

Addressing Community Gaps in Adequate Water Infrastructure for Firefighting

Thousands of communities across the nation struggle to ensure adequate water resources for firefighting – an issue that water and fire protection agencies struggle to address with no single, reliable source of funding assistance.

From the high construction and maintenance costs of physical infrastructure to restrictions on popular water and fire service programs, including grants and financing, to interagency collaboration issues – this problem transcends geography, impacting all types of communities.

The nation’s fire protection agencies and water providers need solutions to protect the public health and safety of their residents.

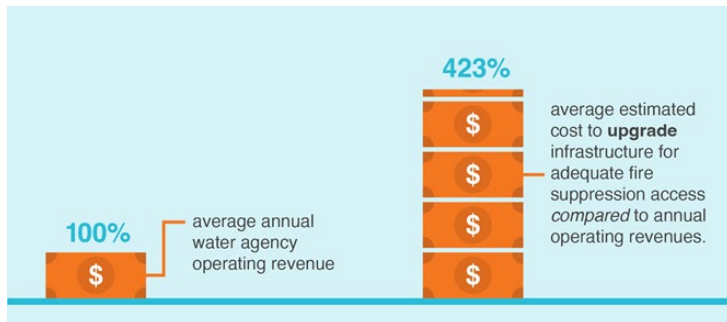
72%

Fire agencies with less than 60% of service area accessible to adequate fire suppression resources.*

44%

Water agencies with less than 80% of service area accessible to adequate fire suppression resources.*

Major Contributing Factors



Water agencies estimate **costs** for adequate system upgrades to be **very high: 4 times** their annual budgets.



Small- to mid-sized agencies have **limited resources** to apply for and secure the limited available grant funding opportunities.



FEMA’s Assistance to Firefighter Grant program has **limits and restrictions** on useful tools in rural communities.



EPA State Revolving Funds for water infrastructure are **prohibited** for use on fire flow projects.



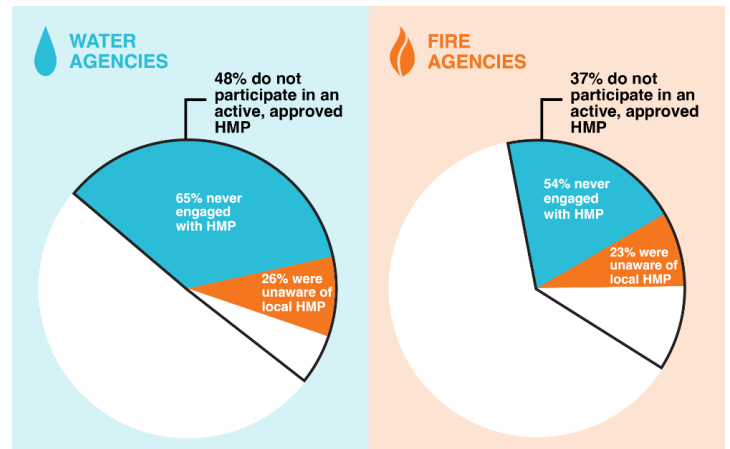
Many impacted communities **lack resources** to research, apply for, and execute financial assistance awards due to tight budgets – especially in small, rural communities.



Lack of Interagency communication and collaboration among local governments is a barrier to success; many are unaware of key federal mitigation resources or are unaware of opportunities to successfully access existing programs, such as the FEMA Hazard Mitigation Plan, providing 75% of eligible project funding.



No community is the same. Rural, suburban, and urban areas have different types and degrees of needs. Wildland-urban interface communities experience elevated risk and financial barriers to securing adequate water infrastructure for firefighting.



Solutions

The complexity of addressing community gaps in water infrastructure for firefighting presents a wide range of approaches to address the issue in urban and rural communities.



Water and fire agencies generally agree – **additional hydrants** where water infrastructure exists is a solution.

However, hydrants work well only if pipes are adequately sized and pressurized. A solution: **improve water infrastructure to ensure adequate flow for firefighting.**



Development of **ponds and reservoirs** as dual use of drinking water capacity and firefighting access is a solution in *all* types of communities.

Improve interagency collaboration to expand understanding of community fire protection and water infrastructure needs.

Capacity for necessary fire apparatus in rural & WUI communities.

Water tenders are useful in rural areas where water must be shuttled. These trucks are often too expensive for small fire departments.



Water Storage Tanks

Water storage tanks, such as one pictured left, can be a critical asset for fire protection providers and water suppliers in rural and wildland-urban interface communities.

Unfortunately, small fire agencies serving these communities are met with financial and permitting challenges to effectively deploy tanks for fire coverage – which are seen as a cost-effective alternative to water pipe installation in these areas.

Rural & Wildland Urban Interface (WUI) Solutions

McKenzie Fire & Rescue invested in six 15,000-gallon tanks installed around the Leaburg, Ore., community, between 2020 and 2022, including the tank pictured above. **Total cost to-date: \$470,000.**

The Hot Sulphur Springs/Parshall Fire Protection District invested in two 30,000-gallon each in 2018 and 2021 tanks to increase protection in its Colorado community, but still lacks a pressurized water source. **Total cost to-date: \$380,000.**

Outcomes



Adequate water resources are necessary for community growth and for firefighting to protect lives and property.

40%

40 percent of a community's Insurance Services Office (ISO) rating for fire protection depends on water supply. Adequate water infrastructure for firefighting can aid community insurability and affordability.



One ISO point improvement in a small town of 5,000 can yield \$250,000 in community insurance premium savings, furthering cost of living.



Success Story: South Lake Tahoe and Caldor Fire (2021)

Local fire officials credit access to municipal water infrastructure to success in fighting the 220,000-acre Caldor Fire in the WUI and U.S. Forest Service lands surrounding the community of South Lake Tahoe, Calif. Using hundreds of miles of hoses (pictured left), *firefighters connected to the South Tahoe Public Utility District system and ensured that not a single life or structure was lost in the community.*

Regional partners estimate a \$61.5 million need to upgrade the region's water infrastructure to be adequate for firefighting.

Connect & Engage on Solutions

Read the Full NSDC Report

NSDC is the only national organization representing and advocating for all types of special districts at the federal level.



colek@nationalspecialdistricts.org



(417) 861-7418

Scan the code for NSDC's full report on this issue, including recommendations.

