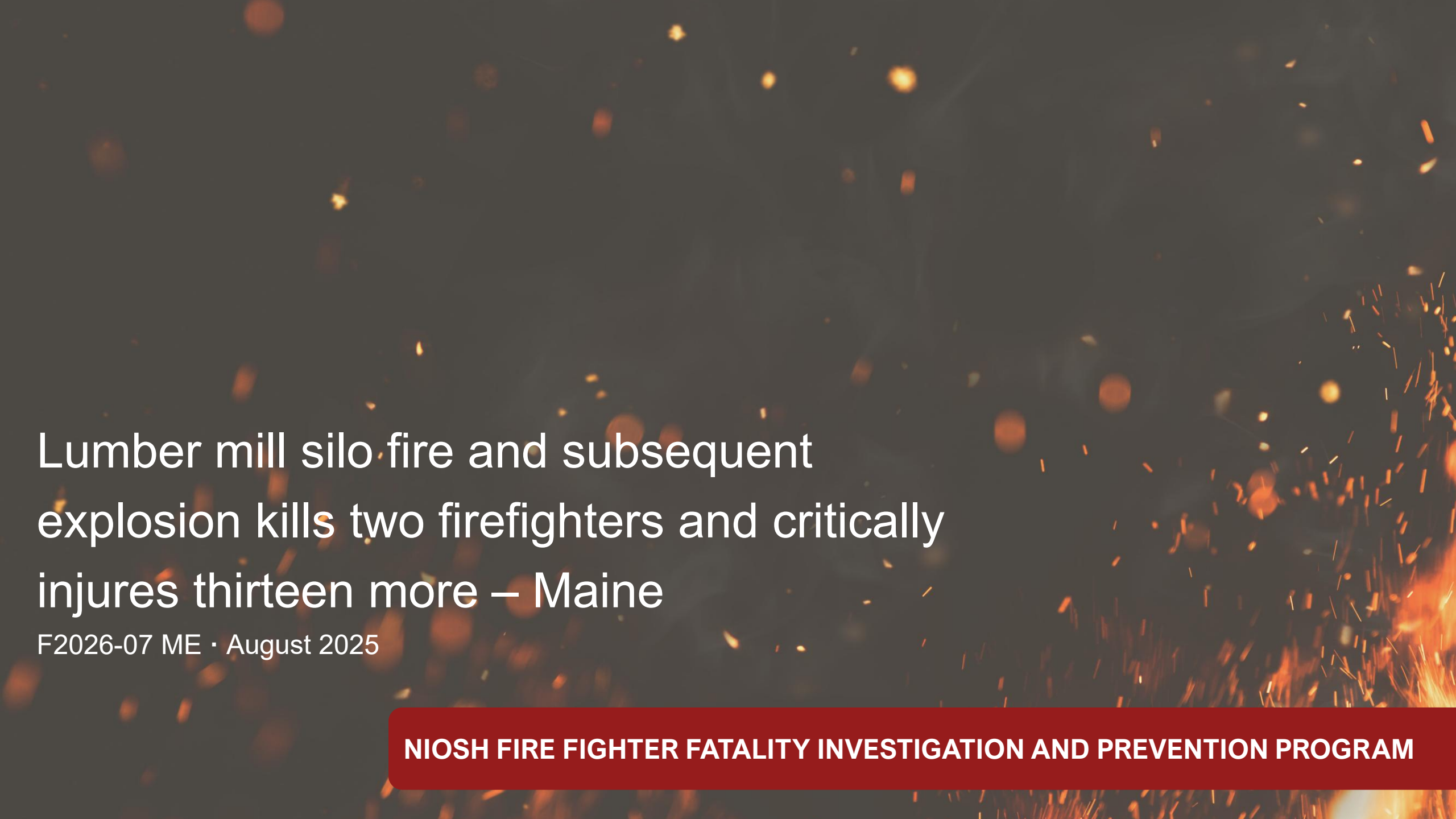


Lumber mill silo fire and subsequent explosion kills two firefighters and critically injures thirteen more – Maine

F2026-07 ME · August 2025

NIOSH FIRE FIGHTER FATALITY INVESTIGATION AND PREVENTION PROGRAM

KEY POINTS

- Two volunteer firefighters died following an explosion of an oxygen-limiting silo that occurred on May 15, 2026.
- The explosion critically injured eleven volunteer firefighters and two EMS providers.
- Facility employees and firefighters were unaware that the silo was oxygen-limiting or that its contents were a combustible dust hazard.
- Over the past 40 years, NIOSH investigated several incidents where firefighters directing water into an oxygen-limiting silo unintentionally caused explosions.

Aerial view of incident from Side Bravo of incident silo, post-explosion. (Source: State Fire Marshal's Office)

SUMMARY

- The facility automatic notification system reported a fire in the silo with employees subsequently finding smoke conditions.
- When the fire department arrived, they deployed a hoseline and directed water into an opening at the silo's base.
- Facility owners and employees remained at the silo to answer questions to assist firefighters.
- After some time, firefighters believed the fire was largely under control.

Lieutenant 40 flowing water into the blower on Side Charlie. (Source: Fire department)

SUMMARY

- Without any warning, the silo launched into the air followed by a large plume of fire at the bottom as it rose.
- The explosion threw surrounding facility employees, firefighters, and EMS providers away in a blast of pressure and fire.
- Approximately two hours after the explosion, a personnel accountability check found that one firefighter was missing and later declared deceased.
- Another firefighter died four weeks later as a result of injuries sustained at the incident.

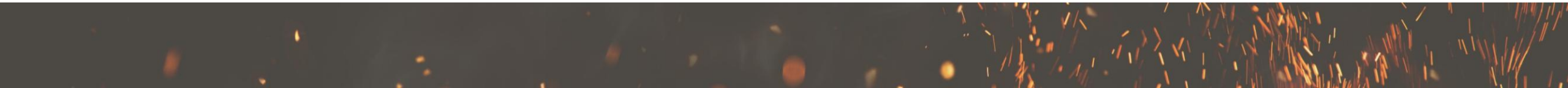
Surveillance footage capturing moment the incident silo exploded. (Source: Lumber mill)

CONTRIBUTING FACTORS & PREVENTION ACTIONS

Contributing factor	Prevention action summary
1. Combustible dust explosion	Train fire officers and firefighters on the hazards associated with different types of silos, including any unique hazards posed by silo contents.
2. Fire suppression tactics for silo fires	Ensure firefighters choose the appropriate firefighting tactics for silo fires and never direct water or foam into an oxygen-limiting silo.
3. Incident command	Establish and maintain unified command with high-hazard occupancy representatives throughout the incident.
4. Personnel accountability system	Use a personnel accountability system to identify the location and function of all operating personnel.
5. Fire department pre-incident planning	Develop a pre-incident plan for all high-hazard occupancies, such as lumber mills.
6. Lumber mill emergency planning	Ensure fire safety and evacuation plans include information on combustible dust explosion hazards and share this information with responding fire departments.
7. Combustible dust explosion mitigation and prevention	Properly operate and maintain silos and implement the applicable requirements of NFPA 660, Standard for Combustible Dusts and Particulate Solids.
8. Hazard identification	Update relevant codes and standards to require hazard labeling for bulk storage enclosures containing combustible dust.

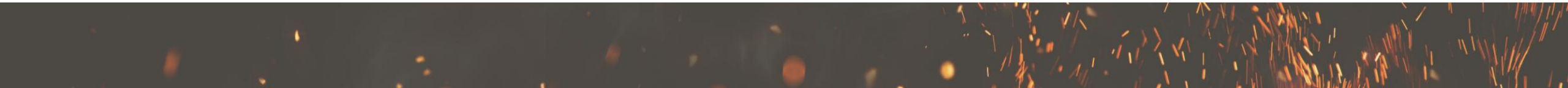
FIRE DEPARTMENT INFORMATION

Category	Information
Department type	Volunteer
Jurisdiction	40 square miles
Population	1,400 residents
Average response	70 calls for service annually
Personnel	14
Leadership	Fire chief, assistant chief, safety officer, and three lieutenants



FIRE DEPARTMENT ACTIONS TO ECHO

- Conduct periodic mutual aid training.
- Participate in regular walk-throughs at high-hazard occupancies.



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