



Backflow Preventers Decoded

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Backflow preventers stop contaminated water from flowing back into clean water supplies. In fire systems, they ensure stagnant or chemically treated water doesn't re-enter municipal water lines, which could pose a public health risk. They are required in most fire protection systems and are an essential component of maintaining potable water integrity.

System Components

- **Check Valves:** One-way valves that only allow water to flow in one direction, preventing backflow.
- **Shutoff Valves:** Allow isolation of the device for testing or maintenance.
- **Test Cocks:** Ports used by certified testers to verify functionality.
- **Strainer:** Installed upstream to prevent debris from damaging internal components.

Inspection & Maintenance Frequencies

(per NFPA 25 and local code)

Monthly/Quarterly - Visual checks and exercising of valves depending on local jurisdiction and system design.

Annually - Performance test by a certified tester.

Other Uses

- **Domestic Water Systems:** Backflow preventers are used to protect drinking water lines from contamination due to cross-connections, such as those with boilers, irrigation systems, or chemical dispensers.
- **Irrigation Systems:** These systems often utilize fertilizers, pesticides, or other additives that can siphon back into the municipal water supply. A properly installed backflow preventer prevents this by creating a physical barrier.

Frequently Asked Questions

Q: Why is backflow prevention important for fire sprinkler systems?

A: Fire systems can remain stagnant for long periods, and any degradation, microbial growth, or chemical treatment in that water could severely impact public water safety if allowed to reverse flow.

Q: What happens if a backflow preventer fails an inspection?

A: If a device fails, it must be repaired or replaced immediately. Non-compliance can result in water service interruptions, fines, or liability exposure for contaminating the potable water supply.

*** This information is provided as a general resource to assist property managers, building engineers, and facility management professionals in understanding fire and life safety best practices. It is not intended to serve as a comprehensive or exhaustive list of fire protection requirements.

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