



STATE OF MARYLAND



MAY 2018 SEVERE WEATHER AND FLOODING

AFTER-ACTION REPORT (AAR)

JULY 23, 2018

Security Notice

1. The title of this document is May 2018 Severe Weather and Flooding AAR.
2. Point of Contact: Training and Exercise Branch Manager, Maryland Emergency Management Agency



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Incident Overview/Executive Summary

Beginning in the evening on Tuesday, May 15, 2018, a series of severe thunderstorms containing excessive rain impacted portions of western and central Maryland for several days, leading to widespread urban and stream flooding in portions of Frederick and Washington Counties. During the first two days, multiple roadways and bridges (State and local) were inundated, with many being “washed out” completely. On Thursday, May 17, 2018, MEMA was notified by the Garrett County Office of Emergency Management (OEM) of an incident in the Kitzmiller area of Garrett County, where a slow-moving mudslide threatened to isolate numerous residences from road access. As a result of this cascading series of incidents over a geographically-dispersed region, MEMA leadership elected to elevate the State Response Activation Level (SRAL) to “Enhanced” as of 1600 hours on May 17, 2018, and then to “Partial” at 0700 hours on Friday May 18, 2018. Local and State agencies coordinated public safety resources and information sharing to ensure the safety of affected residents and to kick-off the recovery process throughout the duration of the event. During this event, local Declarations of Emergency were issued by Frederick City, Frederick County, and Washington County. MEMA remained at an elevated SRAL until Saturday, May 20, 2018 at 1400 hours. MEMA hosted a Statewide Recovery Call on Monday, May 22, 2018 to assess local needs during the anticipated long-term recovery process.

On Sunday, May 27, 2018, a heavy line of thunderstorms again impacted portions of central Maryland, this time dropping 9-10 inches of rain in the West Baltimore City, Catonsville (Baltimore County), and Ellicott City over a very short period of time. As a result of this extreme rainfall, catastrophic urban flooding occurred in these three jurisdictions. Significant damage to buildings and infrastructure, emergency swift-water rescue operations, and previous experience with flooding in these areas prompted MEMA to rapidly escalate the SRAL to “Partial” in the evening of May 27, 2018. Local and State Declarations of Emergency were issued early during the response phase of this incident, in support of emergency response measures and rapid initiation of a coordinated recovery effort. MEMA remained at an elevated SRAL, supporting extensive resource coordination, and then the major recovery effort, until returning to a “Normal” SRAL on June 14, 2018 (coinciding with the rescinding of the State Declaration of Emergency). The Statewide Recovery efforts for both of these significant incidents continue as of the time of this report.



The purpose of this report is to analyze the Maryland Emergency Management Agency's (MEMA's) response to the event, identify strengths to be maintained and built upon, identify potential areas for improvement, and support development of corrective actions. The experience gained through planning for and the response to these severe weather and flooding events will serve as the basis for enhancing planning and response for future events.

Key Findings

- Notification and early incident communication were key to the success of the management of the incidents and the rapid deployment of recovery initiatives.
- Local responders were well prepared and performed response functions extremely efficiently and effectively.
- Overall, management of this incident was described as very successful, with positive feedback received concerning State support to local agencies throughout the incident.
- Recovery efforts were considered on the first day of each event, meaning recovery started as soon as response started. This was observed as a significant strength for these operations.
- Dedication of MEMA staff was noted as a strength, with many personnel responding immediately on a Sunday night of a holiday weekend.
- MEMA built on previous successes and lessons learned to optimize response to this event, and will need to ensure that this continues in future events.
- This incident highlighted the need for renewed focus on MEMA staff accountability, both in terms of safety and ability to rapidly respond and support SEOC operations.



Incident Timeline

Phase	Date	Event
Storm 1	Tuesday, May 15, 2018	2000 hours – Frederick County Executive Jan Gardner issues Local State of Emergency
Storm 1	Wednesday, May 16, 2018	Frederick County Mayor Michael O'Connor Declares a State of Emergency
Storm 1	Wednesday, May 16, 2018	0100 hours – More than 80 people trapped aboard a MARC train near Brunswick, MD as a result of flash floods from Tuesday night's rainfall
Storm 1	Wednesday, May 16, 2018	MARC train service suspended for the Brunswick Line
Storm 1	Thursday, May 17, 2018	Frederick County DFRS crews responded to 37 water rescues, Nearly 20+ road closures from Tuesday night through Thursday
Storm 1	Thursday, May 17, 2018	1600 hours – MEMA State Response Activation Level (SRAL) increased to "Enhanced" posture
Storm 1	Thursday, May 17, 2018	By 0800 hours, 8 inches of rain had fallen since Tuesday, May 15th, according to meteorologist Jeremy Geiger. Flash flood warnings still in effect until 8am Saturday, May 19 th for Frederick and Washington Counties
Storm 1	Friday, May 18, 2018	0700 hours – MEMA SRAL increased to "Partial", SEOC opened with MEMA and SCF staffing
MEMA Recovery Effort	Friday, May 18, 2018	Weather Briefing Conference Call with SCFs, NOAA Regional Offices, and first Recovery Kickoff discussion (MEMA-led)
Storm 1	Friday, May 18, 2018	1900 hours – MEMA SRAL decreased to "Enhanced"
MEMA Recovery Effort	Friday, May 18, 2018	MEMA sent out initial damage assessments to SCFs and Local Emergency Managers
Storm 1	Sunday, May 20, 2018	1400 hours – MEMA SRAL decreased to "Normal Operations"
Storm 1	Monday, May 21, 2018	Frederick County Emergency Management Division established a post-storm assessment survey due June 15th
MEMA Recovery Effort	Monday, May 21, 2018	0900 hours – Initial State Recovery Support Call (led by MEMA)
MEMA Recovery Effort	Tuesday, May 22, 2018	MEMA staff visited Washington and Frederick Counties to assist with preliminary damage assessments
Storm 1	Wednesday, May 23, 2018	Local state of emergency lifted for Frederick County
Storm 1	Wednesday, May 23, 2018	Local state of emergency lifted for Washington County
Storm 1	Thursday, May 24, 2018	Frederick County EM, FEMA, and MEMA officials tour Frederick County to view damage done by flood



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Phase	Date	Event
MEMA Recovery Effort	Thursday May 24, 2018	MEMA begins processing the preliminary damage assessments
MEMA Recovery Effort	Friday, May 25, 2018	MEMA appointed a State Disaster Recovery Coordinator (SDRC) to support statewide recovery operations
MEMA Recovery Effort	Friday, May 25, 2018	Recovery Coordination Call for Washington and Frederick Counties
Storm 2	Sunday, May 27, 2018	1440 hours – NWS issues flash flood warning for Baltimore and Howard Counties and Baltimore City
Storm 2	Sunday, May 27, 2018	1640 hours – Howard County EOC activated fully in response to flash flooding in Ellicott City
Storm 2	Sunday, May 27, 2018	1715 hours - MEMA SRAL increased to "Partial" and SEOC staffed
Storm 2	Sunday, May 27, 2018	2100 hours – Governor Larry Hogan signed an Executive Order declaring a state of emergency in Maryland
Storm 2	Monday, May 28, 2018	Roger Carter Center opened as an emergency shelter in Howard County
MEMA Recovery Effort	Monday, May 28, 2018	Statewide Emergency Managers Call Statewide Recovery discussion
MEMA Recovery Effort	Tuesday, May 29, 2018	MEMA Representative deployed to Howard County to relay information on recovery and mitigation efforts
MEMA Recovery Effort	Tuesday, May 29, 2018	Initial debris management call with FEMA, State and local jurisdictions
Storm 2	Tuesday May 29, 2018	Disaster Assistance Center opened at Fifty Plus Center
Storm 2	Tuesday, May 29, 2018	Roger Carter is open to support residents during normal business hours, but no longer being used as a shelter
MEMA Recovery Effort	Tuesday, May 29, 2018	Joint Preliminary Damage Assessments for Ellicott City and Baltimore County requested
Storm 2	Wednesday, May 30, 2018	Howard County - All damage assessments completed
Storm 1	Wednesday, May 30, 2018	Sandy Hook Road closed and only open to emergency personnel. Washington County OEM advised they give MEMA imagery and MEMA personnel.
MEMA Recovery Effort	Wednesday, May 30, 2018	SPG and program staff meeting initiated for Howard County mitigation strategies
MEMA Recovery Effort	Wednesday, May 30, 2018	FEMA Region 3 administrator came to Howard County to meet with MEMA Director Strickland and OEM Director Miller of Howard County



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Phase	Date	Event
MEMA Recovery Effort	Friday, June 1, 2018	1600 hours – MEMA SRAL lowered to “Enhanced”
MEMA Recovery Effort	Monday, June 4, 2018	MEMA finalizes numbers for the preliminary damage assessments in conjunction with FEMA in order to meet the dollar amount threshold
MEMA Recovery Effort	Monday, June 4, 2018	State Recovery Operations Center (SROC) activated
MEMA Recovery Effort	Thursday, June 7, 2018	Recovery Operations Kick-off meeting
Storm 2	Friday, June 8, 2018	Ellicott City Flood DAC has closed. Howard county initiates virtual assistance center
Storm 1	Friday, June 8, 2018	Disaster Assistance Hotlines open for Frederick and Washington County
MEMA Recovery Effort	Wednesday, June 13, 2018	MEMA hosted a Disaster Recovery Workshop for the five affected jurisdictions
MEMA Recovery Effort	Wednesday, June 13, 2018	MEMA sends Presidential Emergency Declaration request letter to Governor
MEMA Recovery Effort	Thursday, June 14, 2018	Governor sends Presidential Emergency Declaration request letter to FEMA Region 3
MEMA Recovery Effort	Thursday, June 14, 2018	1630 hours – Maryland Governors State of Emergency Declaration lifted
MEMA Recovery Effort	Friday, June 15, 2018	FEMA acknowledges Governor’s Presidential Emergency Declaration request letter
Storm 2	Friday, June 15, 2018	1430 hours – MEMA SRAL decreased to “Normal Operations”
MEMA Recovery Effort	Friday, June 15, 2018	Governor Larry Hogan’s request for a Small Business Administration (SBA) Physical Disaster Declaration approved
MEMA Recovery Effort	Monday, June 18, 2018	Howard County closed its EOC and went back to normal operations
MEMA Recovery Effort	Monday, June 25, 2018	Governor Larry Hogan requests Presidential Disaster Declaration for Baltimore and Howard Counties, City of Baltimore following flooding
MEMA Recovery Effort	Monday, July 2, 2018	President Donald J. Trump Approves Maryland Disaster Declaration



Observed Strengths

- Communication went well between Washington County Command Post and MEMA Headquarters, despite cellular service issues.
- SEOC Position Specific Training and SEOC Playbooks were very helpful for new staff filling new positions.
- MEMA staff, SCF representatives, and local agencies were noted to have demonstrated exemplary customer service throughout all phases of these incidents.
- Recovery efforts were considered on the first day of each event, meaning recovery started as soon as response started. This was observed as a significant strength for these operations.
- Elected officials responded to damaged areas quickly, providing visible declarations of support and acknowledgement of needs in all affected jurisdictions.
- Damage assessments were completed in a timely manner in all affected jurisdictions.
- Concentrated efforts were made to “right-size” the event responses, which was helpful in preventing exhaustion of MEMA staff. Additionally, “non-traditional” MEMA staff (i.e., OCCC, GOHS, and IMT members) volunteered and were deployed to assist local jurisdictions during these events, helping to “stretch” MEMA staff capabilities further than in previous events.
- The SEOC Planning Section sent out staffing schedules days in advance whenever possible for increased situational awareness for MEMA staff asked to staff the SEOC.
- The Maryland Statewide Incident Management Team (IMT) worked well supporting operations while deployed to Washington County and then Howard County.
- Local Directors appreciated MEMA seeking feedback relating to scheduling statewide calls to fit in with their schedules and activities.
- Phone conversations for Ellicott City started around 4:30pm on Sunday of the holiday weekend, and the “pseudo-advance team” was able to very rapidly



accomplish a great deal of front-end work before MEMA staff arrived at the SEOC.

- Dedication of MEMA staff was noted as a strength, with many personnel responding immediately on a Sunday night of a holiday weekend.
- MEMA built on previous successes and lessons learned to optimize response to this event, and will need to ensure this continues in future events.
- SEOC Operations Section entered good notes into the WebEOC Incident Log, which enabled a smooth transition for shift changes and overall event tracking.



Observed Areas for Improvement/Suggested Actions

- Maryland Voluntary Organizations Active in Disaster (MDVOAD) coordination/connection with the local jurisdictions was noted to be inconsistent at times.
 - Evaluate ways to streamline integration of MDVOAD capabilities prior to future events.
 - Consider adding a MDVOAD representative to staff the SEOC Resource Section or Liaison Unit to help to coordinate MDVOAD response and assist with tasking.
- MEMA Regional Liaison Officers' vehicle dash-cams do not have recording capabilities.
 - Identify a way to record footage captured could assist with future "windshield surveys."
- Cellular connectivity was identified as a struggle in the Western Region, even with the phone utilities providing assistance. MEMA employees only having Verizon wireless service on work-issued communications devices also compounded the issue.
 - Evaluate ability to utilize Federal/Military assets to assist with this during future events/incidents.
 - SEOC Operations Section should get training on, and be issued, a radio for activations (and training on radio console in the SEOC) – COMML or MJOC responsibility. Additionally, MEMA staff should be issued a "MEMA number" to further standardize communications.
 - Consider diversifying cell and Wi-Fi service providers for field personnel who may be deployed to assist local jurisdictions.
- MEMA Staff accountability improvement was identified as a management priority for future event.
 - Evaluation methods of tracking the status of staff for accountability, including:
 - WebEOC;
 - Smartphone App; and
 - Calendar codes.



- Planning Section email should have access to all MEMA staff calendars.
 - Establish an Accountability Workgroup to assess options moving forward.
- The Planning Section is too isolated in their current location, and lack easy access to collaboration partners, and situational awareness information available in the main room of the SEOC.
 - Consider moving the Planning Section into the Logistics Lounge, which could have the potential for a big return with little impact to Operations.
- Shortcomings in certain key SEOC positions continue to present an operational challenge for extended activations.
 - Develop a Liaison Officer training program.
- MEMA needs to improve the State's ability to collect ALL damages and costs for a disaster.
 - Evaluate what data needed from jurisdictions that are not severely affected.
 - Evaluate how we provide support to counties that are not included in a Declaration.
- A Recovery Workshop was conducted with the supporting State agencies and impacted local jurisdictions.
 - It is recommended that a Mock Recovery Workshop be held for all local jurisdictions prior to future disasters so local jurisdictions will understand the process for requesting recovery support, and will know what resources may be available to them.
- Improvements to the State-level State of Emergency Declaration process need to be made.
 - Develop a more systematic process/guidelines for when a State of Emergency Declaration is or is not needed.
- Rescinding the declared State of Emergency was done without coordination with the MEMA Executive Director.
 - State Agencies should work together to ensure the consistent flow of information, up and down, to ensure a unified response during times of disaster.



- Data collection (and management) continues to be a challenge during SEOC activation.
 - MEMA should explore what access is needed to controlled information and develop the process to request it.
 - Create a state-level document of who owns what data and how to access it.
- Multiple WebEOC events were created for each flooding event during the early phases of the response, creating some early confusion pertaining to resource management, monitoring, and allocation.
 - MEMA should identify a long-term strategy to handle WebEOC event creation, including identifying who has the authority/ability to create incidents in WebEOC.
 - Examine the benefits/drawbacks of using one WebEOC event or two when multiple events are occurring at the same time.
- Howard County had requested Maryland Motor Vehicle Administration (MVA) to come issue new licenses or identification cards at the Disaster Assistance Center (DAC) for those who lost them, but due to new security features, MVA doesn't have the ability to issue these licenses and cards on site.
 - For future (large-scale) disasters, explore options to allow for these cards to be printed on site, even if a temporary card (like SSA can produce), in order to allow individuals to access vital statistics resources.
- Individuals deployed to the DAC were in need of contact information for the Social Security Administration (SSA) 24/7 watch center, but it was not readily available.
 - Ensure that the SSA Watch Center email is maintained with accessibility for future events.
- Despite MEMA's posture as a "non-response" agency, MEMA does have elements (e.g., MD Incident Management Team (IMT), Regional Liaison Officers (RLOs), Public Assistance (PA) Staff) that do serve in some response capabilities.
 - MEMA should have "deployment kits" with proper equipment (e.g., communications, medical, PPE) for these personnel to have packaged to ensure they are ready to deploy to complete their field missions.



- The National Capitol Region (NCR) Incident Management Team (IMT) represents 2 EMAC requests and 3 MEMAC requests when MEMA requests their assistance.
 - MEMA should develop a mutual aid agreement with the NCR IMT or work on an agreement with NCR IMT that removes this from the EMAC domain.
 - Develop awareness training for all MEMA-staff on the IMT's role and capabilities, and what MEMA's role is in terms of managing requests for Maryland's IMT.
- The process of coordinating resources by the MJOC for the local jurisdictions prior to SEOC staff's arrival is cumbersome. The responding RLO was put under pressure to support the local jurisdiction while simultaneously managing the coordination of swift water rescue resources. The DO could not assist in filling initial resource requests because the DO was busy working on up-staffing the SEOC.
 - MEMA should build depth in MEMA's capability for early resource coordination for "no-notice" events.
 - MEMA should develop a plan for how to deal with emergency resource requests that have an immediate need to be fulfilled, and allow the MJOC to have the authority to fulfill these requests in any manner necessary (can always backfill with a MEMAC/EMAC request).
- Having additional personnel pre-identified as available to up-staff the MJOC is critical for emergency situations such as the Ellicott City flood. Minimum MJOC staffing is 2, but it is not possible for 2 people to handle the normal MJOC load while also gathering resources for multiple jurisdictions.
 - Pre-identify a MJOC employee for high-risk weather days who can come in on short notice.
 - Allow for MJOC personnel to work from home to assist with emails/Code Red pages during high--volume situations. Paging is a task that can be done from any computer, and pages can be sent via Google Chat for supervisor approval prior to being sent.
- Initial incident notification (for Ellicott City flooding) came from both another MEMA employee monitoring social media and notifying the MJOC, and then a notification from the NWS that flash flooding was occurring and that the Howard County 911 center had notified Sterling of multiple people trapped in buildings.



- MEMA should look into some ways of getting notifications from local PSAPs via email, messages, applications, or even social media.
- MEMA should look into creating a Twitter account for the Duty Officers to monitor, or using an aggregator to support monitoring of social media.



Closing

Based on initial observations, several strengths and areas for improvement were identified in response to the May 2018 Severe Weather and Flooding events. Over the next several months, the Maryland Emergency Management Agency and State and local partners will work to identify the cause and effects of each area of improvement noted, as well as develop and implement additional corrective actions where necessary.

The Maryland Emergency Management Agency and its local, State, and Federal partners have a strong working relationship across disciplines. This event highlighted the work that has been done to prepare to support preparedness, response, mitigation, and recovery in the event of an emergency in the State of Maryland, while identifying opportunities to continue to improve and strengthen the State's ability to protect the public.



Appendix A: Acronyms

AAR – After-Action Report

DAC – Disaster Assistance Center

DFRS – Division of Fire/Rescue Services

DO – Duty Officer

DOC – Director on Call

EMAC – Emergency Management Assistance Compact

EOC – Emergency Operations Center

FEMA – Federal Emergency Management Agency

FOUO – For Official Use Only

IMT – Incident Management Team

MDVOAD – Maryland Voluntary Organizations Active in Disaster

MEMA – Maryland Emergency Management Agency

MEMAC – Maryland Emergency Management Assistance Compact

MJOC – Maryland Joint Operations Center

MVA – Motor Vehicle Administration

NCR – National Capital Region

NWS – National Weather Service

OEM – Office of Emergency Management

PA – Public Assistance

PSAP – Public Safety Access Point

RLO – Regional Liaison Officer

SCF – State Coordinating Function



SEOC – State Emergency Operations Center

SPG – Senior Policy Group

SRAL – State Response Activation Level

SROC – State Recovery Operations Center

SSA – Social Security Administration

