



FEMA

# Interagency Recovery Coordination

## CASE STUDY – Teaching Note

### Pre-Planning and Community Participation

ELLICOTT CITY, 2016 FLASH FLOODING RECOVERY

**Learning Objective:** Evaluate the impact that pre-disaster planning and community participation had on shaping economic recovery after a dangerous flood in a historic city.

**Keywords:** Recovery, Flood, Major Disaster Declaration, Local Government, Voluntary Organization Active in Disasters (VOAD), Recovery Planning, Economic Recovery, Community Engagement, Leadership, Historical Context / Repetitive Loss, Hazard Mitigation, Staffing

#### Instructor's Introduction

This Teaching Note is intended to prepare an instructor to use this case study in a classroom (live or virtually). The note expands on the lessons learned from this case study, which has been written to help students learn from a real-world disaster recovery experience. Selection of learning objectives, discussion questions, and activities can be customized based on audience and time allowance. The remainder of the guide provides suggestions of key concepts to explore as you teach the case. It is suggested that students read the Background and Challenges sections (Part One), and pause to discuss the scenario, before they move on to read the Actions, Results, and Lessons Learned sections (Part Two).

Ellicott City, a historic town built along the Patapsco River, was inundated by a flash flood in 2016. Over 100 businesses were closed following the flood and the city experienced \$67 million in economic losses. The city has a history of flooding, leaving some business owners without strong confidence in re-investment. This case study describes how local leadership utilized recent training from FEMA to organize the community for the recovery effort.

To become more familiar with this event and pre-disaster recovery planning resources, please review:

- [Ellicott City Flood YouTube Video](#)
- [Howard County: Ellicott City Flooding Website](#)
- [Howard County Stormwater Management Division](#)
- [FEMA Community Recovery Management Toolkit](#)
- [MEMA Recovery Planning Toolkit](#)

#### Student Learning Outcomes:

- Discuss how local governments can prepare/train to recover from known hazards.
- Analyze practices that can help local businesses recovery after experiencing a widespread flooding event.
- Discuss how to anticipate stakeholder needs and prepare for public-facing events.

#### Lessons Learned:

- Howard County emergency management officials were equipped to fast-track recovery efforts through utilizing an existing Recovery Framework and interagency connections they had built through attending a FEMA training.
- The County OEM was prepared to take a strong leadership position during the recovery, ensuring safety of residents and property owners after the flood and helping far more businesses to reopen after the flood than is typically possible.
- Consistent, active engagement with citizens during the recovery process helped solve their concerns and built trust among community members.

## PART ONE

### Background

On July 30, 2016, Ellicott City was caught in a two-hour deluge that dropped six inches of water in two hours. Enough water to fill an eighty-story tall, one-acre building surged out of the tributaries above the town and gushed through the historic district along Main Street, sweeping cars down streets like “napkins in the wind”.

The water affected 104 businesses and 90 homes, wrecking the economic heart of the city. The area suffered \$67.2 million in reduced economic activity, \$1.3 million in reduced revenues for Howard County, and between 151 and 550 jobs lost.



Figure 1. Damage to historic storefronts downtown after the flash flood.  
Source: FOX5 DC.

Ellicott City is an unincorporated town in Howard County, Maryland. Founded in 1772 at the bottom of a valley by Johan and Joseph Ellicott, to harness the energy of the Tiber and Patapsco Rivers to power the brothers’ mills. The terrain of the city includes steep inclines and an abundance of nonporous granite. The town has been prone to flooding since its founding, though most previous floods originated from the Patapsco River at the bottom of the valley spreading into the city.

Prior to the flood, Howard County Office of Emergency Management (OEM) staff had attended a FEMA recovery training for local governments that assisted in formulating and documenting a Recovery Framework for Howard County, identifying 10 Recovery Support Functions (RSFs) crucial to local disaster recovery. OEM had received buy-in from all agencies identified in the Recovery Framework to lead the 10 RSFs prior to this event.

### Challenges

Though Maryland Governor Hogan declared a statewide emergency just days after the event, the President did not sign a major disaster declaration for Howard County until 48 days later. In the uncertain interim, Howard County executives and OEM staff began planning recovery efforts on their own.

The traumatic flash flooding event, combined with the towns’ history of susceptibility to flooding from the Patapsco River, left many residents and business owners without strong confidence in re-investment. Around half of downtown businesses didn’t have flood insurance, and were wary of reopening if they were likely to experience another flood. Without public support, Howard County would find it difficult to rebuild and revitalize Main Street.

### Part One Discussion Activities

#### Discussion Questions:

1. Howard County did not receive a federal disaster declaration until nearly 40 days after the flooding event in July. How can communities that cannot necessarily depend on financial assistance from the federal government manage their recovery process proactively?

#### Activity 1: Analyze Leadership Messaging

**Duration:** 10-15 minutes

**Setup:** Pull up the [Ellicott City Flood YouTube Video](#)

**Instructions:** Watch the video with the class and discuss your impressions of the Howard County executive’s messaging of the event’s recovery. If short on time, watch video until timestamp 1:13, then skip to 4:30.

## PART TWO

### Actions



Figure 2. Howard County leaders survey the damage to historic Ellicott City.

Within 24 hours of the flood, the county restricted access to damaged areas, began stabilization work, and brought in an Incident Management Team (IMT). Lori Hodges, a Director of Emergency Management in Colorado, was a crucial member of the IMT. Hodges had previously experienced similar flooding in her home county, and her insights allowed Howard County leadership to anticipate and begin problem-solving previously unforeseen challenges.

Within 48 hours of the flood, the County Executive conducted a Town Hall meeting, bringing impacted residents and businesses together with state and local representatives. Within days, the Recovery Framework was approved for use, and soon afterwards, Howard County hired a Recovery Manager to coordinate the recovery mission.

Expediting economic recovery was a key priority. A major contribution from the Howard County Economic Development Authority (HCEDA) was to conduct “micro-missions,” escorting affected residents into the disaster area in four-wheel utility vehicles. As a direct result of these micro-missions, HCEDA determined that SBA loans would be insufficient and, in some cases, unsuited, to address recovery needs for the Ellicott City business owners and instead qualified individuals for gap-loans from HCEDA. HCEDA also assisted with flood insurance questions and helped struggling business owners rework their business models. Finally, to jumpstart businesses reopening, Howard County waived \$38,000 in fees and expedited 203 permits.

The Department of Planning and Zoning (DPZ) held four community meetings, hosted in the fall and winter of 2016. These meetings addressed the perception that development worsened flooding, explained that hazard mitigation would take time and resources, and provided a forum for feedback. In total, DPZ received 223 ideas from the community for consideration in their Master Planning process. The project ideas were compiled, categorized and published in a report on recommendations to the County by the Community Advisory Group (CAG), which acted as a bridge between the County government and the community in the recovery process. The project ideas will inform the development of the Master Plan.

Howard County also worked to identify volunteer organizations and community leaders like Pastor Adam Feldman. Feldman led the volunteer effort in Ellicott City and helped create One EC, a local nonprofit started in response to the flood. One EC acted as a local VOAD by working directly with Howard County and coordinating all other volunteer organizations. The IRS fast-tracked One EC’s 501(c)3 nonprofit application because of the organization’s focus on recovery.

#### Key Partners

- Howard County
- One EC Recovery Project
- Maryland Emergency Management Agency (MEMA)
- Maryland Voluntary Organizations Active in Disaster (Maryland VOAD)

National experts estimated eight to 10 years for Howard County to reach full recovery. This estimate and the six guiding principles influenced Howard County’s decision-making towards favorable outcomes. For example, workers requested “gawkers” be kept away from the disaster zone, as they hampered work and presented safety concerns. To solve this issue, Howard County produced a weekly video showing residents the ongoing repair work in the affected area.

### Results

The county eventually received Public Assistance (PA) and Hazard Mitigation (HM) funds, as well as a Small Business Administration (SBA) emergency loan qualification. Due to both the proactive leadership of Howard County, and the assistance it received from the Incident Management Team (IMT) and state and federal partners, approximately 95

percent of the affected businesses in Ellicott City reopened by November 25, 2017, “Small Business Saturday.” The county also opened the Millworks Business Resource Center, a business incubator and one-stop-shop for business-related recovery questions in Historic Ellicott City that served as a source of continued outreach for Howard County residents.

The micro-missions deployed immediately after the disaster, allowed citizens to see their properties for to assess initial damages, retrieve portable valuables, and eventually allowed property owners to survey the damage with contractors. Over the first 45 days of recovery, HCEDA burned through 4,000 extra man-hours, but also successfully established trust with the community.

The recovery efforts also created a new network of support that Howard County can rely on in future disasters. One EC is transitioning to move beyond flood recovery and seeks to provide assistance that bridges the gap between governmental resources and community needs.

On May 27, 2018, Ellicott City suffered another severe flood event, killing one individual, damaging many shops and businesses for the second time in less than two years. As of August 2018, the County proposed a five-year strategy to mitigate flooding in Ellicott City, including a core component that would address the most immediate life safety threat on the town’s lower Main Street within one year. The community will be engaged through the Master Plan process to provide input into the design and use of a proposed new open space to be established in the floodplain in the area.

## Lessons Learned

- Involving residents in the recovery process from the beginning and promoting consistent, visible action tied to clear communication is essential to build trust in the recovery process.
- It is important to manage expectations for critical issues, such as funding decisions and work completion deadlines, to maintain trust.
- Identifying appropriate communication channels to reach residents, such as distributing flyers door-to-door, can increase community buy-in.
- Building pre-disaster partnerships among government agencies and other organizations now will help expedite coordination efforts during post-disaster recovery.
- Development of a pre-disaster recovery plan with an established structure of predefined roles and actions can allow for quick response after a disaster and a more organized and expeditious recovery.

## Part Two Discussion Activities

### Discussion Questions:

1. How do you think the Town Hall and community meetings impacted residents’ expectations for recovery and interest in mitigating future flood hazards?
2. Howard County OEM was able to benefit from the assistance of emergency managers who had recently handled flooding events similar to the Ellicott City flood, like Lori Hodges from Colorado. How could your community benefit from external resources or personnel, and what type of expertise would you want to call-in after experiencing an expected hazard?
3. How can communities coordinate volunteers in an effective way? What are some challenges usually experienced while trying to manage volunteer efforts?
4. What were the replicable keys to success that Howard County employed to help businesses reopen?

## Activity 2 (Optional): Analyzing Stakeholder Concerns

**Duration:** 40-45 minutes

**Setup:** The class will collectively prepare for a Town Hall meeting taking place roughly six months into the recovery process. Assign roles to each student or small group (depending on class size), either randomly or by relevance. More than one person can be assigned to a role, and you may add roles to this activity based on the audience (i.e. FCO, CPCB, IMT, etc.).

**Activity Roles:** Howard County Office of Emergency Management staff member, Howard County Economic Development Authority staff member, Howard County Executive (meeting facilitator), Department of Planning and Zoning staff member, Pastor Adam Feldman, Ellicott City shopper, Ellicott City long-time resident, Ellicott City impacted business owner, FEMA Public Assistance staff member, FEMA Hazard Mitigation staff member, and FEMA Community Planning and Capacity Building staff member.

**Instructions:** Give individuals 5 minutes to write down a few notes on the recovery issues they would be experiencing or interested in. What would your priorities be for the individual/group you are representing? Students may even prepare a short statement or question that their stakeholder would likely read at the Town Hall. When ready, have the County Executive lead a meeting where each role has an opportunity to share their perspective, or have a few volunteers share the priorities for their role. If the audience includes State/Local executives, have them discuss how they can best anticipate stakeholder concerns and prepare for public meetings. Use this as an opportunity to build participants' skillset in preparing to respond to tough questions and gain a perspective on the recovery process that they may not have had before.

**Discussion:** Save approximately 10 minutes to discuss key takeaways.

1. Were there any conflicts between the needs and priorities of different individuals or groups? What steps might local, state, or federal officials take to address this?
2. What advice do participants have for officials in these challenging public-facing situations?
3. Give the participants time to reflect and share insights from this exercise.

## Activity 3 (Optional): Collaborating to Support Recovery Priorities

**Duration:** 20-30 minutes

**Setup:** Students will work in small groups of 3-5 individuals.

**Instructions:** Have the students discuss the roles that state and federal partners played in this recovery effort. They may use the [National Disaster Recovery Framework](#) as a reference, if needed.

**Discussion:** After about 10 minutes, pull the group together and ask volunteers to share some findings, and consider the following questions.

1. What partners, within the roles outlined in the National Disaster Recovery Framework (NDRF), could help support each of the Howard County's six Guiding Principles for Recovery? (Healing, Economy, Stability, Rebuilding, Preservation, and Environment)
2. How can a local government lead the recovery effort in a way that helps federal agencies with different tasks/responsibilities collaborate to achieve the long-term outcomes that the local government sees as success?
3. How could these roles, partnerships, and working relationships change if a community were impacted by another storm or disaster while still in the midst of the recovery process? How could you, in a leadership role, respond if your town flooded again before you had finished rebuilding from the last flood?

## Follow up with the FEMA Guidance Development Office

The Guidance Development Office (GDO) develops and distributes FEMA's Interagency Recovery Coordination (IRC) case studies. Our team would appreciate your feedback on these case studies and accompanying teaching notes. Please let us know how you have used this case study for a learning experience and your thoughts on what went well or could have been improved. To get in contact with our team, please email [FEMA-RECOVERY-ICD-GDO@fema.dhs.gov](mailto:FEMA-RECOVERY-ICD-GDO@fema.dhs.gov). Thank you.