



CASE STUDY

Rebuilding Substantially Damaged Homes

TOWN OF LYONS, COLORADO: 2013 FLOODING

Learning Objective: Learn from the challenges experienced by a small town managing home reconstruction with the aims of expanding affordable housing and reducing future vulnerability after the devastating 2013 Colorado flood.

Keywords: Recovery, Flood, Local Government, Isolated Community, Housing, Leadership, Recovery Planning, Hazard Mitigation, Resilience, Affordable Housing, Partnerships

PART ONE

Background

On September 9, 2013, a major storm front stalled over Colorado, dumping a record-breaking 18 inches of rain across the Rocky Mountains over a week, in an area that typically receives 14 inches of precipitation annually. That rain landed on the tens of thousands of mountainous acres that drain into the St. Vrain watershed, at the base of which sits the town of Lyons (population 2,035).

At 11:00 p.m. the night of September 11, 2013, the Lyons town administrator, Victoria Simonsen, was woken up by a terrifying phone call. It was the Fire Chief. "It looks like the river is coming out of its banks, and you might want to come down to the fire department," he told her. Victoria said goodbye to her family and reached the bridge. "I was about to cross the bridge to get to downtown, when the Sheriff stopped me because the water was already over the top of the highway," she recalls. Just two town employees were able to make it downtown before the bridge was overwhelmed by the floodwaters.

After midnight, they recognized that residents were already out of their houses and there was an urgent need to set up emergency shelter for the hundreds of displaced people, some of whom were injured. Their evacuation plan had provisions to shelter in the nearby town of Longmont, but there was no way for them to get there. They decided to use the local elementary school as an emergency shelter because it was on higher ground and would be large enough to shelter everyone they found for the time being. The phone lines were down. Lyons' residents hit a roadblock when they arrived at the school. There was no formal arrangement with the school district to use its facilities in an emergency, and they found the school locked when they arrived. Luckily, a teacher among the survivors knew that a janitor lived nearby, who eventually let the stranded residents and town staff into the building. The town commandeered the elementary school and used the gym as its informal evacuation center until they were able to get help. Residents whose homes had flooded and were unable to reach the school stayed with neighbors at higher ground for the first few days.

By the morning it was clear how bad the flooding was. The St. Vrain River completely inundated Lyons. The event was described by the National Weather Service as a "biblical" 1000-year event, with 26,000 cubic feet of water per second moving down the St. Vrain, over 20 times the volume of a normal flood stage. The water stranded all



Figure 1. The town of Lyons was flooded by the North and South Vrain Creeks on September 13, 2013. Source: [The Denver Post](#).

residents on six “islands” of higher ground where they were trapped without food, water or sewer, electricity, or communications. Leaders shouted across rushing waters to send important messages between the isolated areas where residents were gathered, until helicopters and National Guard high-water vehicles arrived to evacuate residents over 36 hours later. The entire community was evacuated.

The river did not subside for nearly two weeks. Residents were unable to return to their homes for an additional month, as the main roads, water lines, and sewer lines to the town needed significant repairs. Out of a total housing stock of 960 homes, the flood damaged 128 homes, and an additional 88 homes were determined to have “[substantial damage](#)”. The flood destroyed nearly all of the affordable homes in the area.

Challenges

Though Lyons had emergency plans in place, all planning efforts were based on a 100-year flood. The September 2013 flood event was categorized as a 500 to 1,000-year flood, meaning that in any given year, there was a one in 1,000 chance of a flood of this magnitude occurring.

A month after the flood, local officials realized that not all homes could be rebuilt where they had been, or in the same way. Some homes would need to be elevated out of harm’s way and some would need to be bought from residents who could not afford the repairs. Determining how to approach rebuilding would require time, and careful consideration. Another challenge facing the local government officials was figuring out how to message the need to buy-out some substantially damaged properties in the floodway, and then managing the properties once they were acquired. The town administrator commented, *“This was the first really major flooding event for our region... right after it happened people thought they would be rebuilding on stilts like they do in coastal hazard areas. That doesn’t work here because of the boulders that come down the mountains with the water. They would take those stilts out. Here, we had to quickly figure out that an elevated concrete foundation with flood vents,”* would better mitigate future flood hazards.

The flood severely exacerbated the town’s challenge to offer affordable housing. Two mobile home parks had provided the bulk of affordable housing before the rainstorm, one with 37 units and one with 12 units. Both properties were entirely destroyed and received offers to be bought out. Lyons’ footprint could not grow because the town is nestled in between mountains and much of the land surrounding the town is owned and managed by Boulder County Parks and Open Space. Housing prices continued to rise and the question of where dozens of affordable housing units could be rebuilt in a town with very limited space remained open.

The 2013 flood was Colorado’s first major flooding event in 14 years. This significant time gap between flooding events left many residents and businesses without the mindset to prepare for disasters and unaware of the impacts they were at risk of due to extreme weather. Most of the homes that flooded were not in a flood hazard area and did not have flood insurance. The lack of awareness of the flood risk is perpetuated by new residents who move in. In an interview in 2019, Victoria dismayed, *“We still have people who move to town and have no idea there was a major flood here five years ago.”*

PART TWO

Actions

The National Guard ran checkpoints into the town for two months preventing anyone from coming in that did not have a city-administered permit to enter. This served the multi-purpose of preventing looting, managing arriving volunteer agency staff, controlling unwanted vendors, and providing space for utility management to repair the water, sewer, and electricity lines so residents with undamaged homes could return quickly.

The town made rebuilding homes a top priority from the beginning. Officials made a controversial decision to put a six-month moratorium on building permit issuance. The moratorium gave town staff, in partnership with their newly formed and resident-driven Housing Recovery Working Group (RWG), the time and space to conduct high-quality comprehensive housing planning activities. Town staff also took advantage of the six-month timeframe to educate residents on the purposes and advantages of a buyout program. However, some town officials and residents expressed difficulties with the moratorium, which delayed projects and frustrated survivors.

Town officials developed a proposal to build housing in the restored Bohn Park to help displaced residents to return to the town as soon as possible. However, the community placed a high value on this park space and organized a campaign to save the park. A referendum was issued for local vote and did not pass. Of 1,112 votes cast, 614 people voted “no” while 498 people voted “yes.” A local group, Save Our Parks and Open Spaces, was a vocal component in the “no” category.

The town’s commitment to creating affordable and accessible housing sometimes conflicted with residents’ expectations for the locations of new construction. While public support for affordable housing seemed high at meetings, town staff met significant pushback from individuals whose homes were located near proposed construction sites. The availability of vacant land for housing was also low. The town’s profile could not grow, and federal money could not be used to rebuild housing within the floodplain.

The town of Lyons worked with several partners to formulate a plan for maintaining and leasing bought-out properties. Lyons’ buy-out plan was approved by both FEMA and HUD, and formally adopted by the town council. This program was called the Deed-Restricted Buyout Properties program, or DR BOP for short. The DR BOP program gave impacted residents the option to either rebuild and elevate their home or receive money from a buyout of their property. Though town leadership found the program valuable, some expressed concerns about the long-term impact the buyout program could have on housing prices and availability, and the ability of the town to manage and fund the program after federal support teams left.

Housing Recovery Key Partners

- American Planning Association (APA)
- FEMA
- U.S. Department of Housing and Urban Development (HUD)
- Colorado Department of Local Affairs (DOLA)
- Colorado Department of Homeland Security and Emergency Management (DHSEM)
- Colorado Resiliency and Recovery Office

In addition to the Housing RWG, a Housing Committee was established, chaired by a town council member. Despite committee members’ best efforts, progress on housing reconstruction was slower than anticipated. Residents were getting discouraged. Managing expectations was essential to keep housing priorities on track and prevent disheartened residents from giving up. Town administrators noted that setting realistic timelines would have helped. For example, changes to zoning codes, building inspection requirements, or property taxes could be completed in the short-term, while building new housing required further studies and planning with a longer time horizon.

Results

During the flood recovery process, the town learned that due to its remote location residents need to be prepared for self-reliance after an incident and equipped with homes that offer better flood protection. Following the flood, the Town of Lyons stressed the importance of households being prepared for 72 hours without assistance in the aftermath of a disaster. They noted this expectation will help build a culture of preparedness and hopefully alleviate some immediate rescue needs in future disaster recovery operations. “Our motto for the next disaster will be - *The*

first 72 are on you. You need to be prepared to shelter in place and take care of yourself for 72 hours in your homes.” – Victoria Simonsen, Lyons Town Administrator.

Of the homeowners eligible for the Deed-Restricted Buyout Program, 28 chose to rebuild and elevate their homes using concrete, and 29 chose to participate in the buyout program. The town leases some of the acquired properties to neighbors to maintain them.

Of the two mobile home parks that had previously provided affordable housing, one owner chose to be bought-out, while the other converted his property into a very successful business. *“He scraped it and refinished it with beautiful sod and made an outdoor wedding venue. He now has 22 tiny homes as vacation lodging that are on wheels and are movable, creating significant revenue in the floodway,”* Victoria commented.

Town officials noted there remains a gap in the affordable housing available in the area. A few new units were built by Habitat for Humanity, but the town witnessed high inflation of property prices in recent years that compounds the problem. Homes that were elevated when rebuilt also have much higher values than before.

While the technical assistance from FEMA, DOLA, APA, and others was helpful in developing the town’s housing recovery plans, town staff noted that subject matter experts with experience in the affordable housing sector could have been a useful asset, especially as plans for affordable housing were communicated to residents. The town staff overseeing these housing considerations noted that strategies and tips for managing expectations and minimizing negative, reactionary responses to affordable housing recovery proposals could have been beneficial.

Lessons Learned

- Partnerships with state and federal agencies as well as non-profits with expertise in housing planning allowed the town to develop and implement a forward-looking approach to rebuilding that integrated hazard mitigation and resiliency into all recovery projects, ensuring Lyons will be better prepared for future events.
- Despite its best efforts, the town was unable to agree on a solution to the town’s shortage of affordable housing, given diminished space for rebuilding and commitment to preserving green spaces. They noted it would be helpful to involve affordable housing experts in developing housing recovery plans.
- Communicating the benefits of rebuilding more resiliently and setting realistic timeframes for each step are critical to gaining public support for strengthened building codes and floodplain ordinances.
- The town used the flood recovery process as an opportunity to become better prepared for future incidents by requiring new construction near the St. Vrain watershed to elevate foundations on six feet of concrete with flood fins, and by regularly communicating the importance of preparing for flash floods to newer residents.

Additional Resources

- [FEMA Planning Considerations: Disaster Housing](#)
- [IRC Case Studies](#) – *Building Community Strength through Recovery: Lyons, Colorado Flooding 2013; Leveraging Financial Resources: Lyons, Colorado Flooding 2013; Colorado Watershed Coalitions; Colorado Recovery Symposium*
- [Daily Camera: Lyons Housing Vote Deflates the Displaced, But Opponents Insist It’s Nothing Personal](#)
- [FEMA Mitigation for Homeowners Fact Sheet](#)
- [Lyons DR BOP Overview](#)