closed impassable roads. A local disaster emergency was declared in Allegheny County on April 17, 2018, due to the prolonged precipitous conditions beginning on February 15, 2018. *See Enclosure E.*

B. Westmoreland County (See Enclosure F for Westmoreland County Impact Statement)

Overall: Prolonged, heavy rainfall caused embankment failures, landslides and flash flooding in Westmoreland County. Flash flooding severely impacted transportation infrastructure; washed away roadways, berms and guiderails; and undermined roads making them either a single lane or totally impassable. Drainage infrastructure was overwhelmed and compromised; specifically, drainage culverts were damaged or destroyed, and drainage pipes were damaged and destroyed. Westmoreland County has a per-capita threshold of \$1,343,822, and experienced over \$1.4 million in damages, with additional municipalities now reporting un-assessed damages that can contribute to this event.

Road Systems: Ten separate roadways were severely damaged or destroyed making travel routes impassable or dangerous.

Actions Taken: Westmoreland County officials monitored and compiled preliminary damage estimates. Emergency responders also closed impassable roads. A local disaster emergency was declared in Allegheny County on May 30, 2018, due to the prolonged precipitous conditions beginning on February 15, 2018. *See Enclosure G.*

V. STATE AND LOCAL RESPONSE TO THE DISASTER

PEMA coordinated with the National Weather Service, local jurisdictions and state agencies concerning the event forecasts and potential impacts on the escalating embankment failures and landslides associated with anticipated/actual flash flooding. In addition, PEMA's CRCC did the following: monitored the storm(s) and landslides, interfaced with local governments and state agencies impacted by the event; disseminated the necessary information and guidance to the public; responded to media inquiries; mobilized and pre-staged resources to effectively respond to local and regional requests for assistance; and responded to other requests for assistance, as required.

The CRCC logistics section coordinated requests for unmet needs, such as site visits and damage assessments; and supported CRCC operations with information technology services, communications, provisioning of meals, security, and safety.

The Pennsylvania Department of Transportation (PennDOT) conducted operations to evaluate and begin immediate repairs on critical highways and other roadways. District incident command centers were activated, and roads were closed or allowed only limited access. PennDOT monitored road conditions; coordinated the closure of designated roads; activated variable message signs (VMS) with emergency messages; and responded to accidents and emergencies. In addition, PennDOT has requested over \$12 million in emergency relief funds

from the Federal Highway Administration (FHA) to assist in the critical repairs of the devastating embankment failure to Federal-aid highway Route 30 in Allegheny County. PennDOT has not been notified if its request for FHA emergency relief funding will be granted. If PennDOT does not receive these requested FHA funds, the Commonwealth will be responsible to fund the repairs. PennDOT is also responsible for over \$9 million in damages to other federal highways within Allegheny and Westmoreland counties that are not eligible for any emergency relief funds from the FHA.

The Pennsylvania State Police (PSP) responded to police incidents, assisted with highway closures, and established detours around closed roads.

VI. RECENT DISASTER HISTORY

Over the last six months, I issued two proclamations of disaster emergency related to severe weather events. This is the first time that the Commonwealth has requested a major disaster declaration this year. The last major disaster declaration request for the Commonwealth was filed in May of 2017. Since then the Commonwealth has responded to several local flooding, snow, and ice events that did not meet the Commonwealth's per-capita threshold for supplemental federal assistance. Two of these severe weather events were declared disasters by the Small Business Administration, making loans available to residents and businesses, but no federal supplemental assistance was available to municipalities for the damages these events caused to public infrastructure.

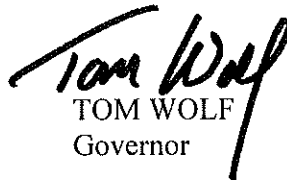
VII. CURRENT DAMAGES

The Joint Preliminary Damage Assessments (JPDAs) were conducted with local governments, counties, state agencies and FEMA. These JPDAs provided cost information to PEMA from the local governments, authorities, counties, and state agencies. The information contained in the JPDAs included, but was not limited to, equipment costs, force account labor costs, material costs, and other information that is consistent with FEMA's Public Assistance Policy.

Currently, all damages and costs currently appear to be in all categories of infrastructure costs. The current total amount of damages is approximately \$22,347,548. *See* Enclosure B. The Commonwealth's per capita threshold is \$18,545,473. The Commonwealth is unaware of infrastructure costs eligible for insurance coverage or insurance reimbursement.

Finally, I have designated Mr. Jeffrey A. Thomas, PEMA's Executive Deputy Director, as the State Coordinating Officer for this request. Mr. Thomas will work with FEMA to provide further information as needed on my behalf.

Sincerely,



TOM WOLF
Governor

Enclosures

- OMB No. 1660-0009/FEMA Form 010-0-13
- A: Individual Assistance (NOT APPLICABLE)
- B: Public Assistance – Joint Preliminary Damage Assessment Spreadsheet
- C: Requirements for Other Federal Agency Programs (NOT APPLICABLE)
- D: Allegheny County Impact Statement

- E: Allegheny County Local Disaster Declaration
- F: Westmoreland County Impact Statement
- G: Westmoreland County Local Disaster Declaration