

2013 Colorado Floods

A Decade of Recovery and Building Resilience

September 2023



2013 Colorado Floods: A Decade of Recovery and Building Resilience
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Cover Photo: The community of Jamestown was left isolated amid road washouts during the 2013 Colorado floods. Photo: FEMA/Steve Zumwalt

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Overview

The 2013 Colorado Floods were the result of a series of torrential rains, starting on September 8. The initial rainfall was moderate, with the worst coming on September 11-12, quickly causing widespread flash flooding. The statewide one-day precipitation record was set in Fort Carson with 11.85 inches on September 12. The city of Boulder also set daily and monthly precipitation records, in both cases nearly doubling the previous records. This weather pattern occurred over much of the Front Range and well into the plains of eastern Colorado.

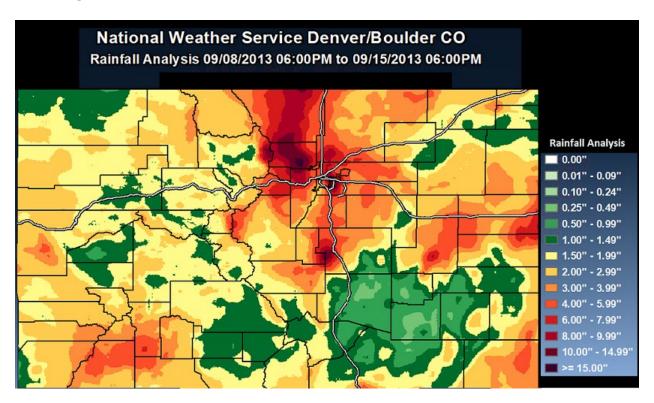
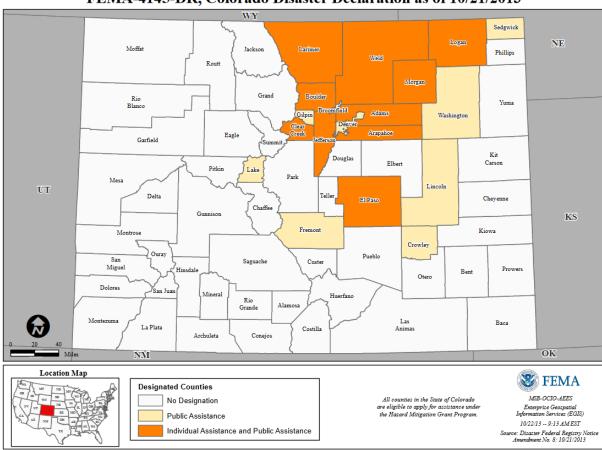


Figure 1: Colorado rainfall totals for the seven-day period starting Sept 8, 2013.

National Weather Service Graphic

This deluge caused the Big Thompson, St. Vrain and South Platte rivers, as well as their tributaries, to breach their banks and carve out new channels throughout three major watersheds in the state. The flooding and resulting mudslides left multiple mountain communities isolated and required a massive aerial evacuation. The disaster impacted Colorado communities north to south, from Fort Collins to Manitou Springs, and east to west, from Sterling to Estes Park.

With widespread flooding starting in earnest late on September 11, initially a federal emergency declaration (EM-3365) was made the following day, providing federal assistance to support immediate response activities. As the full scope of the flooding became evident, President Obama issued a major disaster declaration (DR-4145) on September 14, providing the full complement of federal disaster assistance programs. Ultimately, this declaration would include 18 counties.



FEMA-4145-DR, Colorado Disaster Declaration as of 10/21/2013

Figure 2: DR-4145, counties included in the federal disaster declaration. FEMA Graphic

FEMA directed multiple federal agencies to provide support to Colorado as part of the response and recovery efforts. A summary of those assignments is provided in the table below.

Table 1: Federal Mission Assignments for the 2013 Colorado Flooding Response and Recovery Support

Agency	Task(s)	Total funding
Civil Air Patrol	 provide aircraft and aerial support for response and recovery operations 	\$18,530.43
Dept. of Agriculture	 coordinate emergency support function 11 (agriculture and natural resources) provide technical assistance for long term recovery 	\$17,492.78
Dept. Of Commerce	 coordinate economic Recovery Support Function (RSF) 	\$230,144.72

Agency	Task(s)	Total funding
Dept. Of Defense	 provide emergency preparedness liaisons and Air Operations Planner 	\$24,028.54
Dept. of Energy	 coordinate emergency support function (ESF) 12 technical assistance support 	\$3,757.50
Dept. of Health and Human Services	coordinate ESF 8 (health and medical)	\$317.09
Dept. of Housing and Urban Development	coordinate housing RSFprovide staff to answer housing related questions at disaster recovery centers	\$75,016.52
Dept. of the Interior	 provide aircraft to support response and recovery operations coordinate natural and cultural resources RSF 	\$224,425.69
Dept. of Transportation	coordinate ESF 1 (Transportation)	\$1,709.07
Environmental Protection Agency	 coordinate ESF 10 (hazardous materials) provide technical assistance for debris removal on private property and disposal of orphaned containers, and conduct aerial assessment of areas impacted by oil and hazardous materials provide technical assistance for long term community recovery 	\$1,813,095.77
Federal Aviation Administration	 provide charter aircraft for response and recovery efforts 	\$41,683.02
Federal Highways Administration	 provide technical assistance on road issues for long term recovery efforts 	\$50,000.00
General Services Administration	 provide real estate contracting assistance to identify locations for disaster response and recovery operational facilities 	\$64,966.02
National Geospatial- Intelligence Agency	 provide GIS analysts to support urban search and rescue efforts 	\$3,081.60
Tennessee Valley Authority	 provide staff with engineer expertise in water/wastewater, electrical, road/bridge, and structural to support the public assistance program 	\$600,969.50
U.S. Army Corps of Engineers	 coordinate ESF 3 (infrastructure) and the infrastructure RSF 	\$2,454,545.48

Agency	Task(s)	Total funding
	 provide technical experts to support the public assistance program, response operations, and public messaging 	
	 provide technical expertise in assessing drinking water supplies and water distribution and treatment systems 	
U.S. Forest Service	 provide incident management teams to support response operations support aerial infrastructure damage assessments 	\$3,421,208.23
Total		\$9,044,971.96



Figure 3: FEMA Urban Search and Rescue Nebraska Task Force 1 was one of five federal teams deployed to support Colorado search and evacuation efforts. FEMA Photo/Michael Rieger

Assistance to Individuals

1. Immediate Response

With mass evacuations taking place from isolated communities, shelters were set up by September 12. The American Red Cross managed shelter operations, with locations established in multiple counties. All shelters had closed by September 30. Voluntary organizations provided meals, beverages, and cleaning supplies in flooded communities, facilitating individual recovery efforts.

FEMA's Transitional Sheltering Assistance (TSA) program was activated on September 21. This program allowed individuals and households to stay in hotels as an interim form of housing while looking for rental housing or prior to returning to their damaged homes. The number of households in hotels peaked at 598 on October 17 and the program ended operations on December 15.



Figure 4: Voluntary agencies provided food and basic supplies to flood-stricken communities. FEMA Photo

2. Financial Assistance

FEMA's Individual Assistance program was made available to residents of 11 Colorado counties. Statewide, 28,052 individuals or households registered with FEMA for disaster assistance. In total, more than \$61.2 million was provided; \$56.3 million for rental assistance or home repair, and \$4.9 million for other basic needs.

Table 2: Summary of FEMA Individual Assistance funding for DR-4145 (2013 Colorado Floods)

County	Registrations	Housing Assistance	Other Needs Assistance	FEMA Individual Assistance Total
Adams	980	\$1,111,230.81	\$136,456.55	\$1,247,687.36
Arapahoe	2,702	\$3,277,705.88	\$295,249.91	\$3,572,955.79
Boulder	15,515	\$32,739,570.87	\$2,304,370.68	\$35,043,941.55
Clear Creek	180	\$244,110.69	\$2,673.54	\$246,784.23
El Paso	1,445	\$1,578,068.39	\$194,261.29	\$1,772,329.68
Fremont	99	\$59,351.99	\$1,950.40	\$61,302.39
Jefferson	908	\$1,558,010.80	\$38,441.77	\$1,596,452.57
Larimer	3,861	\$6,491,538.70	\$393,620.61	\$6,885,159.31
Logan	311	\$485,883.67	\$42,875.09	\$528,758.76
Morgan	56	\$82,381.40	\$8,292.05	\$90,673.45
Weld	1,995	\$8,658,442.32	\$1,500,880.80	\$10,159,323.12
Total	28,052	\$56,286,295.52	\$4,919,072.69	\$61,205,368.21



Figure 5: Disaster Recovery Centers provided a location where individuals could meet in person with disaster recovery specialists and discuss their individual situations. FEMA Photo

Federal/state Disaster Recovery Centers were established in 21 communities across the state. These facilities provided a place where individuals could meet directly with disaster recovery specialists from a variety of federal and state agencies. Statewide, individuals made a total of 22,314 visits to the centers.

3. Temporary Housing

To address the severe housing shortage and lack of available rental properties in selected communities, FEMA activated its direct housing program. Under this effort, lots were rented at five manufactured housing communities in Boulder, Larimer and Weld counties. A total of 54 manufactured homes were used to house 47 households. The first home was occupied on November 27, 2013, and the final home was vacated on March 14, 2015.



Figure 6: An example of a FEMA manufactured home used in Colorado. This home had a ramp added to make it accessible for a wheelchair user. FEMA Photo

4. Voluntary Agency Support and Case Management

The disaster sparked a high level of interest in volunteers willing to help. Members of the Colorado Voluntary Agencies Active in Disasters (VOAD) were joined by more than 50 national, state and local voluntary and faith-based organizations. More than 28,500 volunteers donated roughly 275,000 hours during the early relief.

FEMA voluntary agency liaisons worked with grassroots organizations and relief networks which were involved in relief and long-term recovery. Volunteer agencies provided survivors shelter, food, water, snacks, muck-out, debris removal, home repairs, and home construction.

Four Long Term Recovery Groups helped survivors make repairs and rebuilds to their homes in Boulder, Larimer, Weld and El Paso counties.

The volunteer hours also were of financial benefit to local jurisdictions as they had the potential to be credited toward the jurisdictions' local match for FEMA reimbursement under the Public Assistance program when pertaining to eligible activities.



Figure 7: Volunteers from Texas gather for a farewell dinner following their volunteer mission in Jamestown. Southern Baptist Disaster Relief Photo

4.1. Disaster Case Management Program

In early October 2013, FEMA conducted a Disaster Case Management Assessment that found a need for a long-term Disaster Case Management Program (DCMP). On March 3, 2014, the state of Colorado was awarded a grant in the amount of \$2,667,963.26 for a 24-month period from the date of declaration. Under this state-administered program, case managers met one-on-one with survivors to assess unmet disaster-related needs that had not been covered by other resources.

Sub-grants were awarded to Catholic Charities of the Archdiocese of Denver (CCD) and Lutheran Family Services Rocky Mountains (LFSRM) to activate case management throughout the affected counties. Operations in every area were underway by June 2014.

The DCMP teams worked side by side with volunteer case managers and non-governmental organization (NGO) case managers from several faith-based organizations. Construction and volunteer coordinators also worked together with the DCMP teams in the case management centers.

During nearly two years of program operations, the DCMP team created 1,050 case files. Nearly 40% of the cases were in Boulder County and about 28% were in Weld County. Larimer County and the Balance of State group accounted for approximately 16% each. At the program's end, 217 cases or about 20% of the total remained opened. All were transferred to case managers at the state's two sub-grantees and Boulder County for continuing service.

In Boulder and Weld Counties, large Hispanic populations were affected by the flooding. To address the cultural differences and needs of this community, bilingual case managers in the two counties worked together to share resources, best practices, and lessons learned.

The state of Colorado's DCMP was the first ever in FEMA Region 8. It was successful in connecting thousands of survivors with millions of dollars in public and private assistance. By partnering with government agencies at every level, local Long Term Recovery Groups, nonprofits, and other NGOs, the DCMP team was able to provide Colorado residents a path to recovery.

Quotes of Hope: A Collection of Encouraging Words from Disaster Case Management Program Operations

"Thank you for helping us move out of our old house which was making me and my whole family sick. I like our house and we are so happy. Thank you for our beds so we are no longer sleeping on the floor. Thank everyone who helped to make our life."

-Child of Client

"This client cannot believe what has been done on their behalf and wept tears of joy. He has called almost every day to say thank you and express his gratitude for the "above and beyond anything he could have imagined on their behalf and the generous blessing".

-Case Manager

"...thank you and the Catholic Charities for your compassion and your ability to make an immediate impact. This is beyond belief. Words are inadequate. Please know that I and my family are so appreciative and thankful."

-DCMP Client

"So many people have shared so much of themselves during these past 7 months. Yet if it weren't for the adversity that hit last year, I never would have encountered these living Angels. And you and others have been so kind to bless me. It is the advantage of adversity that brought about the peace and serenity after the flood that touches my heart now. Thank you for your enormous part."

-DCMP Client

Assistance to Communities

FEMA's Public Assistance program provides funding assistance to repair or replace damaged public infrastructure and reimburse communities for emergency response and recovery actions.

Table 3: Summary of FEMA Public Assistance funding for DR-4145 (2013 Colorado Floods)

County	Number Of Applicants	Number Of Projects	Total Funding Obligated
Adams	17	53	\$5,053,597.20
Arapahoe	7	25	\$2,403,314.25
Boulder	91	349	\$186,044,924.26
Broomfield	1	1	\$399,649.32
Clear Creek	3	14	\$986,316.30
Crowley	1	3	\$285,714.42
Denver	4	20	\$2,151,295.47
El Paso	9	109	\$7,382,185.24
Fremont	7	28	\$760,107.36
Gilpin	2	8	\$594,197.24
Jefferson	25	77	\$8,696,637.46
Lake	2	4	\$110,911.84
Larimer	51	242	\$83,842,705.55
Lincoln	1	2	\$70,299.93
Logan	11	19	\$590,042.78
Morgan	16	29	\$2,861,271.26
Sedgwick	4	4	\$20,617.81
Statewide*	21	96	\$32,681,159.00
Washington	1	3	\$277,783.15
Weld	37	127	\$20,304,746.35
Total	311	1213	\$355,517,476.19

^{*} Statewide incudes funding to state agencies and applicants that cover multiple counties

1. Repairs in Hard Hit Mountain Communities

Two communities that were especially hard hit by the flooding were Lyons and Jamestown in Boulder County. The flooding washed away roads, bridges, and damaged other critical public infrastructure, leaving the communities isolated and with a lengthy road to recovery. These communities had extensive debris removal efforts and emergency road restoration as well as longer term infrastructure repairs that have lasted years.



Figure 8: Restoring McConnel Drive was one of the largest Public Assistance projects in Lyons. FEMA Photo

Public Assistance Program Highlights for Lyons and Jamestown

Lyons

Consolidated Fixed Cost Estimate Projects– provided funding for repairs and/or restoration at a number of public parks, the waste-water treatment plant, and several roads and bridges in the community

Total Obligated \$ 16,123,013.25

Park Street Access – restoration of Park Street bridge over the St Vrain as well as the north and south approaches to the bridge

Total Obligated \$ 3,046,847.59

McConnell Drive – repair of roadways and restoration of bridge at intersection of McConnell Drive and US 35

Total Obligated \$ 1,910,913.23

Jamestown

Street and Bridge Repairs – provide engineer support to develop scopes of work for 5 road projects and two bridges along Main St., 12th St., Andersen Hill St, Andersen Ave. and Ward St.

Total Obligated \$ 4,411,530.26

County Road 94 – repair of multiple culvert blowouts and road washouts on this road which is the sole maintained access road to the community

Total Obligated \$ 3,017,472.38

Water Distribution System – replace damaged water mains, fire hydrants and other critical water distribution infrastructure within the community

Total Obligated \$ 1,296,419.18

2. Public Assistance Alternative Procedures

The Sandy Recovery Improvement Act legislation passed following Hurricane Sandy created several changes to FEMA's Public Assistance program that gave FEMA greater flexibility in implementation and in supporting communities. These changes were collectively referred to as Public Assistance Alternative Procedures (PAAP). The Colorado floods were the first large event in FEMA Region 8 following implementation of these procedures and several communities were the beneficiaries.



Figure 9: Due to program changes authorized in the Sandy Recovery Improvement Act, Lyons was able to receive additional funding for debris removal efforts. FEMA Photo

Debris removal is a covered category of work under the Public Assistance program. There were multiple PAAP changes that were utilized in Colorado. One change was to provide a greater federal

cost share for work completed in the early days following the event - up to 85 percent (the traditional federal cost share for work is 75 percent). Another change was made that allowed applicants to receive funding for regular time worked by staff, rather than only overtime hours as had been the policy in the past.

Four applicants – Adams County, the South Adams County Water and Sanitation District, Aurora and Lyons were all able to take advantage of different facets of this program, with the four projects totaling more than \$1.35 million.

A second PAAP initiative was to allow applicants to receive funding for fixed cost estimates for timely completion of permanent work. The program traditionally only provided funding to applicants for large projects (in excess of approximately \$125,000) as reimbursement upon completion of the work. By accepting the cost estimate option, applicants were limited to the total funding of the estimate, but if there were underruns, they could use the excess funds for specific disaster recovery related work. Four applicants chose this cost estimate process for specific projects.

Table 4: Summary of Applicants with Fixed Cost Estimate Projects

Applicant	Funding	Summary of Work Completed
Longmont	\$22,152,485.63	Restoration of facilities at Izaak Walton Park Greenway and Pond, Dickens Farm Park, Sandstone Ranch Park and Kanemoto Park
Lyons	\$16,123,013.25	Restoration of facilitate at 13 locations around the community including public parks, the wastewater treatment plant, and several roads and bridges in the community
Loveland	\$10,727,430.48	Restoration of multiple facilities at Viestenz-Smith Mountain Park
Big Elk Meadows Association	\$1,365,391.54	Restoration of the Mirror Lake, Willow, Rainbow and Sunset Dams

3. Streamlined Environmental Reviews

Another component of the Sandy Recovery Improvement Act (Section 6: Unified Federal Review) mandated the establishment of an "...expedited and unified interagency review process to ensure compliance with environmental and historic requirements under Federal law relating to disaster recovery projects, in order to expedite the recovery process, consistent with applicable law".

The unified federal review process allows agencies to collaborate on projects that might otherwise need to undergo environmental reviews or permitting processes through multiple agencies. The joint review allows communities that are completing recovery projects receiving federal funds to receive approval on projects more quickly, and ultimately receive funding sooner. The 2013 Colorado floods

provided the first opportunity for FEMA Region 8 to implement this unified federal review process on a large scale.

FEMA initiated the Disaster Unified Review Team (DURT) as a multi-partner think tank tasked to identify streamlining measures for environmental and historic resource preservation regulatory requirements applicable to disaster response and recovery. DURT meetings brought together 43 partners during three initial meetings, each representing unique state, local and federal functions of disaster recovery.

Goals of the DURT were to:

- Complete an interagency Programmatic Agreement or Memorandum of Understanding for accomplishing Unified Federal Review mandate
- Continue to increase transparency of natural and cultural regulatory review by making inroads between partners and sharing resources
- Reach clear understanding of legal responsibilities surrounding the implementation of Executive
 Orders (EO) 11988 and 11990 applicable to disaster recovery and response
- Establish a common definition, or harmonize various codified agency definitions, of what constitutes an "emergency" for use in regulatory reviews
- Harmonization across agencies of National Environmental Policy Act (NEPA) categorical exclusions to ensure consistency of regulatory review
- Identify new partners, resources and forums applicable to Unified Federal Review

Successes of the Disaster Unified Review Team during the 2013 Colorado Floods

GIS Information Sharing

• FEMA hosted an online GeoPlatform, called the DURT Viewer, as a secure utility for the sharing of geospatial data among DURT partners. Contributing agencies shared geospatial information which may be useful to other partners in jointly reviewing projects.

Collaborate Review Processes

- Programmatic Agreement with the Colorado State Historic Preservation Office (SHPO) established appendix of allowances wherein FEMA is exempted from National Historic Preservation Act (NHPA) Section 106 consultations for specific types of activities.
- Emergency Consultation with U.S. Fish and Wildlife (USFWS) for Endangered Species Act (ESA) allowed for after the fact documentation of impacts to endangered species and habitat for emergency projects providing immediate protection of life or property.
- FEMA and Federal Highway Administration (FHWA) Programmatic Agreement on Roads and Bridges addressed common impacts of roadway and bridge construction outlining project types with the potential to adversely affect environmental and/or historic resources and project types that are not likely to adversely affect these resources.



Figure 10: Environmental reviews and securing necessary permits are important requirements for any projects occurring in floodplains or wildlife habitat. Only limited exceptions are made for emergency actions. The Colorado DURT team sought to simply these efforts, facilitating community recovery. FEMA Photo

Building Resilience

1. Hazard Mitigation Grant Program Awards

FEMA's Hazard Mitigation Grant Program provides financial assistance to the state following a major disaster declaration, with the funding based on total disaster program expenditures. Following the 2013 floods, Colorado received more than \$57 million for the program. The state works with communities to develop projects that can mitigate the impacts of future disasters. Projects were funded in communities across the state to deal with a variety of hazards, from flooding to landslides to wildfires. Some grants also provided funds to local communities to update their hazard mitigation plans.



Figure 11: FEMA and Colorado DHSEM leadership survey a detention pond constructed in Colorado Springs to collect floodwaters and debris, protecting downstream properties. The project received \$6.5 million in Hazard Mitigation Grant Program funding from FEMA.

FEMA Photo

Table 5: List of DR-4145 Hazard Mitigation Grant Program Projects

Grant Recipient	Project Type	Funding
Archuleta County	Wildfire Fuels Reduction	\$1,559.00
Aurora	Local Multi-hazard Mitigation Plan Development	\$58,194.00
Boulder	Installation of Generators - Boulder Fleet Services	\$35,610.00
Boulder	Installation of Generators - Boulder Wildland Fire Station	\$34,275.00
Boulder County	Installation of Generators - Boulder County	\$422,418.22
Boulder County	Acquisition of Properties at Flood Risk	\$6,848,369.47
Boulder County	Wildfire Fuels Reduction	\$600,646.83
Boulder County	Wildfire Fuels Reduction	\$216,414.61
Boulder County	Wildfire Fuels Reduction	\$1,100,381.25
Boulder County	Floodplain Building Code Enhancement	\$93,410.00
Brighton	Outdoor Warning System Installation	\$196,898.00
Chaffee County	Local Multi-hazard Mitigation Plan Development	\$37,500.00
Clear Creek County	Local Multi-hazard Mitigation Plan Development	\$71,426.00
Clear Creek County	Wildfire Fuels Reduction	\$96,459.00
Colorado Division of Homeland Security and Emergency Management	Program Management Costs	\$3,141,835.00
Colorado Springs	Local Multi-hazard Mitigation Plan Development	\$58,351.00
Colorado Springs	Erosion Control on Manitou Incline	\$747,623.00
Colorado Springs	Garden of the Gods Detention Pond	\$6,537,639.11
Colorado Springs	Acquisition of Properties at Landslide Risk	\$3,909,694.00
Colorado Springs	Acquisition of Properties at Flood or Landslide Risk	\$6,239,917.29
Colorado Springs	Acquisition of Properties at Landslide Risk	\$245,349.76
Colorado State University	Academic Study on Weather and Climate Monitoring in Colorado	\$64,504.00
Custer County	Local Multi-hazard Mitigation Plan Development	\$37,500.00

Grant Recipient	Project Type	Funding
Denver County	Local Multi-hazard Mitigation Plan Development	\$44,640.00
Denver County	Sanderson Gulch Flood Control Project	\$5,290,603.00
Denver County	Installation of Generators - Denver FD and PD	\$188,510.00
Elbert County	Local Multi-hazard Mitigation Plan Development	\$41,453.00
Evans	Installation of Generator at Fire Station	\$101,437.00
Evans	Installation of Generator at Public Works	\$47,682.00
Fort Collins	Acquisition of Properties at Flood Risk	\$181,414.62
Fort Collins	Storm Sewer Mitigation	\$717,528.95
Fort Collins Stormwater	Flood Warning System Enhancements	\$107,175.00
Fourmile Fire Protection District	Installation of Generators - Poorman Fire Station	\$11,100.00
Fourmile Fire Protection District	Wildfire Fuels Reduction	\$263,128.62
Glenwood Springs	lenwood Springs Wildfire Fuels Reduction	
Greeley	Installation of Stream Gauges for Flood Warning	\$17,538.43
Huerfano County	Wildfire Fuels Reduction	\$46,942.39
Jamestown	Installation of Stream Gauges for Flood Warning	\$78,138.60
Jamestown	Elevation of Property at Flood Risk	\$25,824.74
Jamestown	Acquisition of Properties at Flood Risk	\$1,174,395.51
Jamestown	Culvert Installation for Stormwater Management	\$1,206,016.09
Jefferson County	Local Multi-hazard Mitigation Plan Development	\$83,970.00
Jefferson County	Installation of Generators for Fire Station 1	\$10,871.00
Jefferson County	Installation of Generators for Fire Station 2	\$18,155.00
Larimer County	Local Multi-hazard Mitigation Plan Development	\$75,000.00
Larimer County	Wildfire Fuels Reduction	\$133,023.79
Larimer County	Stream Monitoring System for Enhanced Flood Warning	\$203,152.10
Las Animas County	Local Multi-hazard Mitigation Plan Development	\$42,433.00

Grant Recipient	Project Type	Funding
Longmont	St. Vrain Creek Mitigation Channel Project	\$1,388,068.48
Loveland	Installation of Generator at Chilson Rec Center	\$351,583.59
Lyons	Acquisition of Properties at Flood Risk	\$3,227,263.59
Lyons	Elevation of Property at Flood Risk	\$38,614.11
Mesa County	Flood Control-Mesa County Bosley Wash Reservoir A	\$2,057,669.34
Mesa County	Flood Control-Mesa County Orchard Mesa Pond A	\$716,295.17
Milliken	Acquisition of Properties at Flood Risk	\$342,546.73
Milliken	Storm Sewer Mitigation	\$2,009,854.47
Montezuma County	Local Multi-hazard Mitigation Plan Development	\$34,636.00
Nederland	Installation of Generators - Nederland Evacuation Center	\$58,660.00
Southwest Washington County Fire Protection District	Installation of Generators - Southwest Washington County Fire	\$9,261.00
Statewide	Mitigation Technical Assistance	\$768,750.00
Statewide	State Multi-hazard Mitigation Plan Development	\$1,338,035.75
Sterling	Installation of Generators - Sterling Service Center	\$47,546.95
Sunshine Fire Protection District	Installation of Generators - Sunshine Fire Station 1	\$11,217.00
Sunshine Fire Protection District	Installation of Generators - Sunshine Fire Station 2	\$12,106.00
Thornton	Local Multi-hazard Mitigation Plan Development	\$63,724.00
University of Colorado	Pedestrian Bridge Replacement	\$2,690,509.96
University of Colorado	Flood Reduction Projects	\$720,693.60
Washington County	Wildfire Fuels Reduction	\$1,073.74
Weld County	Local Multi-hazard Mitigation Plan Development	\$77,221.00
Weld County	Installation of Generators - Dacono	\$23,739.00
Weld County	Installation of Generators - Ft. Lupton	\$23,739.00
Weld County	Stream Gauge Warning Systems	\$79,366.50

Grant Recipient	Project Type	Funding
Weld County	Installation of Generators - Weld County Southwest Service Center	\$72,826.00
Weld County	Public Education Outreach Materials	\$29,342.93
Total		\$57,121,301.29

2. Long-Term Recovery

To support state long-term recovery efforts, recovery support functions (RSF) were activated under the National Disaster Recovery Framework. The RSF coordinators were able to work with the state and local communities to identify needs in five key support areas and provide coordinated support from across the federal government. These RSFs worked closely with both the Colorado Department of Homeland Security and Emergency Management and the Department of Local Affairs initially and included the Resiliency and Recovery Office once established by Governor Hickenlooper in 2014.

Recovery Support Functions Activated to Support the Colorado Flood Recovery

- Community Planning and Capacity Building coordinating agency: FEMA
- Economic coordinating agency: Department of Commerce
- Housing coordinating agency: Department of Housing and Urban Development
- Infrastructure coordinating agency: U.S. Army Corps of Engineers
- Natural and Cultural Resources coordinating agency: Department of the Interior

One of the primary focal areas for the RSFs was supporting comprehensive watershed coalitions, ensuring recovery efforts were a collaborative effort including communities and stakeholders from an entire watershed and including support to significant community engagement and capacity building work in each watershed planning area. This effort was done in close collaboration with the Colorado Water Conservation Board and the Colorado Department of Local Affairs.

A total of 10 coalitions were engaged in the flood areas, eight newly established and two pre-existing. These coalitions brought together stakeholders to identify recovery projects needed in the various respective communities and then developed watershed-wide plans that addressed the needs of each community and stakeholder. FEMA provide technical assistance for this planning effort and agencies U.S. Army Corps of Engineers and the Natural Resources Conversation Service provided guidance on developing proposed projects. The watershed plans were then combined into a statewide plan that prioritized projects and guided statewide recovery efforts.

A more detailed case study on the Watershed Coalition effort is available at https://www.fema.gov/case-study/colorado-watershed-coalitions.



Figure 12: Community meetings allowed Lyons residents an opportunity to voice their priorities for the community's recovery. FEMA Photo/John Mills

Planning Technical Assistance for the Town of Lyons.

Lyons, Colorado was one of the most highly impacted communities after flash flooding occurred across northern Colorado, in the fall of 2013. The community's housing stock was substantially affected, along with the commercial area, parks and the lifeblood of the community, the St. Vrain River. The confluence of North and South St. Vrain Creeks is located on the western edge of the town. The flood waters in those two watersheds tore through residential neighborhoods destroying or significantly impacting more than 25 percent of Lyons' housing stock including the most affordable housing in the community. The flood destroyed water, sewer, power and transportation infrastructure essentially stranding community members in 6 different "islands." It would take 2-3 months to build the temporary infrastructure and stitch Lyons back together.

The community had existing planning capacity as evidenced by their recently updated comprehensive plan. However, the disaster presented a significant need to undertake postevent capacity building to support development of a long-term recovery plan that would review and update existing strategies and develop recovery priorities and actions.

The planning and capacity-building process included extensive stakeholder involvement and necessarily included and integrated items in the city's comprehensive plan to respond to the needs, opportunities, and changes brought by the flood.

In addition, with assistance from the regional Community Planning and Capacity Building (CPCB) Field Coordinators and the Department of Local Affairs, members of the American Planning Association (APA) Community Planning Assistance Team (CPAT) also assisted the town of Lyons by providing recommendations and policy options for recovery and redevelopment focused on identifying hazard mitigation policy options that complement the town's recovery plan. The final APA report included visualizations and design work from students at University of Colorado Denver.

Finally, the CPCB RSF team supported the state's Department of Local Affairs with development of Colorado's first Resilience Framework (2015). The Framework would contribute to the foundation required for the creation of the Colorado Resilience Office (CRO). While initially grant funded, the pilot CRO was written into state statute and made a formal and permanent office in 2018.

The Lyons Recovery Action Plan can be viewed at https://www.townoflyons.com/301/Community-Plans

The Colorado Resilience Office and the Colorado Resilience Framework can be viewed at https://www.coresiliency.com/colorado-resiliency-framework

Summary

Recovery from major disasters is a lengthy process, and the 2013 Colorado floods were no different. The flooding left lasting change throughout the Front Range and eastern Colorado, not only to communities, but even to streams and rivers themselves.

To date, FEMA has provided more than \$470 million in funding to Colorado through various recovery and mitigation programs. Staff continue to work with local communities, finalizing funding for projects still to be competed and documented. Hundreds of millions more in additional funding was provided by other agencies including SBA disaster assistance loans and HUD Community Development Grant-DR awards.

The floods are a clear example of the concept of whole community recovery. This means the collaboration of all levels of government, in partnership with the private sector and non-profit organizations. Government funding is a critical component to the recovery but marrying those dollars with local resources and a clear vision for the future provides an exponential benefit and greatly expands the capabilities to build back better, stronger, and safer.



Figure 13: A sign on display at the Lyons Five Year Recovery Celebration, highlighting work done in Bohn Park, which received funding from FEMA. FEMA Photo

Appendix A: By the Numbers

Table 5: 2013 Colorado Floods - By the Numbers

Number	Fact
1	Joint Field Office established to coordinate recovery efforts (located in Centennial)
5	FEMA Urban Search and Rescue teams deployed to support rescue and evacuation efforts
11	Number of counties designated for FEMA's Individual Assistance Program
18	Number of counties designated for FEMA's Public Assistance Program
21	Communities that hosted federal/state Disaster Recovery Centers
27	Hardware stores or home improvement stores where FEMA provided mitigation and rebuilding information
47	Households living in 54 manufactured homes at peak of FEMA's housing operation
74	Statewide projects funded by the Hazard Mitigation Grant Program
1,213	FEMA Public Assistance projects
1,752	National Flood Insurance policy claims paid
4646	Individuals who received mitigation and rebuilding guidance at Disaster Recovery Centers or hardware/home improvement stores.
22,314	Individual visits to a Disaster Recovery Center
28,052	Registrations for assistance from the 11 Individual Assistance counties
\$4,919,072	Aid provided from FEMA's Other Needs Assistance Program
\$56,286,296	Repair and rental Aid provide from FEMA's Housing Assistance Program
\$57,121,301	Funding provided for Hazard Mitigation Grant Program projects statewide
\$61,205,368	Total FEMA Assistance grants under the Individual Assistance Program
\$69,757,056	Total amount of claims paid out by the National Flood Insurance Program
\$355,517,476	Public Assistance** funding awarded statewide
\$473,844,145	Total Assistance to Colorado from FEMA Programs

^{*}PA funding still being provided for ongoing projects



Figure 14: FEMA staff set up in hardware stores and home improvement centers in flooded communities to provide information to more than 4,000 Colorado residents on how to rebuild stronger and safer. FEMA Photo

Appendix B: Voluntary Agencies Supporting Response and Recovery

The following is a non-exhaustive list of voluntary agencies which supported response and recovery.

- Adventist Community Services Disaster Response
- American Red Cross
- Colorado Mounted Rangers
- Church World Services
- Colorado Baptist Disaster Relief
- Colorado FriendShip
- Colorado Volunteer Center Network
- Community Food Share
- Convoy of Hope
- Food Bank of Larimer County
- Habitat for Humanity
- Hope Restored
- Islamic Circle of North America Disaster Response Services
- Jewish Family Services
- Knights of Columbus
- Life Bridge Christian Church
- Mennonite Disaster Services
- Nazarene Diester Relief
- NECHAMA Jewish Response to Disaster
- O.M.E.G.A.
- Operation Hope
- Pet Aid
- Samaritan's Purse
- Serve 6.8
- Southern Baptist Disaster Relief
- Team Rubicon
- The Church of Jesus Christ of Latter-day Saints
- The Salvation Army
- United Way 211
- United Methodist Committee on Relief
- Village Seven Presbyterian Church
- Weld County Food Bank
- Westwoods DiRT