

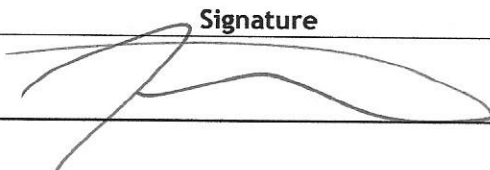
# Backflow Prevention and Cross-connection Control

## GS Pinon Pines LLC BPCCC Program

### Purpose

This Backflow Prevention and Cross-connection Control Program outlines how the supplier of water specified below will implement its written BPCCC program and achieve compliance with Regulation 11.

Other potentially applicable backflow prevention and cross-connection control requirements are specified in Article 1-114 and Article 1-114.1 of Title 25 of the Colorado Revised Statutes and in the Colorado Plumbing Code. The Department has developed Safe Drinking Water Program Policy 7 to assist public water systems achieve compliance with Regulation 11.

Public Water System Name & PWSID:	GS Pinon Pines LLC PWSID# Co0108050	
Public Water System Owner:	GS Pinon Pines LLC	
BPCCC Administrative Contact:	John Victor	
Address:	2100 E. Colfax	
	Denver, co. 80206	
Email:	john@gscommunities.biz	
Phone:	1-303-779-6131	
<b>Signatures of Owner or Administrative Contact:</b>		
Effective Date	Name	Signature
6/17/16	John Victor	

This water system is comprised of 57 single family mobile homes with a well pumping system for potable water. The system has no storage tanks except for a series of 5- 120gal psi tanks.

Single-family-residential connections pose a relatively low risk to the distribution system based on the volume of water contained in the plumbing system. Local plumbing codes, which are enforced by the local jurisdiction having authority over plumbing within residential structures, are in place to protect private residences from typical residential cross connections. If the local jurisdiction having authority requires that a backflow prevention assembly or backflow prevention method be installed, it is generally the responsibility of the homeowner to maintain the assembly or method.

For single-family residential connections There are types of cross connections at single-family-residential connections that may pose a greater risk than those addressed by local plumbing codes enforced by the local jurisdiction authority. These include but are not limited to: i. Dedicated irrigation lines (from the water main); ii. Dedicated fire suppression system lines and chemically enhanced fire suppression systems; iii. Multi-purpose fire suppression systems are not required to be

controlled where each branch of the suppression system terminates at a regularly used fixture; iv. Auxiliary water sources (e.g. wells, ponds, lagoons, irrigation ditches), hot tubs or swimming pools piped with permanent plumbing, reclaimed water systems, gray-water systems, or onsite water storage tanks with permanent plumbing; and v. Connections to a home's potable water supply system from home business and hobbies including but not limited to agricultural commerce and hydroponic systems, doctor's offices, photo laboratories, hide tanning operations, and metal plating operations.

\*\*\*\*This program must be kept on file for review by the Department. It can be revised by the Department as necessary.

## Backflow Prevention and Cross-connection Control Program

### (i) Process for conducting surveys.

Mail out or hand delivery the questionnaire survey to each mobile home owner or renter on premises. The ORC will review the results and schedule further inspection and identify possible device .
Since this system consists of only single family residences a onsite survey / inspection will not be performed.

### (ii) Process to select a backflow prevention assembly or backflow prevention method to control a cross connection.

Determine if a cross connection exists from the survey or inspections and the device required for the degree of hazard.

### (iii) Legal authorities to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods and/or require customers to install, maintain, test, and inspect backflow prevention assemblies and/or backflow prevention methods.

<input type="checkbox"/> Ordinance (attach copy) <input type="checkbox"/> User Agreements (attach copy) <input checked="" type="checkbox"/> Other - explain below
The supplier performs the actions necessary to complete the indicated requirement(s) in the regulation. 1. If the supplier does not have a legally-enforceable mechanism in place, the Department expects the supplier to perform the actions necessary to complete the indicated requirements in the regulation.

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(iv) Process to track the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections.

The administration will keep a spread sheet of all devices , addresses, contact info , installation dates, testing, and maintenance

(v) The process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician.

The residences with devices will be required to have yearly inspections by a Certified Technician.

## Backflow Prevention and Cross-connection Control Program

### Department Notification

If we become aware of a suspected or confirmed backflow contamination event, the supplier must notify and consult with the Department on any appropriate corrective measures no later than 24 hours after learning of the backflow contamination event. The notification should be made to the **24-hour Environmental Release and Incident Report Hotline at 1-877-518-5608.**

When reporting the event, please have available the as much of the following information as possible:

- Date and time of event;
- Location of event;
- Type of threat or event;
- Public Water System Name and Identification Number;
- Water supplier contact name and phone number;

- Method of discovery (consumer complaint, witness, perpetrator, employee report);
- Response actions taken (water quality parameter testing, isolation of affected water);
- Recovery actions taken;
- Notifications made (customers, law enforcement, news media, etc.);
- Assessment of threat, if possible.

Regulation 11.39(7) requires that we notify the Department within 48 hours in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation and any backflow prevention and cross-connection control treatment technique violation specified in Regulation 11.39(6).

Such notifications to the Department can be written, verbal, or made by other means. The Department can be notified via telephone at 303.692.2000 and contacting the Department's Water Quality Control Division's backflow prevention and cross connection control specialist. The Department can also be notified via email at [cdphe.wqenginfo@state.co.us](mailto:cdphe.wqenginfo@state.co.us) sent to the attention of the backflow prevention and cross-connection control specialist.

#### Public Notice Requirements

Regulation 11.39(7) requires that suppliers distribute Tier 2 public notice as specified in Regulation 11.33 in any instance the supplier becomes aware of any backflow prevention and cross-connection control treatment technique violation.

Regulation 11.39(7) requires that suppliers distribute Tier 3 public notice as specified in Regulation 11.33 a in any instance the supplier becomes aware of any backflow prevention and cross-connection control violation.

Please contact your Department assigned compliance officer with any questions regarding to public notice.

## **Backflow Prevention and Cross-connection Control Program**

### **(i) *Survey Process and Documentation***

Single-family means:

- A single dwelling which is occupied by a single family and is supplied by a separate service line;
- A single dwelling comprised of multiple living units where each living unit is supplied by a separate service line.
- If a water supplier has ownership and maintenance responsibilities of a service line up to a point of single-connections such connections may be considered a single-family-residential-connection even if this connection is to a multi-family dwelling unit. It is important to be aware that all other applicable parts of Regulation 11 will also apply to those new acquired waterworks (i.e. distribution system) and that any irrigation or other cross connections that are directly connected to the newly acquired service line would have to be controlled in accordance with Regulation 11.39.

The supplier must survey any waterworks and the water supply systems associated with those facilities for cross connections.

If the supplier uses questionnaires, various methods may be used to distribute the questionnaires: email surveys, web-based surveys, written surveys, or telephone surveys. Questionnaires should provide examples of common cross connections to the customer who completes the survey. Questionnaires should ask that the property-owner indicate that the information is accurate to the best of their knowledge.

It is important that newly constructed and renovated buildings are constructed in accordance with the local plumbing code. The code is intended to protect the internal potable water system and its occupants from contamination that can be introduced via restrooms, kitchens, boilers, irrigation, HVAC systems, etc. It is equally important that the water supplier protect their distribution system from contamination that can be introduced via car washes, auxiliary water sources, fire suppression systems, irrigation and many other sources. Water suppliers need to perform cross connection identification surveys to identify potential cross connections within their distribution system.

\*\*\*Note to supplier. Describe in this section how the supplier complies with the regulation and its survey requirements

**(ii & iv) Legal Authority**

The supplier does not have a legally-enforceable mechanism in place, the Department expects the supplier to perform the actions necessary to complete the indicated requirements in the regulation.

As a reminder suppliers are prohibited from installing or permitting any uncontrolled cross connection to the distribution system or within the supplier's waterworks.

- Installing an uncontrolled cross connection means modifications or additions to waterworks or water supply systems that create a cross connection. The supplier is prohibited from intentionally performing any actions which would result in the creation of a cross connection.
- Permitting an uncontrolled cross connection in the context of Regulation 11.39 means the supplier has allowed their users or customers to continue to have an uncontrolled cross connection past the regulatory-defined timelines. If the regulatory-defined timelines have elapsed and the supplier has not taken any of following actions; control the cross connection, remove the cross connection or suspends service to the identified connection\*\*\*, then the supplier is allowing, or permitting, the cross connection to exist and is in violation of Regulation 11.

\*\*\* Note to supplier. Before suspension of service can be considered appropriate action the Department expects that the supplier will confirm the following:

- The connection downstream of the valve used to suspend the service does not remain pressurized because the customer has access to an alternative source of water or a storage tank onsite
- If the cross connection is to a fire suppression system; suspension of service would not result in the building being inadequately protected from loss of life through fire. If there are service connections at the property separate from the fire suppression system causing the cross connection, a supplier may suspend service to one or all of those other service lines (e.g. domestic or irrigation) as an appropriate action.
- The supplier may receive a Department approved alternative compliance schedule for identified cross connections that have not been controlled within 120 days. Department-approval of an alternative compliance schedule means either an email or other written communication from the Department. The Department has provided in [APPENDIX C - BPCCC Rule 120-Day Cross-connection Control Extension Application](#) for such request.
- Suppliers must specify the process that the water system will use to require the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. Generally, this is specified in one of the

following: local government ordinances, user agreements or the public water system assumes full responsibility.

**(iii) Identification of Cross Connections and Backflow Prevention Assembly or Backflow Prevention Method Selection**

If the supplier discovers an uncontrolled cross connection and believes that a backflow contamination event has not occurred, the supplier must: first determine the type of backflow prevention assembly or backflow prevention method needed to control the cross connection and second install and maintain or require the customer to install and maintain a backflow prevention assembly or backflow prevention method at the uncontrolled cross connection, suspend service to the customer, or remove the cross connection, no later than 120 days after its discovery.

\*\*\*Note to supplier. Suppliers should include in the written BPCCC program guidelines and criteria used to select the type of backflow prevention assembly or method used to control an identified cross connection. Guidelines and criteria should address examples of cross connections throughout the water systems distribution system along with the corresponding appropriate backflow prevention assembly and or backflow prevention method used to control the identified cross connection. Part 4.3 of SDWP [Policy 7](#) provides various examples of backflow prevention assemblies and methods and when the use of such assemblies and methods may be appropriate.

**(v & vi) Tracking & Certified Tester Verification**

Suppliers must specify the tracking mechanism it will use to verify the installation, maintenance, testing, and inspection of all backflow prevention assemblies and backflow prevention methods used to control cross connections. This section may include the process the supplier will use to ensure backflow prevention assemblies are tested by a Certified Cross-Connection Control Technician

\*\*\*Note to supplier. Please provide a tracking spreadsheet or description of program or other method which the supplier is using to verify performance and compliance with Regulation 11.

- i. To be considered adequate, test reports used to document compliance with Regulation 11 must include all of the following:

Assembly or method information:

- a. Assembly or method type;
- b. Assembly or method location;
- c. Assembly make, model and serial number;
- d. Assembly size;
- e. Test date; and,
- f. Test result (pass/fail).

Certified Cross-Connection Control Technician information:

- a. Certified Cross-Connection Control Technician certification agency;
- b. Certification number;
- c. Certification expiration date or statement that certification is current;
- d. As an alternative to a-c, suppliers may provide documentation of an alternative validation process such as electronic login to reporting software where only current, certified cross-connection control technicians (or their companies) are given a login.

Definitions

1. "Air gap separation" means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture or other device and the overflow level rim of the receptacle and



should be at least double the diameter of the supply pipe measured vertically above the flood level of the rim of the vessel, but in no case, less than one inch.

2. "Auxiliary water supply" means any water source or system, other than the public water supply, that may be available in the building or premises.

3. "Backflow" means the flow of water other than the intended direction of flow, of any foreign liquids, gasses or substances into the distribution system of any public water supply.

4. "Backflow prevention assembly" means any double check valve, vacuum breaker, or reduced pressure principle backflow preventer having resilient-seat shut-off valves on both the upstream and downstream end of the device and the necessary test-cocks as integral parts of the assembly.

5. "Consumer" means the owner or person in control of any premises supplied by, or in any manner connected to a public water system.

6. "Containment" means the protection of the public water supply by installing a backflow prevention assembly or air-gap separation on the main service line to a facility.

7. "Contamination" means the impairment of the quality of water by sewage, process fluids or any other substance to a degree which could create an actual hazard to public health through poisoning, or through the spread of disease by means of exposure.

8. "Cross connection" means any physical link between a potable water supply due to the reversal of flow of the water in the piping or water distribution system.

9. "Hazard, degree of" means an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

A) Hazard, Health- any condition, device or practice in the water supply system and its operation which could create or may create a danger to the health and well-being of the water system consumers.

B) Hazard, Plumbing- a physical plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air gap separation or backflow prevention assembly.

C) Hazard, Pollutational- an actual or potential threat to the physical properties of the water system components or to the potability of the public or the consumer's potable water system, but which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but may not be dangerous to human health.

D) Hazard, System- an actual or potential threat of severe damage to the physical properties of the public's potable water system or the consumer's potable water system, or of a pollution or contamination which would have a protracted effect on the quality of the potable water within the system.

10. "Industrial Process System" means any system containing a fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutational or plumbing hazard if introduced to a potable water supply.

11). "Isolation" means the protection of a facility's internal plumbing system by the creation of an air gap separation, the installation of a backflow prevention assembly device on any individual fixture, appurtenance or system.

12. "Pollution" means the presence of any foreign substance (organic, inorganic or biological) in water which degrades its quality so as to constitute a hazard or otherwise impair the usefulness of the water to a degree which creates an actual hazard to the public health.

13. "Public potable water system" means any publicly or privately owned water system supplying water to the general public which is satisfactory for drinking, culinary and domestic purposes and meets all of the requirements of the Colorado Department of Public Health and Environment.

14. "Service connection" means the terminal end of a service line from the public water system. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

15. "Water System Operator" means the individual on record with the Colorado Department of Public Health and Environment as the water system "ORC" (Operator in Responsible Charge) with the full-backing of the owners of the water system to make all operational decisions with regard to the integrity of the water system.