What is a Fire Protection Impairment?

understanding what an impairment is, why it's important, and best practices to manage the risk

To understand fire protection impairments, we start with a more basic question:

What are Automatic Fire Protection Systems?

Automatic fire protection systems encompass a wide range of systems and technologies that respond automatically to suppress or control fires. The most common example is a sprinkler system and its water supply. Other examples include CO_2, clean agent, foam, and water mist systems, as well as fire pumps and water reservoirs.

What is a Fire Protection Impairment?

A "Fire Protection Impairment" is any condition in which an Automatic Fire Protection System will not function normally. This can be due to planned events such as maintenance, renovations, relocating sprinkler heads, and doing tie-ins to fire water mains. An impairment can also arise from unplanned events such as frozen pipes, fire pump failure, or a water main break. A fire protection impairment is a period of heightened risk that requires additional precautions and management.

Why are Fire Protection Impairments Important?

National Fire Protection Association (NFPA) records show that automatic fire protection systems are critically important to safety and business continuity. In fires where an automatic extinguishing system worked, there were:

- never more than two deaths recorded in a building
- 87% fewer worker & civilian deaths
- 85% lower property and business interruption losses

NFPA data also show that the single greatest cause of failure for automatic fire protection systems is simply that they were shut off-- a circumstance that accounted for three out of five, or 59% of all failures![1]

Most insurance companies, and some Authorities Having Jurisdiction (AHJ), ask to be notified when a facility has a fire protection impairment, and to be notified again when fire protection is returned to service.

The RiskTools.AI portal helps manage impairments, communicate them internally, and ensure that external stakeholders like insurance companies are kept promptly informed.

Sprinkler systems that are shut off for maintenance or repairs are a common fire protection impairment

[1] U.S. Experience with Sprinklers, National Fire Protection Association report, 2017.