Drone Inspections: When Observers Become Participants in Hazards Stats and Facts

FACTS

- **Drones Reduce Exposure — But Do Not Eliminate It:** Drones are deployed because environments are too dangerous for direct entry. When a drone malfunctions or requires retrieval, the worker often ends up in the same hazard zone the drone was meant to avoid.
- **Observer Becomes Participant at Recovery:** A drone that crashes inside a confined space, on a rooftop, or inside a tank requires a worker to retrieve it — often without the planning that would accompany a scheduled entry.
- **Signal Loss Is a Real Operational Hazard:** Drones in industrial environments — around steel structures or high-voltage equipment — are susceptible to signal disruption causing unexpected flight paths, collisions, or uncontrolled descent.
- **Bystander Exposure Is Underestimated:** Workers near a drone inspection who are not the operator may be unaware of the flight path or payload weight. A falling drone is a struck-by hazard with no warning.
- **Data Overconfidence Creates Hazard Gaps:** Drone inspection data is only as useful as the operator's ability to interpret it. A missed defect leaves a hazard unaddressed — with the false assurance that an inspection was completed.

STATS

- Approximately 200 drone-related accidents were reported worldwide in 2022 — a figure the FAA acknowledges significantly underrepresents actual incidents, as comprehensive national statistics on drone-related injuries

are not publicly consolidated.

- The FAA reported a 45 percent increase in drone incidents near airports between 2020 and 2022, receiving more than 100 such reports per month.
- Over 1.1 million drones were registered in the United States as of 2023, growing rapidly across construction, energy, utilities, and emergency response sectors.
- Drones have been shown to reduce OSHA violations on construction sites by up to 85 percent when used for safety inspections, according to industry safety research.
- 50 percent of workers in safety-sensitive industries reported exposure to dangerous environments such as heights or confined spaces where drones could reduce injury risk, according to a 2020 National Safety Council survey.
- There were 5,070 fatal work injuries in the United States in 2024, with transportation and construction — the two sectors with the highest drone deployment — accounting for the majority of fatalities, according to the Bureau of Labor Statistics.