

BACKFLOW PREVENTION APPLICATION **INSTRUCTIONS**

Receive Backflow Device Application, Fact Sheet and Report on Test and Maintenance of Backflow Prevention Device.

When paperwork is returned we need:

1. **Completed application** (totally filled out & signed) (5 copies)
2. **Picture & description** of backflow prevention device (5copies)
3. **Engineer's Report** of backflow prevention device (5 copies)
4. **Location drawing** of backflow prevention device (5 copies)
5. **\$250.00 fee (per device)**
check made out to: Orange County Department of Health
6. **\$250.00 fee (per device)**
check made out to: Town of Newburgh Water Department

After backflow is installed:

A copy of the Report on Test and Maintenance of Backflow Prevention Device form must be submitted the Town of Newburgh Water Department before a Certificate of Occupancy is issued.

Application for Approval of Backflow Prevention Devices

PRINT OR TYPE ALL ENTRIES EXCEPT SIGNATURES
Please completed items 1 through 12a + Block and Lot Numbers

Block #	Lot #	FOR DEPARTMENT USE ONLY Log No.
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1. Name of Facility		2. City, Village, Town		3. County	
4. Location of Facility <small>Street</small>		City	state	zip	
4a. Phone Numbers		5. Contact Person			
5. Approx. Location of Device(s)		6. Mfg. Model #		Size of Device(s)	
# of Fire Services		# of Domestic Services		# of Combined Services	
# of Fire Services		Total # of Services		Total # of Buildings	
7. Name of Owner		Title		Phone Number	
8. Nature of works		<input type="checkbox"/> Initial Device Installation <input type="checkbox"/> Replace Existing Device			
Full Mailing Address <small>street</small>		8a.			
City		state		zip	
Owner's Signature		Date		8b.	
M		/		<input type="checkbox"/> New Service <input type="checkbox"/> Existing Service	
D		/		<input type="checkbox"/> New Building <input type="checkbox"/> Existing Building <input type="checkbox"/> Major Renovations	
Y					

9. Name of Design Engineer or Architect		10. NYS License #	
<small>Street</small> Address _____ City _____ State _____ Zip _____		<input type="checkbox"/> PE <input type="checkbox"/> RA <input type="checkbox"/> Other	
Original Ink signature and seal required on all copies _____ Signature		10a. Telephone Number(s)	
		Date	
		M / D / Y	

11. Water System Pressure (psi) at Point of Connection		12. Estimate Installation Cost		12a. Estimate Design Cost	
Max _____ Avg _____ Min _____					
13. Degree of Hazard		List of processes or reasons that lead to degree of hazard checked:			
<input type="checkbox"/> Hazardous <input type="checkbox"/> Aesthetically Objectionable		_____ _____			

14. Public water supply name		Name of supplier's designate representative	
Mailing Address		Title	
<small>street</small> _____ City _____ state _____ zip _____		_____ Signature _____	
Telephone No. ()		M / D / Y	

Note: All applicants must be accompanied by plans, specifications and an engineer's report describing the project in detail. The project must first be submitted to the water supplier, who will forward it to the local public health engineer. This form must be prepared in quadruplicate with four copies of all plans, specifications and descriptive literature.



NEW YORK STATE DEPARTMENT OF HEALTH

Bureau of Water Supply Protection

Corning Tower, Room 1110, Empire State Plaza, Albany, New York, 12237

FACT SHEET Approved Backflow Prevention Devices/Assemblies

PURPOSE

The purpose of this Fact Sheet is to provide a list of approved backflow prevention devices/assemblies for containing potential contamination as required by Section 5-1.31 of the State Sanitary Code.

POLICY

The New York State Department of Health (DOH), Bureau of Water Supply Protection, will only accept those backflow prevention devices/assemblies which appear on the current edition of the List of Approved Backflow Prevention Assemblies generated by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (FCCCHR). Please note that along with double check, double check detector, reduced pressure and reduced pressure detector assemblies, the FCCCHR list includes atmospheric and pressure vacuum breakers which do not satisfy Section 5-1.31 of the State Sanitary Code.

The FCCCHR list is available for free on-line at <http://fccchr.usc.edu//list.html>.

Individuals with questions regarding the approval status of a device/assembly can contact their local County Health Department, DOH District Office or the DOH Central Office (518-402-7650).

Devices/assemblies which are out of production, or have only spare parts available, may not appear on the FCCCHR list. If such devices/assemblies are currently installed, they may remain in service provided that they are appropriate for the degree of hazard. When these assemblies demonstrate repeated test failures, require frequent maintenance or if spare parts cannot be readily obtained, they must be replaced by a currently approved device/assembly.

**ORANGE COUNTY DEPARTMENT OF HEALTH
BACKFLOW PREVENTION DEVICE CHECKLIST**

SUBMISSION:

1. Plans must be prepared by a NYS registered Professional Engineer or Architect.
2. The cover sheet of the plans must include an Orange County Department of Health approval box which includes a minimum white area of 3" x 5".
3. The application DOH-347 must be signed by the water supplier or his designated representative, prior to submission. Application must also be signed and sealed by the engineer or architect.
4. Include review fee of \$250.00 per device made payable to the Orange County Dept. of Health.
5. The Design Professional will be required to submit scanned copies of the approved documents to the OCHD within 30 days following OCHD approval. Please provide an email address that will be used to submit these documents so that it can be entered in our Sharefile system. Failure to submit these documents may delay our review and/or approval of subsequent projects.

ENGINEER'S REPORT:

1. Describe the degree of hazard and the type of device selected.
2. Describe system conditions including flows and pressures as appropriate.
3. Address sizing of the unit, based on hydraulic requirements.
4. Ensure that devices appear on the list generated by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (FCCCHR).
5. Estimate maximum possible discharge from any RPZ drain. Ensure adequate drainage is provided.
6. Appropriate protection for fire systems according to system classification (AWWA M-14).
7. Parallel units should be considered at facilities where water service cannot be interrupted.

PLAN REVIEW:

1. GENERAL:

- a. The preferred installation is a separate building as close as possible to the property line, with a floor 6" minimum above grade. Where containment at the property line cannot be achieved or is waived, installation of the device may be done immediately inside the building.
- b. Site plans must be provided to demonstrate that containment is achieved, and the location of the device is satisfactory.
- c. Ideally, no platforms or ladders should be required for access.
- d. Provide adequate heat to prevent freezing.
- e. Provide adequate lighting to facilitate servicing.
- f. Below grade or basement installations are acceptable for DCVA's. RPZ's are allowed below grade only if at least one of the following conditions is met:
 - i. Adequate gravity drainage system to accommodate relief valve on RPZ's.
 - ii. Level alarms are installed to detect flow from the device.
 - iii. Sump pumps are sized to accommodate a relief valve failure and are connected to an auxiliary power supply.
 - iv. Floor area and volume below device could handle discharge from a relief valve failure. For 2" and smaller units, 2000 cu.ft. is acceptable. For larger units, the time to submerge the unit based on maximum discharge rate shall not be less than 8 hours.

2. CLEARANCES:

- a. All assemblies must be installed with a centerline height of 30-60" above the floor.
- b. All RPZ devices must have 18" minimum clearance between bottom of relief valve and floor to prevent submersion and provide access for servicing.
- c. A minimum of 12 inches clearance must be provided above and behind the device for servicing.
- d. 30 inches minimum clearance shall be provided in front of the device to the nearest wall or obstruction.
- e. Devices shall be adequately supported and/or restrained to prevent movement.

3. DRAINAGE:

- a. Drainage shall be provided to accommodate discharge during testing or relief valve discharge.
- b. For RPZ devices, drainage must be sized to accommodate intermittent discharge and catastrophic failure of the relief valve.
- c. Discharge from relief valves must be readily visible. Adequate lighting must be provided.
- d. All drainage from RPZ's must be by gravity drains through a properly designed air gap. Sump pumps are not allowed unless they are sized to accommodate maximum discharge and they are connected to emergency power sources. Manufacturer's air gap fittings may not be sized to accommodate catastrophic discharge. Confirm capacity.
- e. Discharge piping from any relief valve must terminate at least 1 inch above grade or receiving receptacle.
- f. In pit installations, floors pitched to drain, and discharge piping must terminate above grade in an area not subject to flooding. The end of the pipe must be equipped with a rodent screen.

4. NOTES – These notes must appear on the plans:

- a. New and replacement devices must be tested after installation and before entering service. Devices must be tested annually thereafter.
- b. Strainers are recommended prior to each backflow device on non-fire fighting lines **ONLY!** No strainer is to be used on a fire line without Insurance Underwriter approval.
- c. Assemblies should be specified and installed with manufacturer supplied valves.
- d. Water lines should be thoroughly flushed before installation of device to prevent debris fouling the device check valves.
- e. Devices must be mounted horizontally unless approved for vertical installation.
- f. Assemblies should not be installed in areas containing corrosive or toxic gases which could render the device inoperable.
- g. Due to inherent design of RPZ assemblies, fluctuating supply pressure on a low flow condition may cause nuisance dripping. Installation of a soft seated check valve ahead of the RPZ will often hold pressure constant during periods of low flow.
- h. Where the distance between the water meter and device is greater than 10 feet, all exposed piping should be marked "Feed line to Backflow Preventer – Do Not Tap" at 5-foot intervals.
- i. **This note must appear on page 1 of the plans** Orange County Department of Health plan approval is limited to 5 years. Time extensions for plan approval may be granted by the Orange County Department of Health based upon development facts and any new regulations, or guidance, in effect at that time. A new plan submission may be required to obtain a time extension.

§ 179-62. Determination of type of backflow protection device.

A. Categories; rating system; regulation.

(1) An acceptable backflow prevention device must be installed in every service connection to a facility. Three categories shall be considered when determining the degree of hazard posed by a facility and making the subsequent determination of the type of protection device required. The Department recognizes the threat to the public water system arising from cross connections. All threats will be classified by degree of hazard and will require the installation of approved reduced pressure principle backflow prevention devices, "reduce pressure zone assembly," (RPZA) or "double-check valve assembly" (DCVA). The considerations are:

- (a) Use, toxicity and availability of contaminants within the premises.
- (b) Availability of a supplementary supply of water.
- (c) Fire-fighting system evaluation.

(2) Based on these considerations, the Water Distribution Superintendent shall rate a facility as "hazardous," "aesthetically objectionable" or "nonhazardous."

- (a) A hazardous facility must be contained through the use of an RPZA or properly designed air gap.
- (b) An aesthetically objectionable facility must be contained through the use of a DCVA, RPZA or air gap.
- (c) Nonhazardous facilities should be protected through an internal plumbing control program to ensure that plumbing cross connections are adequately protected or eliminated; or through the use of a DCVA, RPZA or air gap.

B. The Water Supply Superintendent or designee shall determine the type of device required for each property and facility. In making this determination, the Water Supply Superintendent may utilize the Sample List of Facilities Requiring Backflow Prevention, prepared by the Department of Health and, if necessary, shall consult with the Orange County Department of Health.

C. Cross-connection control by facility type.

(1) Hazardous types of facilities which shall require installation of an approved reduce pressure zone assembly (RPZA) or air gap in the service connection to the public water distribution system include but are not limited to:

- (a) Sewage and industrial wastewater treatment plants and pumping stations and sewer flushers.
- (b) Paper manufacturing or processing, dye plants, petroleum processing, printing plant, chemical manufacturing or processing, industrial fluid systems, steam generation, rubber processing and tanneries.

- (c) Canneries, breweries, food processing, milk processing, ice manufacturing, meat packers, poultry processing and rendering companies.
 - (d) Hospitals, clinics, laboratories, veterinary hospitals, mortuaries and embalmers.
 - (e) Metal plating, photo processing, laundries, commercial car washes, commercial refrigeration systems and dry-cleaning establishments.
 - (f) Commercial greenhouses, spraying and irrigation systems using weedicides, herbicides and exterminators.
 - (g) Boiler systems, cooling towers or internal firefighter systems using conditioners, inhibitors and corrosion control chemicals.
 - (h) Residential units with lawn and irrigation systems with chemical injection.
 - (i) Residential units or facilities with service provided by both the village water distribution system and private well or water supply.
- (2) Aesthetically objectionable types of facilities which shall require installation of an approved double-check valve, RPZA or air gap in the service connection of the public water distribution system are those which include but are not limited to:
- (a) Customer fire protection loops and fire storage tanks with no chemical additives.
 - (b) High temperature potable water.
 - (c) Utilization for food-grade dyes.
 - (d) Complex plumbing systems in commercial buildings, such as but not limited to beauty salons, churches, apartment buildings, gas stations, supermarkets, nursing homes, construction sites and carnivals.
 - (e) Residential units with lawn and irrigation systems.
- (3) The above lists are not all-inclusive. The type of backflow prevention device required for each facility shall be determined by the Water Supply Superintendent or designee as set forth above.
- (4) Strainers. The Department strongly recommends that all new retrofit installation of reduced pressure principle devices and double-check valve backflow preventers include the installation of strainers located immediately upstream of the backflow device, except on fire lines. The installation strainers will preclude the fouling of backflow devices due to both foreseen and unforeseen circumstances occurring to the water supply system, such as water main repairs, water main breaks, fires, periodic cleaning and flushing of mains,

etc. These occurrences may stir up debris within the water main that will cause fouling of backflow devices installed without the benefit of strainers. No strainer is to be used on a fire line without the approval of the insurance underwriters having jurisdiction.

§ 179-63. Testing; owner liability for costs.

- A. The testing of backflow prevention devices shall be performed on an annual basis by the owner of any system requiring the same, and the cost of such testing shall be borne by the owner of the system. The testing procedures shall conform to the requirements of the New York State Department of Health and the Orange County Department of Health. Test results shall be submitted to the Water Supply Superintendent within 30 days of the completion of such testing. Late submissions of annual test results shall be subject to an administrative processing fee as set forth in Chapter 104, Fees.
- B. Any backflow preventer which fails during a periodic test will be repaired or replaced. When repairs are necessary, upon completion of the repair the device will be retested at the owner's expense to ensure correct operation. High-hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than 30 days after the test date will be established. The owner is responsible for spare parts, repair tools or a replacement device. Parallel installation of two devices is an effective means of the owner ensuring that uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.
- C. Backflow prevention devices will be tested more frequently than specified above in cases where there is a history of test failures and the Department feels that, due to the degree of hazard involved, additional testing is warranted. Cost of the additional testing will be borne by the owner.

**INSTRUCTIONS FOR COMPLETING DOH-1013 (9/91)
REPORT ON TEST AND MAINTENANCE OF BACKFLOW PREVENTION DEVICE**

PART A - To Be Completed by Certified Tester

- # Indicate the test year and whether initial or annual test.
- # Complete public water supply name, customer account number (if available) and county.
- # Complete block and lot (if available) for New York City Metropolitan area tests.
- # Complete facility name, address and specific location of device (e.g., meter room, etc.)
- # Complete device information including manufacturer, type, model, size and serial number.
- # Complete section A Test Before Repair and indicate:
 - C Whether check valve #1 leaked or closed tight. For RPZ devices, the pressure drop across the check valve must be at least 5.0 psid.
 - C Whether check valve #2 leaked or closed tight.
 - C Opening of RPZ differential pressure relief valve - must be at least 2.0 psid or device must be failed and/or repaired.
 - C Complete water system line pressure in psi and indicate test date.
- # Describe any repairs and materials used and the name and license number of the repairer and indicate repair date.
- # Complete A final test section only if repairs have been made.
- # Indicate the water meter number/meter reading and the type of service (describe A other e.g., boiler feed, irrigation line, etc.)
- # Complete the Remarks section if there are any deficiencies.
- # Complete the certification indicating if the device meets or does not meet the requirements at the time of testing - print and sign your name and indicate certificate number and expiration date.
- # Have the property owner (or owner-s agent) certify that test was performed.

PART B - To Be Completed By Design Engineer, Architect or Water Supplier for initial Tests Only

- # Complete name, title, license number, phone number, company name and address.
- # Sign and date form and indicate NYSDOH (or local health department/water supplier).
- # Describe minor installation changes.

After completion, submit copies of test reports to the supplier of water, customer, State or local health department and retain copies for the tester-s personal records.

Report on Test and Maintenance of Backflow Prevention Device

Please use a separate form for each device.

For the year:
 Initial test - Complete entire form
 Annual test - Complete Part A only

Public Water Supply	Account No.	County	Block	Lot
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Facility Name _____	Location of Device _____
Address _____	
Street City Zip	

Device Information	Manufacturer	Type <input type="checkbox"/> RPZ <input type="checkbox"/> DCV	Model	Size (in inches)	Serial Number
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Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve	Line Pressure _____ psi
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Test before repair	Leaked <input type="checkbox"/> Closed tight <input type="checkbox"/>	Leaked <input type="checkbox"/> Closed tight <input type="checkbox"/>	Opened at _____ psi	Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> M D Y
	Pressure drop across first check valve _____ psi			

Describe repairs and materials used	Repaired by Name _____ Lic # _____	Date repaired: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> M D Y
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Final test	Closed tight <input type="checkbox"/>	Closed tight <input type="checkbox"/>	Opened at _____ psi	Date <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> M D Y
	Pressure drop across check valve _____ psi			

Water Meter Number	Meter Reading	Type of Service: (check one) <input checked="" type="checkbox"/> Domestic <input checked="" type="checkbox"/> Fire <input checked="" type="checkbox"/> Other _____
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Remarks (Describe deficiencies: bad gaskets, outlets before the device, connections between the device and point of entry, missing or inadequate airgaps, etc.)

Certification: This device meets, does NOT meet, the requirements of an acceptable containment device at the time of testing
 I hereby certify the foregoing data to be correct.

Print Name _____ Certified Tester No. _____ Signature _____ Expiration Date _____

Property owners (or owners agent) certification that test was performed:

Print Name _____ Title _____ Signature _____ Telephone _____

Design Engineer/Architect/Supplier Certification
 Certification that installation is in accordance with the approved plans. (To be completed by the design engineer or architect or water supplier.)

I hereby certify that this installation is in accordance with the approved plans.

Name	Title	Date	NYS DOH Log #
License Number	Phone () _____	m d y	
Representing		Describe minor installation changes	
Address			
City	State Zip		
Signature _____			

NOTE: Send one completed copy to the designated health department representative and one copy to the water supplier within 30 days of the testing device. Notify owner and water supplier immediately if device fails test and repairs cannot immediately be made.