



FEMA

# Interagency Recovery Coordination

## CASE STUDY – Teaching Note

### Arizona Wildfire Recovery

A COORDINATED NETWORK OF RECOVERY SUPPORT

**Learning Objective:** Examine how Arizona applied its Disaster Recovery Framework to leverage federal and philanthropic resources to recover from a complex, non-declared wildfire disaster that devastated a small community in 2013.

**Keywords:** Recovery, Non-Declared Disaster, Wildfire, Local Government, State Government, Coordination, Infrastructure Systems, Low-Income Population, Identifying and Leveraging Resources, Philanthropic Organizations

#### 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. It is suggested that students read the Background and Challenges sections (Part One) and pause to discuss the scenario, before moving on to read the Actions, Results, and Lessons Learned sections (Part Two).

This case study describes the unincorporated community of Yarnell's management of a wildfire recovery, which severely impacted the low-income community. The wildfire burned 8,300 acres of land and caused 19 firefighters to lose their lives. The case study highlights the importance of partnerships and pre-planning at the state level to address local recovery needs in the absence of a Presidential disaster declaration and formal funding support.

To become more familiar with relevant concepts before teaching the case, please review the following:

- [FEMA: Arizona Yarnell Hill Fire \(FM-5032\)](#)
- [Outside Magazine: The True Story of the Yarnell Hill Fire](#)
- [Wildland Fire Lessons Learned Center: Yarnell Hill Fire Entrapment Fatalities](#)
- [International Association of Wildland Fire: The Yarnell Hill Fire: A Review of Lessons Learned](#)
- [National Centers for Environmental Information: On This Day: Remembering the Yarnell Hill Wildfire](#)
- [Arizona Department of Forestry and Fire Management: Yarnell Hill Fire Report](#)
- [National Weather Service: Yarnell Wildland Fire](#)

#### Student Learning Outcomes:

- Examine the ways in which recovery guidance developed during steady state can aid successful organization and cooperation during a state-managed disaster recovery operation.
- Discuss how the media, community organizations, and nonprofit/private sector partners can both help and impede recovery efforts.
- Analyze ways in which communities can leverage post-disaster recovery projects and efforts to increase preparedness and resiliency for future disasters.

#### Key Takeaways:

- The *Arizona Disaster Recovery Framework* (AZDRF) provided a coordination structure for the recovery effort in Yarnell in the absence of a FEMA declaration.
- Financial and technical support from community, nonprofit, and private sector organizations was a key factor in the Yarnell community's recovery.

## PART ONE

### Background

In June 2013, the unincorporated community of Yarnell in Yavapai County, Arizona experienced a dangerous wildfire caused by a lightning strike. It took 12 days for emergency personnel to contain the fire, during which time mandatory evacuation orders were in place for the communities of Yarnell and Peoples Valley.

When the fire was contained, over 8,300 acres of land had burned. Most devastating to the community, 19 local firefighters lost their lives attempting to contain the fire. This was the greatest loss of U.S. firefighter life since the September 11, 2001 terrorist attacks and the most wildland firefighters ever killed in a single fire.

According to the initial Preliminary Damage Assessment, 116 residences were impacted, 93 of which were completely destroyed. Approximately 30 of the destroyed structures were uninsured residential homes, and 50 percent of the impacted community was classified as low-income. Among many other infrastructure impacts, the fire caused approximately \$1 million in structural damage to the Yarnell Water Improvement Association, a private water co-op that served as the sole water supply for the entire Yarnell area.

Damages stemming from the fire in Yarnell did not meet the threshold for FEMA funding. The Governor's Emergency Fund also could not provide funding for repairs to privately-owned infrastructure, including the water co-op.

### Challenges

Local leadership and the Yarnell community were facing a major, complex recovery effort following the wildfire. In the days immediately following the disaster, the community was not only physically impacted, but also emotionally impacted by the loss of fellow community members and the severe interruption to day-to-day life.

In the midst of this, the realization that local leadership would have to take the lead in facilitating and directing the recovery effort was daunting. The level of support available from the state or federal government was a looming question: how much financial or technical expertise would these other governmental partners be able to offer to aid in Yarnell's recovery? The extensive damage to local residences and infrastructure, combined with the uneven insurance coverage and lack of direct funding from the state or federal government, meant that the Yarnell community would need to find innovative ways to obtain funding and drive recovery progress.

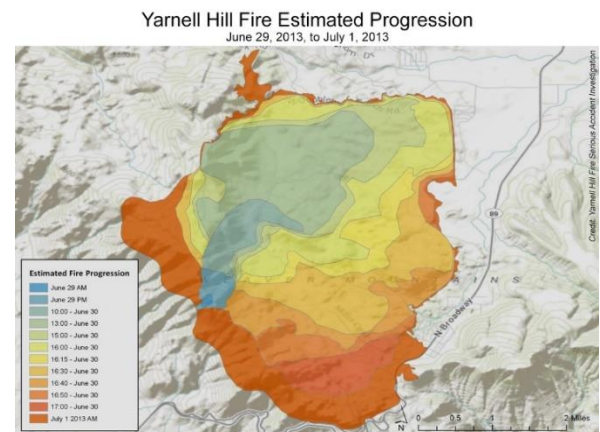


Figure 1. Estimated fire progression over time in Yarnell, Arizona in 2013. Graphic created by the National Centers for Environmental Information, NOAA.

### Part One Discussion Activities

#### Activity 1 (Optional): Identifying and Leveraging Community Partners

**Duration:** 30 Minutes

**Instructor Setup:** Split participants into small groups of 2-3 people. Provide chart paper and markers for groups to record ideas.

**Instructions:** Given the lack of FEMA funding and assistance following the Yarnell fire, community groups and nonprofits became key to achieving recovery goals. Imagine that you are tasked with connecting local personnel to community and nonprofit resources. In your groups, brainstorm and write down some considerations for the following discussion questions.

1. What types of nonprofits or community groups would be most beneficial to meet the recovery needs of the Yarnell community? Consider the damages to housing, the water co-op, and the loss of firefighter life.

2. What tools, communication methods, or strategies would you utilize to connect local leadership to these community and nonprofit partners?
3. What type(s) of support can community and nonprofit partners provide, both post-disaster and during long-term recovery? What are the benefits of these outside partners? What are the limitations?

**Report-Out:** After groups have had time to discuss, bring all participants back together to share thoughts and responses.

## PART TWO

### Actions

In 2012, Arizona had published the *Arizona Disaster Recovery Framework* (AZDRF), identifying the roles and responsibilities of a State Recovery Coordinator (SRC) and six State Recovery Support Functions (SRSFs). The AZDRF created a structure that identified, organized, and coordinated key state and federal stakeholders for recovery at any scale. Under the framework, the SRC and the SRSFs collaborate to assess impacts, prioritize needs, and engage additional partners in order to meet recovery goals.

#### Arizona State Recovery Support Functions (SRSFs)

- Community Planning and Capacity Building
- Economic
- Health and Social Services
- Housing
- Infrastructure Systems
- Natural and Cultural Resources

Several community groups were also key to the firefighting and recovery efforts. The Granite Mountain Hotshots, a local municipally-funded wildland firefighting crew, worked nearly nonstop alongside crews who had traveled from other regions to help contain the fire.

#### Key Partners

- Infrastructure Systems SRSF
- Arizona Department of Water Resources
- Arizona Department of Environmental Quality
- Arizona Corporation Commission
- USDA Regional Offices
- U.S. Small Business Administration
- National Rural Water Association

The media coverage of the fire generated a significant amount of attention, and financial donations stemming from news reports covered the cost of rebuilding the approximately 30 uninsured residential homes.

The nonprofit Yarnell Hill Recovery Group was formed to apply for grant funding and address the community's unmet needs, and the Arizona Community Foundation and Yavapai County Community Foundation jointly awarded \$400,000 to address the initial and most critical recovery issues. Additional funding and support

from the Arizona Foundation for Charitable Support, the 100 Club of Arizona, and other non-governmental organizations contributed to the community's long-term recovery. In total, approximately \$13 million in public donations was distributed to victims and their families.

The U.S. Small Business Administration also stepped in, offering business loans of up to \$2 million, home loans of up to \$200,000, and personal property loans of up to \$40,000, all low interest, for residents and business owners in Yarnell and other affected communities.

The state activated the Infrastructure Systems SRSF to coordinate the repair effort for the water co-op. The Arizona Department of Water Resources and the Arizona Department of Environmental Quality took the lead and formed a working group that convened and coordinated relevant stakeholders to find a recovery solution that would incorporate resiliency and leverage federal interagency support.

### Results

Through the working group, the Arizona Corporation Commission, USDA Rural Development, and the National Rural Water Association assessed the current state of the water supply and relevant infrastructure systems and identified available financial resources, including consolidated and restructured loan options for the privately-owned water infrastructure. The stakeholders worked together to effectively reorganize the private co-op's debt by expediting loan



Figure 2. Firefighting efforts in Yarnell, Arizona in 2013. Source: NBC News.

approvals and consolidating existing loans. These collaborative efforts allowed the co-op to maintain the Yarnell community's water supply during the recovery period.

In 2015, another fire struck the Yarnell community. Though local officials were better prepared because of the actions taken in 2013, the Yarnell community partnered with USDA Rural Development once again for additional fire preparedness improvements during the recovery, including repairs to water infrastructure owned by the Yarnell Water Improvement Association and upgraded equipment for the Yarnell Fire Department.

The 2013 fire had a significant emotional impact on the community. The Yarnell Hill Fire Memorial Park and the Granite Mountain Interagency Hotshot Crew Learning and Tribute Center were both established to honor the 19 firefighters who lost their lives and provide spaces for remembrance and reflection.

## Lessons Learned

- Having a state recovery framework in place pre-disaster greatly improved the state's ability to coordinate recovery efforts in the absence of a federal disaster declaration.
- Leveraging financial donations and private sector grants for home repairs and victim needs allowed the Yarnell community to use federal funding for infrastructure improvements, both aiding recovery from the 2013 fire and increasing the community's resiliency for future disasters.
- The interagency, cross-sector working group was crucial to finding a sustainable, long-term solution for the damaged water co-op.
- As a result of lessons learned after this fire, the *Arizona Disaster Recovery Framework* was updated to include specific tools for conducting recovery assessments, activating State Recovery Support Functions, and establishing clear communication post-disaster.

## Part Two Discussion Activities

### Discussion Questions:

1. In what ways do you think the structure laid out in the *Arizona Disaster Recovery Framework* (AZDRF) helped recovery efforts? Do you think the structure could have impeded recovery efforts in any way?
2. Media coverage of the fire prompted donations that directly contributed to the rebuilding of uninsured homes in the impacted community. What are the benefits and drawbacks of intense media coverage following a disaster? What are your experiences with media for disasters you've worked on?
3. The loss of the 19 local firefighters took an emotional toll on the community. During the long-term recovery period, a memorial park and a tribute center were established to honor the lives lost and provide a space for reflection. How can non-traditional efforts like this contribute to a community's overall recovery? When should non-traditional efforts like this be prioritized?

### Activity 2 (Optional): Developing Preparedness Capabilities

**Duration:** 45 Minutes

**Instructor Setup:** Split participants into three groups. Assign each group one topic (Infrastructure, Housing, and Community Planning). Give participants 30 minutes to discuss their topic as a group.

**Instructions:** The community of Yarnell actually experienced two fires: the 2013 fire that this case study is focused on, and a second fire in 2015. The recovery period between the two fires provided an opportunity to enhance preparedness and resilience in the event of another disaster.

Imagine your group is a task force assembled to work with the community and provide recommendations on preparedness and resilience measures on your assigned topic. As a group, discuss measures that the

community could take to increase preparedness in this area. Make recommendations, note available resources and guidance, and be sure to consider challenges to implementation.

**Report-Out:** After 30 minutes, bring all participants back together. Have one speaker for each group report out on the following questions.

- What were your group's top three recommendations for the community to increase its preparedness for your topic (Infrastructure, Housing, or Community Planning)?
- What resources or guidance would you recommend to the community so they might successfully implement some of your recommendations?
- What are the biggest challenges you see for a community such as Yarnell that wants to increase its preparedness in the face of recurring disasters, such as a wildfire?

## 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.