Lawn Irrigation Safety

Keep your drinking water safe

Irrigation systems make watering lawns and gardens easier and save time. Water that may be contaminated by weed killers and/or fertilizers can be back-siphoned (backflow) into your drinking water. Irrigation systems not protected by an approved backflow prevention assembly could endanger the health of a household, neighborhood or community.

Washington state law requires that all new or existing irrigation systems be equipped with an approved backflow prevention assembly. Only properly installed, state-approved backflow prevention assemblies meet the plumbing code and provide health protection for your family and neighbors. Contact your local water supplier for specific information and a list of state-approved assemblies and certified testers.

Freeze protection

All backflow prevention assemblies installed need to be protected from freezing. It's recommended to install a drip-tight shut-off valve (ball valve) below ground on the inlet side of the assembly. Install a shut-off valve with drain (stop and waste valve) just above ground level so piping ahead of the assembly can be drained. Open all test cocks, and shut off valves on the backflow prevention assembly half way and leave open. A low point drain should also be installed on your irrigation system.

Plumbing permits

All irrigation systems connected to a public water system require a plumbing permit before connection. Customers who live outside city limits can obtain permits from Clark County. Customers within a city should contact the city. All piping and materials upstream of (before) the backflow prevention assembly must be of a type that is approved by the Uniform Plumbing Code.

Types of backflow prevention assemblies

- **Reduced Pressure Backflow Assembly (RPBA)**
  - Highest degree of protection
  - Usually most expensive and most complex
  - Allows for introduction of fertilizer or other chemicals into irrigation system (no other type has this approval)
  - Requires annual testing by a certified tester

- **Double Check Valve Assembly (DCVA)**
  - No chemical addition allowed
  - Highly versatile
  - Requires annual testing by a certified tester

- **Pressure Vacuum Breaker Assembly (PVBA)**
  - No back pressure allowed downstream of PVBA
  - More sophisticated and versatile
  - Requires annual testing by a certified tester

- **Atmospheric Vacuum Breaker (AVB)**
  - No valves allowed downstream of AVB
  - The least expensive and easiest to install
  - Does not require annual testing

Keep your water supply safe

Some laws and regulations regarding backflow protection and installations may vary depending upon local requirements.

For more specific information, please give us a call at 360-992-8022.
**Reduced Pressure Backflow Assembly (RPBA)**
- Only one RPBA is required to serve the whole system; control valves can be located downstream of the RPBA.
- Must be installed a minimum of one foot (12 inches) above ground level.
- Must be tested by a State-certified Backflow Assembly Tester when installed, annually, and when moved or repaired.
- In an RPBA equipped system, fertilizer and other agricultural chemicals may be introduced downstream of (after) the RPBA.
- Must be protected from freezing.

**Double Check Valve Assembly (DCVA)**
- Only one DCVA is required to serve the whole system; control valves can be located downstream of the DCVA.
- Can be installed below ground one to one and a half feet deep (12 to 18 inches) with at least three inches of clearance around the assembly.
- Must be tested by a State-certified Backflow Assembly Tester when installed, annually, and when moved or repaired.
- No chemicals or fertilizer may be introduced into an irrigation system equipped with DCVAs.
- Must be protected from freezing.

**Pressure Vacuum Breaker Assembly (PVBA)**
- Only one PVBA is required to serve the whole system; control valves can be located downstream of (after) the PVBA.
- Must be installed a minimum of one foot (12 inches) above the highest point of the irrigation system.
- Must be tested by a State-certified Backflow Assembly Tester when installed, annually, and when moved or repaired.
- No chemicals or fertilizers may be introduced into an irrigation system equipped with PVVBAs.
- No pumps, air fittings or back pressure is allowed on the downstream side of (after) a PVBA.
- Must be protected from freezing.

**Atmospheric Vacuum Breaker (AVB)**
- One AVB is required on each irrigation zone; no control valves allowed downstream of (after) an AVB.
- Each AVB must be installed a minimum of six inches above the highest point of water in the zone it serves.
- No chemical or fertilizer may be introduced into an irrigation system equipped with AVBs.
- No pumps, air fittings or back pressure is allowed on the downstream side of (after) an AVB.
- Must be protected from freezing.