

**WAC 16-202-2009 What measures must be used to prevent backflow into the irrigation water source?** Backflow prevention is a requirement on all irrigation systems used for fertigation except when alternative technology is applied.

(1) Pressurized irrigation system.

(a) At least one irrigation mainline check valve must be correctly installed, properly operated, and adequately maintained to prevent contamination of the water source. The check valve must be located upstream from the injection point. The check valve must be automatic, quick-closing, and capable of forming and maintaining a watertight seal.

(b) An inspection port or a direct access point must be positioned immediately upstream of the check valve to allow visual and manual inspection of the check valve and the low pressure drain. The inspection port or access point must have a minimum diameter of four inches. If a four-inch inspection port or access point is not feasible, an alternative system must be devised.

(c) An inspection port or access point is not required with an approved backflow prevention assembly.

(d) A vacuum relief valve must be located upstream of the irrigation line check valve, installed at the top of the irrigation pipeline and adequately sized to prevent backsiphoning. The orifice size must comply with current American Society of Agricultural Engineers (ASAE) standards.

(e) An automatic low pressure drain or similar mechanism must be placed upstream of the irrigation line check valve and at the lowest point in the bottom of the pipeline. The low pressure drain must be of adequate size and properly positioned to intercept and purge leakage away from the water source.

(f) Product-treated water cannot be discharged through a water outtake.

(2) Nonpressurized water delivery system.

(a) System design must prevent the introduction of treated water into the water source.

(b) Backflow prevention may be achieved with a hydraulic discontinuity in source water flow or by a sufficient hydraulic gradient.

(c) Backflow devices for nonpressurized systems may include a weir box, drop structure, ASAE approved air gap, batch tank, or similar device that can function to prevent backflow into the source water.

(d) Injection must occur downstream from the water diversion point.

(3) Cross-connection to municipal or public water system. Backflow prevention devices must be approved by the Washington state department of health in accordance with WAC 246-290-490.

[Statutory Authority: Chapters 15.54, 15.58, and 17.21 RCW. WSR 01-13-063, § 16-202-2009, filed 6/18/01, effective 11/9/01.]