

AFTER-ACTION REPORT



2013
Flood

City of Boulder Flood Recovery

Sept. 9, 2015

After-Action Report

CITY OF BOULDER FLOOD RECOVERY

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INTRODUCTION

In order to become more resilient, we must build upon best practices and lessons learned from our experiences. This After-Action Report was compiled by utilizing information from all program areas involved in the city's flood recovery efforts through group debriefs and by utilizing information published by the City of Boulder. Information was consolidated to depict the overarching themes observed in the data gathering process. This information will be used to establish plans and procedures to improve response and recovery efforts for future events.

The Event

From September 8 through 16, 2013, the Boulder region experienced unprecedented rainfall that caused significant flooding, loss of life and widespread damage. As a result of the flooding, Boulder County (including the City of Boulder) was designated a "Major Disaster" by the Federal Emergency Management Agency (FEMA)¹. The Boulder community immediately came together to support one another during the recovery efforts. Although many were able to quickly get back to normal routines, others will be dealing with impacts from the flood for months and years.

This event was caused by a 1,000-year rainfall, which brought up to 16 inches of rain to Boulder in eight days. In addition, the rainfall caused 25- to 100-year flooding along all 15 major creeks and the 23 irrigation ditches, which had overwhelmed the city's storm drainage and sanitary sewer systems. Additional information, including analysis of the flooding by creek, is located at bouldercolorado.gov/flood/september-2013-flood.

After the flood, the city surveyed property owners and residents to assess the damage caused by the flood. The results showed that the primary cause of damage included major creek flooding, groundwater infiltration, local drainage flooding, and flood drains and/or wastewater backups. The extent of the damages throughout the City of Boulder included:

- Roadways covered in debris – 20 percent
- Roadways damaged – 1 percent
- Pathways damaged – 15 percent
- City parks significantly damaged – 34 percent
- Open space trails damaged – 100 percent
- Households damaged – 14 percent
- Private property damages - \$200 million
- Municipal property damages - \$28 million

The extent of the damages resulted in extensive coordination by the City of Boulder to conduct recovery operations.

- The city's wastewater treatment facility maintained operations throughout the flood, but the wastewater collection system surcharged, resulting in sewer backups throughout some areas of the city.
- 6,562 housing units were damaged (14 percent of the city's total housing stock).
- 100 businesses were impacted by flooding.

¹ The City of Boulder was included in the May-June 2015 Presidential Disaster Declaration (DR-4229) for the rain, flooding and landslides that occurred during this timeframe, resulting in damage to city infrastructure. The city has requested Public Assistance from FEMA for this 2015 disaster.

- 46,000 cubic yards of sediment was removed from creeks.
- 11,893 tons of trash was collected.
- 85 creek structures were repaired.
- Volunteers worked 3,800 hours.
- Over 300 flood-related are projects planned, underway or completed.

RECOVERY BEST PRACTICES & LESSONS LEARNED

Following the flood, the City of Boulder established priorities to provide adequate care and support to residents that were impacted and to focus on the work of reconstruction and rebuilding and the City Council adopted key objectives for the near-term recovery and long-term resiliency. The flood has caused harm, but has also created an opportunity: to think critically about our future, and to work together in support of long-term community sustainability and resiliency.

City of Boulder Key Objectives for Near-term Recovery and Long-term Resiliency

1. **Help people get assistance.** Facilitate access to individual assistance for affected homeowners, renters and businesses to support their recovery from flood impacts and strengthen long-term resilience.
2. **Restore and enhance our infrastructure.** Invest in projects to restore services and to rebuild and enhance infrastructure, as appropriate, in the interests of public health and safety, community quality of life, and long-term resilience.
3. **Assist business recovery.** Work with the Boulder business community and key partners to connect affected businesses with resources, recover quickly from flood impacts, and support long-term economic vitality.
4. **Pursue and focus resources to support recovery efforts.** Work in partnership with volunteers, governmental and other agencies to maximize financial resources and efficiencies for recovery.
5. **Learn together and plan for the future.** Engage the Boulder community in assessing neighborhood impacts, refining and rethinking community design options, prioritizing actions and opportunities that mitigate hazards before rebuilding and support long-term community resilience and sustainability. In doing so, we build a city both greater and more beautiful than we were before.

The City of Boulder defined *flood recovery* as the process of establishing a community-based, post-disaster vision to focus on plans and projects to address damages sustained from the flood and to aid in the community's recovery from the disaster. The city's sustainability framework and resilience principles were applied to maximize long-term recovery efforts and enable the community to effectively respond and adapt to future challenges. The best practices and lessons learned from each recovery team have been highlighted within their respective sections. Some of the common themes that emerged are highlighted below.

Best Practices

Staff came together with the common mindset to be supportive and understanding for the community during this time of need. Regardless of their daily job duties representatives from all city departments supported one another in the recovery efforts. This was most evident in the immediate surge to help with debris clean-up operations.

Establishing the flood recovery team was essential to the success of the community. The ever-changing dynamics of the flood recovery, coupled with the increased need to break down pre-existing departmental silos, required a new coordination structure. Hiring dedicated staff and bringing together cross-departmental teams proved valuable in supporting recovery operations. Forming a team and assigning tasks with the culture and values of the city in mind allowed this group to succeed.

Water and wastewater service remained operational. The city's water treatment and wastewater treatment systems remained operational throughout the flood, although sewer backups impacted hundreds of homes and

localized areas temporarily lost service. Dedicated and empowered staff worked hard to ensure the continued functionality of the water and wastewater systems during and after the flood.

Lessons Learned

A pre-disaster recovery plan would be helpful to quickly meet the changing needs of the community following a disaster. Although the city was able to establish a recovery structure, a lot of staff time was needed to develop a successful model in the midst of ongoing recovery operations. Pre-planning for the next event will help the city transition from response to recovery and for staff to better understand their roles of how to support recovery operations.

Set clear expectations for residents. A better understanding of the responsibilities that the city will take, along with clearly communicating the known and unknown information, will encourage residents to help each other and take responsibility for their own recovery and rebuilding. One example is providing a more clear delineation of what types of damage would be considered flood-related.

Provide additional mental health support and referral assistance for staff and on-site mental health professionals. Better and more direct mental health support and referral assistance should be provided to help build resilience among the city's workforce, address secondary trauma among staff directly supporting impacted residents, and provide better service for impacted residents.

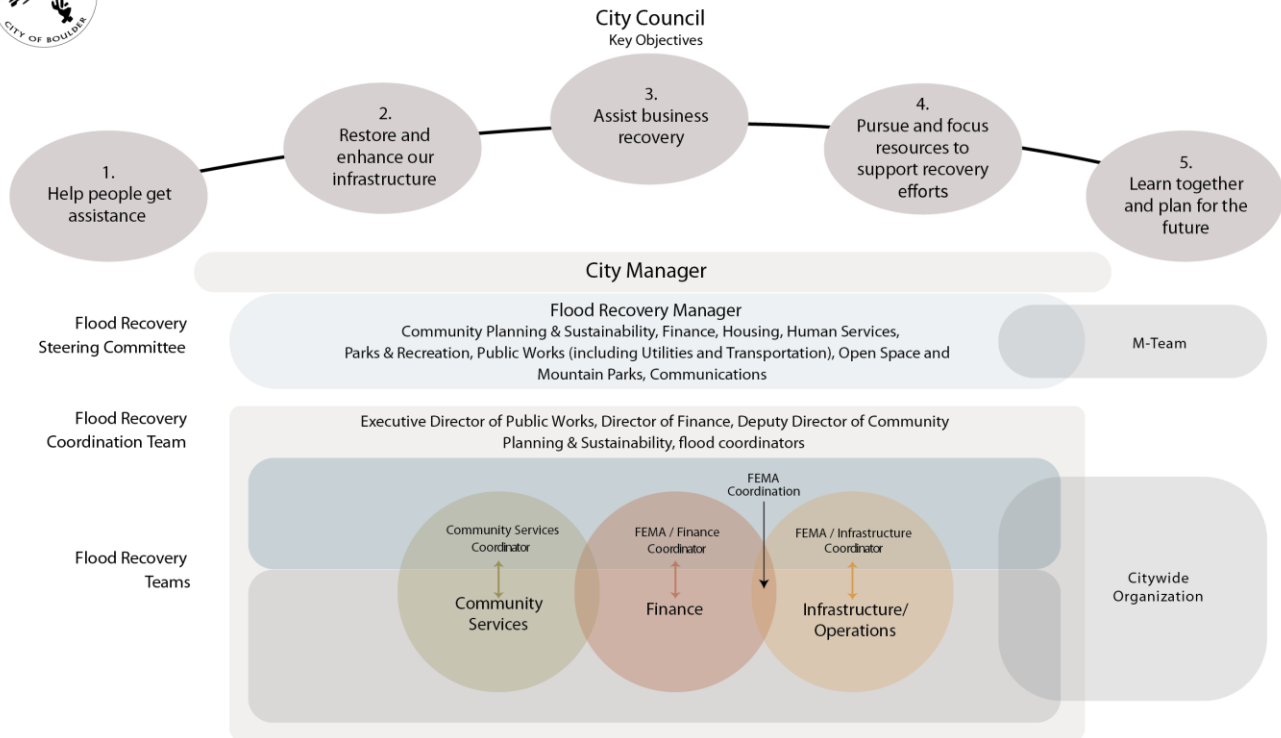
Policy & Coordination

Changing dynamics and a need for cross-department collaboration and coordination required a new approach to conducting operations and supporting impacted residents. For this reason, the City of Boulder established a flood recovery structure that was designed to best meet the objectives established by the City Council.



City of Boulder Flood Recovery Structure*

05/15/2014



*This diagram shows the city's internal long-term flood recovery structure. It is important to note that while not shown on this diagram, long-term flood recovery efforts interrelate to emergency preparedness and response, and resilience planning efforts.

Best Practices

The establishment of a citywide recovery structure and the hiring of flood recovery coordinators helped to centralize resources and was instrumental towards recovery. Establishing a clear delegation of authority for the coordinators allowed each team to meet challenges as they emerged.

Establishing the recovery objectives early in the recovery was essential. Immediately working with the City Council to establish clear recovery objectives provided a framework from which the flood recovery structure could be developed and operated, and allowed recovery progress to be clearly reported to the council and community.

Quickly taking action on regulatory and fee waivers assisted the community. The city quickly passed interim and long-term regulatory changes and fee waivers to assist with the community's recovery. Consideration should be given to creating mechanisms within the city code to implement such actions administratively when a disaster is declared.

Lessons Learned

The flood recovery structure that was used to coordinate city efforts should be implemented immediately after a major disaster. In the transition from response to recovery, overarching coordination was needed to help maintain a best practices operating structure and to establish clear roles and responsibilities. Quickly applying a model similar to the flood recovery structure would assist in providing support and ensuring effective communication across the organization. The overlap between initial response and long-term recovery was chaotic, and having a more organized structure of transition would improve the recovery process.

A centralized information system would help to maintain a best practices operating structure. The ever-changing dynamics of the recovery, from available grants to accessible services, and data coordination from damage assessment, case management and mental health needs require a centralized tracking mechanism to maintain shared information between departments and other community partners.

Having in-house capabilities or quickly hiring staff who have experience coordinating with federal and state agencies (such as FEMA, FHWA, and CDOT) would help to maximize reimbursements. The complex nature of the federal reimbursement process requires a pre-developed understanding. Experienced personnel can help to maximize reimbursements while also limiting duplication of efforts. While consultants can be helpful in assisting in the process, having dedicated staff with the knowledge is preferable.

Finance

By utilizing reserve funds, the city was able to cover immediate emergency response and recovery expenditures. Since the flood event was declared a “Major Disaster” by FEMA, opportunities were available for reimbursement and supplemental funding to support recovery operations. However, because financial support was largely provided on a reimbursement basis, the city’s reserves were a critical asset, allowing the city to perform flood recovery duties without disruption to core community services and other city priorities. In the late 1990s, the reserves in the city’s general fund were close to 3 percent. The city made growth of reserves a priority, and by 2004, general fund reserves were 10 percent. In October 2012, the City Council adopted a reserve target of 15 percent for the General Fund. The 2015 budget included replenishing the General Fund reserves to 14 percent in 2015 and building reserves to 16 percent in 2016 and beyond.

The large costs of the flood response and recovery, combined with coordination with state and federal agencies, required city officials to manage city cash flow and track expenditures, maximize reimbursement potential, identify and submit applications for various grant opportunities (i.e., CDBG-DR, CDPHE, FEMA, NRCS, UDFCD), streamline and centralize the reimbursement process for city departments, and work with the insurance provider for reimbursement of city assets. To date, the city has received:

- Received \$2.7 million from insurance proceeds
- Awarded \$1.895 million grant from Colorado Department of Public Health and the Environment (CDPHE)
- Awarded \$445,000 from the Colorado Water Conservation Board
- Awarded \$75,000 from the U.S. Fish and Wildlife Service
- Received \$5.6 million in FEMA reimbursements as of August 2015
- Community Development Block Grant – Disaster Relief (CDBG-DR) funds awarded as of August 2015:
 - Housing rehabilitation (through Boulder County) - \$1 million
 - Infrastructure - \$500,000
 - Planning - \$75,000
 - Staffing (OSMP) - \$88,000
- Received \$83,000 from FEMA 404 Hazard Mitigation Grants

In addition, the City of Boulder is in the process of pursuing additional CDBG-DR Round 2 and 3 funds. The support of over 3,853 eligible volunteer hours provided the city with value of \$60,000 to be applied towards reimbursements.

Best Practices

The city had reserve funds available to handle the immediate cash needs for flood response and recovery. The city’s foresight to have reserve funds available in case of an emergency and timely decision to utilize those funds helped to streamline rebuilding and reconstruction.

Pre-established relationships helped to expedite repair and rebuilding. By utilizing existing relationships and continuing service agreements that had been previously developed with contractors, consultants and insurance providers, the city was able to quickly begin reconstruction.

A centralized and dedicated finance team was vital in maximizing reimbursements and establishing a citywide process for coordination. Developing a common process for finance across all departments leveraged resources from the city and supported tracking and reimbursements.

Lessons Learned

Be cautious of the recommendations from external agencies and consultants. Although many helpful and hardworking representatives from FEMA and consulting companies provided valuable support to the city, the continuous and frequent changeover in staff, combined with different interpretations of procedures, led to conflicting direction (see procurement lesson learned below).

Continually engage all financial analysts and managers within the city throughout the recovery process. Different departments within the city had varying levels of engagement in the flood response and recovery. Establishing a clear process for coordination will help to ensure a coordinated effort.

Establish a common timekeeping system across all departments to ensure consistency in tracking the staff time that was worked. The city's timekeeping system (i.e., work orders that link equipment to staff time) was well-adapted to get all necessary documentation during the immediate response for some departments, but many departments were not used to tracking time at the level of detail required by FEMA.

Establish a common expense tracking process and set up projects in the financial system that align with FEMA projects. The city was slow to establish a tracking system that utilized the financial system's ability to track expenses by project. Setting this up earlier will result in more efficient reimbursement process and limit the risk of being audited.

Carefully review procurement rules for granting agencies (FEMA, FHWA, etc.) and work with the Purchasing Department to ensure that city practices reflect federal requirements. During flood recovery, city staff did not completely follow FEMA guidelines for purchases under \$50,000 and use of Disadvantaged Business Enterprises (small, minority-owned and women-owned businesses). This has resulted in a slower pace of reimbursements and risk that some expenditures may be considered ineligible for reimbursement by FEMA.

Public Infrastructure & Debris Removal

More than 300 identified projects across the community required repairs, restoration, replacement and mitigation work. After initial identification and assessment of the damages, the Infrastructure Team set out to restore services and rebuild and enhance infrastructure, remove sediment and debris deposited throughout the community, and to work with FEMA and FHWA to get the maximum reimbursement for infrastructure recovery work.

As of August 2015, 79 percent of citywide recovery projects were completed.

- Completed flood recovery projects include:
 - 103 – OSMP
 - 45 – Parks and Recreation
 - 62 – Utilities
 - 27 – Transportation
 - 27 – Facilities

- Partially completed recovery projects include:
 - 18 – OSMP
 - 0 – Parks and Recreation
 - 1 – Utilities
 - 4 – Transportation
 - 6 – Facilities

- Projects in planning/design include:
 - 33 – OSMP
 - 2 – Parks and Recreation
 - 0 – Utilities
 - 1 – Facilities

Best Practices

Essential infrastructure services remained operational throughout the flood. For the most part, the city's core infrastructure (water, wastewater, streets, bridges, etc.) functioned throughout the storm event. The flood mitigation efforts that were conducted prior to the flood helped to keep infrastructure and services available for community members. Localized interruption and significant wastewater system backups impacted some areas of the city.

Volunteers and volunteer groups proved invaluable in helping the community to recover. Cleanup efforts throughout the community were supported by volunteers, which proved an invaluable asset to the city's and community's recovery process.

Previous flood mitigation efforts were essential in minimizing damages throughout the city. The city's previous investments in flood mitigation and hazard reduction resulted in reduced losses in the community.

Lessons Learned

Maintain one point-of-contact with FEMA among each Recovery Support Function to ensure consistency.

Having a single point-of-contact with FEMA within each functional area would help to provide a consistent message when representatives within FEMA change and would help to identify conflicting advice.

Establish a process for determining when it makes sense to seek FEMA reimbursement on large-scale projects and when to move forward with normal city operations.

Due to the complex nature of seeking FEMA reimbursements, it would be beneficial to establish guidance for which projects should seek reimbursement and which should utilize city funding. This would help to utilize staff time more efficiently.

Develop consistent documentation procedures for contractors conducting recovery work. Documentation was difficult at times, especially as the contractors were changing.

Permitting & Private Damage Assessment

The City of Boulder conducted initial damage assessments of more than 22,000 private residential and commercial structures on September 23 and 24, 2013, which identified:

- 58 structures as being damaged (yellow tag); and
- 12 structures as being dangerous (red tag).

Once damage assessment operations were complete, the city initiated an effort to assist with the community's recovery by simplifying flood-related permitting processes and waiving some permitting fees. Along with establishing a streamlined flood recovery permit process, the Permitting Team also staffed the Disaster Assistance Center (DAC) to provide permitting and rebuilding assistance and acted as an information conduit for community members.

Best Practices

Having city staff, regional partners, consultants and contractors immediately deployed in the field to document damages provided an initial picture of damages and also helped to provide community members with important information. Community members were able to see city staff evaluating damage and providing information to those impacted, which helped provide a common mindset for understanding the needs that emerged from the flood.

For one week, the Planning and Development Services Center was only opened to residents impacted by the flood, which allowed the city to focus on the immediate needs of the community. By targeting the needs of flood-impacted residents, the city was able to quickly support rebuilding efforts. In addition, city staff operated a satellite planning and permit information office at the Disaster Assistance Center to speak with impacted residents.

Daily morning update meetings and written scripts for field staff helped ensure a consistent message. Management conducted daily morning update meetings and written scripts for staff to utilize, which was essential for maintaining a common operating picture.

The city waived the need to obtain permits for drywall or insulation and focused on life safety requirements. Modifying some code requirements and waiving permit fees for residents that were rebuilding helped to ease their recovery. Streamlining the contractor licensing process also assisted in the recovery process.

Lessons Learned

Complete preliminary damage assessments as soon as it is safe. In order to gain a general understanding of the damages and impacts to the community, it is recommended that an initial/preliminary damage assessment be conducted shortly after the response is over.

Provide damage assessment teams with information about all response and recovery efforts to distribute to residents. Have a script and handouts for staff in the field to utilize when talking to residents and businesses to ensure consistency of information.

Determine how best to gain awareness of the extent of damages throughout the city. Eighteen months after the disaster, new reports of uninhabitable buildings were being reported that were not included in the

initial damage assessment. It is recommended that a plan be developed that incorporates multiple mechanisms for determining damages throughout the city.

Establish a process for sharing damage information across departments and with Boulder County. The need for information sharing throughout multiple departments and across jurisdictions is essential in maintaining a best practices operating structure, and to be able to provide better assistance to residents. For example, being able to document properties that needed follow-up from the Human Services or the Health Department while conducting the initial damage assessment would have been helpful.

Private Debris Removal

The flood event caused a tremendous amount of debris to flow into the city, with more than 3,779 tons of debris hauled from private property. Private debris removal consisted of the immediate setup of 11 public dumpster locations throughout the community for disposal of damaged materials and curbside debris removal, which was coordinated with Western Disposal, a local trash hauler. When dumpster locations were quickly overwhelmed, it was clear that curbside pickup was necessary.

- Community dumpster locations were available from September 14 through September 22, 2013.
- Curbside pickups were divided into four zones and operated from the end of September until the end of November 2013.

These debris collection efforts were provided to assist community members with removal of flood-related debris from private property. In order for the city to receive Federal Emergency Management Agency (FEMA) assistance for the cost of debris removal, curbside pickup requirements included:

- Storm-related debris only;
- Debris should NOT be placed in plastic trash bags;
- If debris is already in plastic bags, the bags must be opened to allow those picking up the trash to verify they contain only storm debris; and
- Household trash should not be placed with flood debris.

Best Practices

The partnership with Western Disposal was vital to the success of the clean-up efforts. Partnering with Western Disposal for initial community dumpster sites provided additional resources to clean up the community, including coordinating with its subcontractors to assist with heavy machinery to clear community sites. The additional coordination with Western Disposal and the Center for Hard to Recycle Materials (CHaRM) was used to accept electronic waste with no charge to residents.

Utilizing staff from all departments at the waste drop-off sites proved essential in providing adequate support. Staffing the community drop-off sites required an enormous amount of staff time and resources, which was done by the support of all departments in the city.

Hiring a monitoring company to assist with curbside debris removal helped support operations. In order to provide estimates on the amount of debris that was being collected, which was used for FEMA reimbursements, a contractor was utilized that was able to work alongside debris removal teams.

Lessons Learned

Immediately provide clear and concise communication to the public about debris collection locations and what debris is acceptable. Messaging to residents should explain what types of debris will be collected or can be dropped off and how to dispose of electronic waste, recyclables and contaminated materials. With the transition from community drop-off sites to curbside collection, the instructions and requirements changed. A decision on whether to provide community drop-off sites or curbside collection should be made as early as possible.

Coordinate with the county to determine private debris removal sites near the city limits. Shared community drop-off sites with Boulder County caused confusion during the payment and reimbursement process. Additional coordination will help mitigate future issues.

Establish a process for maintaining security at each community site to control illegal dumping. The community drop-off sites were designed to support residents impacted by the flood. Security should be available to prevent dumping of unauthorized trash and debris.

Housing, Human Services and Case Management

The City of Boulder, Boulder County, and the Long-term Flood Recovery Group of Boulder County coordinated to provide many services to residents that were impacted by the flood in order to help them get direct assistance from the city and to facilitate access to other individual assistance programs. This was accomplished by:

- Supporting displaced and impacted residents by stabilizing living situations and meeting basic health and human service needs through assistance with finding housing, providing rental assistance, and coordinating with FEMA on the placement of temporary housing units;
- Coordinating planning and resource deployment with community partners and resources;
- Partnering with Habitat for Humanity to implement and fund housing rehabilitation;
- Monitoring the changing needs for assistance, identifying gaps and connecting people to available resources;
- Performing ongoing outreach and communications to impacted residents and businesses about the flood repair, remediation, and construction needed to ensure the health and safety of buildings and occupants; and
- Providing \$90,000 in funding in 2014-2015 to support case management for more than 300 City of Boulder households through the Long-term Flood Recovery Group (LTFRG).

Additionally, the city participated in the establishment and operation of the Disaster Assistance Center to provide immediate support to impacted residents after the flood; served on the countywide Long-Term Flood Recovery Group (LTFRG) that provided case management services to over 300 households with unmet needs; created a partnership with Housing Helpers to match residents with potential landlords for short-term housing needs; coordinated more than 30 flood-related annexations; and obtained a \$1 million grant to support construction and connection of private properties to city water and sewer services.

Best Practices

Coordinated with nonprofits, Boulder County and FEMA to establish a Disaster Assistance Center (DAC) to support impacted residents. Having one location where residents could receive information about all of the services available to help in their recovery helped them to navigate after the disaster. Having a city presence at the DAC to listen to residents and provide city support was very helpful.

Continual coordination with case managers to identify emerging needs in the community. New needs for city residents continued to emerge after the disaster. Ongoing coordination with case managers and city resources helped to provide assistance for those cases.

Partnering with Boulder County and the LTFRG to provide human services assistance to impacted city residents. The coordination with Boulder County and LTFRG to provide support to impacted city residents was cited as an essential aspect of the recovery.

Lessons Learned

Coordinate unmet needs assessments across and between agencies to limit residents' need to provide the same information to different agencies and organizations. Residents were asked by many organizations (i.e. FEMA, World Renew, Red Cross, Boulder County, City of Boulder, etc.) to provide information on their circumstances in order to receive assistance. A coordinated approach and pre-planning on how to best address unmet needs will help to limit the burden on those impacted.

Understanding that emergencies start and end locally, leverage incoming support while empowering local leadership to establish processes and procedures that build long-term capacity. After a large-scale disaster, many subject-matter experts and support staff provide their services to help locals rebuild and recover. The Boulder community encourages community service and skilled volunteerism, continually self-empowering to address needs. A long-term strategy and predetermined structure for case management services and funding is recommended.

Determine how to leverage partnerships to provide support as soon as possible to those in need. Coordinate with groups that are bringing in donations and services to support disaster victims (such as the Long-Term Flood Recovery Group) and quickly match resources with the greatest need. Developing local leadership and pre-existing support systems, while also harnessing the expertise and resources of supporting entities through an organization such as a Voluntary Organizations Active in Disasters (VOAD) group is recommended.

Neighborhood Outreach

The changing environment that is inherent in the recovery from a disaster requires ongoing communication the community. After the 2013 flood, the City of Boulder set out to communicate with residents about the flood repair, remediation and reconstruction that was needed to ensure the health and safety of buildings and occupants. The city also facilitated conversations during neighborhood meetings to help residents better understand the scope of the flood event. These objectives were accomplished by:

- Completing seven fall 2013 outreach meetings;
- Launching an online crowdsourcing website that for residents to map and describe their flood damages;
- Sending a flood damage survey to more 8,000 residents, with a focus on the hardest-hit neighborhoods;
- Completing two spring 2014 outreach meetings;
- Conducting door-to-door flood information and flood safety canvassing to approximately 2,000 households in partnership with the Center for Resource Conservation;
- Creating a single point of contact for resident inquiries to the city through a designated phone number, email address and online Inquire Boulder topic; and
- Distributing flood information through the “Friday Folders” to grades K-5 in all schools within the Boulder Valley School District.

Best Practices

Held community meetings to provide a dialog with residents that improved communication and understanding. Providing information to residents about the services that were available helped to manage expectations, while seeking information from residents about damages helped to verify damage assessment data that was collected and gave the city a better understanding of the needs in the community. Utilizing the flood inundation mapping as a direct feedback tool was well received, and proved to be a constructive way to talk about flood impacts and damage.

Created a single point of contact for resident inquiry to the city through a designated phone number, email address, and online website and mobile app Inquire Boulder topic. The need to navigate through the city to find available resources was mitigated by having one central place where all inquiries were funneled, which helped ease the burden on those impacted by ensuring their issue was efficiently routed to the appropriate resources for response.

Established a document with “Frequently Asked Questions” that was utilized by staff and residents. A centralized document that was developed to help answer questions was essential in providing a common operating picture on the services available throughout the city.

Lessons Learned

Streamline the process for providing information to the public and establish a mechanism to track messaging. Staff invested significant time into developing resources and information from scratch to provide to the community. Much of this could have been pre-developed to be utilized following a disaster. Taking advantage of the work that was done and modifying it for use in future disasters will limit the time that is needed in the development of these resources after a disaster.

Better coordination with Boulder County to provide common messaging to the public. Residents hear information from both the City of Boulder and Boulder County. Leveraging relationships among Public

Information Officers (PIOs) during the recovery efforts that are already in place during response can support the development of common messaging. In addition, joint neighborhood meetings will limit confusion among residents.

Business Assistance

The 2013 flood caused economic impacts to the City of Boulder. In order to help support the long-term economic vitality of the community, the city worked with businesses and key partners to connect affected businesses with resources to recover quickly from flood impacts. Once an assessment of damages to businesses was conducted, the City of Boulder coordinated resources and events to support the recovery of businesses, which included:

- Communicating information regarding the Recover Colorado Business Grant and Loan Program;
- Co-hosted a business flood recovery workshop with the Small Business Development Center on April 16, 2014;
- Sponsored the Business Preparedness Summit on October 17, 2014; and
- Coordinated calls for assistance from businesses within the City of Boulder with the Boulder Chamber and Small Business Development Center.

The resilience of the business community, combined with the support from the city, helped get the majority of impacted businesses open within three weeks of the flood.

Best Practices

Coordinating with the Boulder Economic Council and the Small Business Development Center provided comprehensive information about the impacts to businesses. By utilizing pre-established relationships and established networks of businesses, the city was able to quickly assess the impacts to businesses and to understand the hardships they were facing. The majority of businesses in the city were not necessarily damaged physically by the flood, but were dealing with flood-impacted employees and/or supplies that couldn't be delivered to them.

Assisted out-of-state contractors with moving through the city's licensing process as quickly as possible so that they could assist our community with recovery. The city streamlined the licensing process and supported out-of-state contractors that could provide essential recovery services in the community to help expedite support.

Lessons Learned

Messaging to the community regarding the availability of access to businesses in Boulder could have been more clear and messaged earlier. Establish a mechanism to let residents know what businesses are opened so they can better support their own recovery.

Partner with local associations and groups to better communicate with businesses before, during and after a disaster. Many of the businesses in Boulder are home-based, which made it difficult to understand the impacts. A targeted outreach to build partnerships will help to better communicate with those entities after a disaster.

Collaborate with regional partners to better communicate the availability of grants and support that are available to impacted businesses. Regional collaboration to better understand and message the availability of funding to impacted businesses can help in the economic recovery of the community. Many grants were available from numerous entities. The city partnering with other jurisdictions could help businesses navigate through the process.