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## Lessons Learned

### Lessons Learned from Permanent Housing Construction Operations in Remote Areas

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#### SUMMARY

During rebuilding efforts after severe spring flooding in Central Alaska in 2013, FEMA and state partners overcame significant challenges related to the region's unique operating environment. This document examines logistical, cultural, and coordination lessons learned during the successful Permanent Housing Construction (PHC) operation.



The town of Galena, Alaska flooded as the Yukon River overflowed during the breakup of winter ice. (Source: Sgt. Edward Eagerton, Alaska National Guard Public Affairs, <https://www.dvidshub.net>)

#### DESCRIPTION

Central Alaska experienced severe flooding from May 17-June 11, 2013, due to a rapid increase in temperatures and related ice jams along the Yukon and Koyukuk Rivers. The flooding caused significant damage to businesses, infrastructure, and residences in the Alakanuk, Circle, Eagle, Emmonak, Fort Yukon, Galena, Hughes, and Tok communities. Federal partners responding to the incident and participating in the PHC operation included the Alaska Joint Field Office (JFO), FEMA Headquarters, and FEMA Region X. PHC includes direct assistance or funding for housing construction and is defined by FEMA as a type of assistance that is only available to insular or other specified areas where no other type of housing assistance is possible.

#### Logistical Lessons from Alaska's Unique Operating Environment

The remote nature of these communities and lack of significant infrastructure created logistical constraints for personnel. The impacted communities lacked connectivity with Alaska's road network, limiting transportation to small aircraft or barges and increasing the costs of moving personnel, volunteers, and supplies during rebuilding efforts.

Officials involved with the Central Alaska PHC operation also observed that pre-existing construction plans needed to account for the following considerations:

- **Constraints Caused by Seasonal Freezing**—The Alaska JFO completed repair and rebuilding operations in three distinct phases that coincided with seasonal thawing and freezing cycles. Phase One consisted of writing policy and getting the business case approved. Phase Two included ordering materials and planning. Phase Three executed the repair and rebuilding operations.

- **Impact of Weather and Culture on Housing Designs Used In Rebuilding Operations**—The State of Alaska partnered with the Cold Climate Research Housing Center to divide the State into seven zones and create pre-approved housing designs for each zone’s specific cultural and geographic needs. The extreme cold of the Central Alaskan climate meant traditional housing designs used by the U.S. Department of Housing and Urban Development would have been too costly and impractical in the communities affected by flooding.
- **Personnel Qualifications for Remote Operations**—The JFO had to train its staff, reservists, and volunteers on how to operate in the Alaskan wilderness. The JFO did not have enough personnel with the experience and qualifications required to operate in a remote, wilderness environment. The FEMA Qualifications System (FQS) does not allow personnel to be requested by name or skill other than those directly related to incident management positions. As a result, the JFO was unable to identify or deploy existing personnel with knowledge of—or experience working in—remote locations. As the FQS matures, it will include searchable fields for language and other skills relevant to deployment.
- **Cultural Awareness for Engagement with Remote Tribal Communities**—Tribal considerations and local governance dynamics in the affected communities created a greater need for cultural awareness than in traditional disaster response and recovery operations. For example, these communities place a significant cultural emphasis on relationships. To best support those affected, the JFO assigned its Individual Assistance personnel to work with applicants individually and face-to-face. FEMA also hired a local individual in Galena to assist with logistics operations. The local hire proved invaluable to responders by building relationships with members of the isolated community and addressing logistics needs.
- **The Importance of Federal and State Coordination During Operations in Remote Areas**—Senior state leadership had previous experience with related PHC operations, which allowed them to quickly work with FEMA, develop and fund solutions to unmet needs, and develop a joint Incident Action Plan. This was accomplished despite the fact that many of the state’s junior field staff were new and less experienced. To help improve the new field staff’s operational efficiency, state personnel were co-located in the Alaska JFO, enabling faster decision-making, coordination, and teamwork. To further improve program integration, Federal and state personnel created a Public Assistance Task Force. The Public Assistance Task Force staff traveled to sites together and worked in conjunction with the Alaska JFO to review and obligate funds. FEMA hazard mitigation staff and state personnel also traveled together to affected communities to inform them of funding opportunities in person.

## REFERENCES

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