

Reclaimed Water Information Packet

January 2026

Overview

This information packet is intended to provide a summary of reclaimed water requirements for civil infrastructure and appurtenances, as well as requirements for premise plumbing and irrigation systems utilizing reclaimed water. Construction of all reclaimed water infrastructure, appurtenances, premise plumbing, and irrigation systems shall be in conformance with Virginia law and Loudoun Water-approved construction plans and permits. The written information, exhibits, and pictures contained within this document are intended as a guide. Please reference Loudoun Water’s Engineering Design Manual, Standard Details, and Approved Materials List when needed [Engineering Design Manual | loudounwater.org](http://loudounwater.org). If you have questions regarding any requirement, please contact your Loudoun Water Inspector who will coordinate with the Reclaimed Water Team to address issues should they arise.

Reclaimed Water Project Responsibilities

<p>Engineering</p> <ul style="list-style-type: none"> • Civil infrastructure plan approval and revisions • Construction permit • Meter sizing • Provide EFA and ERWCAA • Provide Reclaimed Water Service Agreement • Project invoicing <p>Reclaimed Water Program</p> <ul style="list-style-type: none"> • Reclaimed water regulations • Irrigation system plan approval and inspection • Interior signage and labeling inspection for cooling systems and premise plumbing • Witness differential pressure check 	<p>Inspections</p> <ul style="list-style-type: none"> • Verify approved materials and conformance to standard details • Pressure test and flushing of mains • Pressure test of service lines • Meter crock/vault inspection • Beneficial Use inspection for lot, lateral, and service • Exterior signage and labeling inspection • Coordination of CC/BF and RW Program inspections 	<p>Field Service</p> <ul style="list-style-type: none"> • Meter Setter/Yoke Inspection • Meter Delivery • Meter Installation for sizes 1” • MIU and register installation • Account setup <p>CC/BF</p> <ul style="list-style-type: none"> • Cross connection and backflow inspection • Storage tank inspection 	<p>Contactor</p> <ul style="list-style-type: none"> • Certificate of insurance • Pre-con and installation after permit release • Install signage and labeling to meet requirements • Perform backflow test and differential pressure check • Request meters online <p>Developer</p> <ul style="list-style-type: none"> • Submit signed Developer Agreement and construction permit • Submit bond • Submit signed deed of easement and record after counter-sign • Submit estimated flows and supporting documentation for facility water and sewer use • Execute EFA, ERWCAA, and Reclaimed Water Service Agreement • Request connection invoice online and pay all fees and charges
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Signage and Labeling Requirements

Under Virginia law, signage and labeling requirements are in place for civil infrastructure and associated appurtenances, as well as for private reclaimed water system installations, including premise plumbing and irrigation systems. Please refer to the Signage and Labeling Requirements Summary Table in this packet for standards set forth by the Commonwealth of Virginia.

Pressure Testing and Flushing Requirements

1. Reclaimed water mains are subject to pressure testing. The same techniques and standards for potable water mains apply to reclaimed water mains.
2. Flushing of reclaimed water mains shall be coordinated with your Loudoun Water Inspector. Without exception, **reclaimed water mains must be flushed to a sanitary manhole**. Reclaimed water main flushing is subject to chlorine sampling, performed by the Loudoun Water inspector. Flushing shall continue until the 2.0 mg/L Total Residual Chlorine target is achieved.

Reclaimed Water Meter Release Requirements

After completion of the following requirements, contractors can request meter delivery at: www.loudounwater.org/content/water-meter-request.

1. **Executed Acknowledgements:** An executed Estimated Flow Acknowledgement (EFA) and Estimated Reclaimed Water Capacity Allocation Acknowledgement (ERWCAA) are required prior to project invoicing.
2. **Payment of All Loudoun Water Fees and Charges:** Charges include Availability Charges and Meter Charges. You may request your Connection Invoice to pay availability and meter charges at: www.loudounwater.org/content/request-connection-invoice.
3. **Executed Reclaimed Water Service Agreement:** Loudoun Water must receive an executed Reclaimed Water Service Agreement for each building being supplied reclaimed water.
4. **Beneficial Use Inspection:** This inspection is performed by the Loudoun Water Inspector assigned to your project. Completed and passed lot, lateral, service and

purity inspections, as required, are necessary for sewer/blowdown, domestic, process/industrial, and reclaimed water meter release.

5. **Cross-Connection and Backflow (CC/BF) Inspection:** CC/BF inspections are coordinated by your Loudoun Water Inspector and performed by a member of the CC/BF Team. The CC/BF inspection ensures that the installation has the proper separation between public and private water systems, as well as the reclaimed water and potable water systems serving a building. After testing, backflow test sheets must be submitted by the Contractor to Loudoun Water online prior to meter release at: www.loudounwater.org/content/backflow-prevention-assembly-test-report.

Please note that Loudoun Water requires an **air gap and RPZs** for buildings with water storage tanks that use both reclaimed water and potable water. The air gap required by Loudoun Water shall be provided on the potable water system supply line to the storage tank. The air gap must be at least 8” or two pipe diameters, whichever is larger, at the atmospheric overflow point of the system.

6. **Reclaimed Water Signage & Labeling Inspection and Differential Pressure Check:** The reclaimed water signage & labeling inspection and differential pressure check are coordinated by your Loudoun Water Inspector and performed by a member of the Reclaimed Water Team. The signage and labeling inspection ensures that all process plumbing, cooling system components, and/or irrigation system installations meet all standards set forth by Virginia law and the Reclaimed Water Service Agreement. The differential pressure check is performed as a final confirmation that the reclaimed system and the potable system are separate from one another. This check is usually performed by temporarily opening the bypass on the industrial and reclaimed water meter yokes before the meter is set. If a pressure test cannot be performed, then a dye test must be used to demonstrate separation between reclaimed water and potable water systems.

Reclaimed Water Signage and Labeling Requirements

	Size	Material	Identifier	Statement	Letter Height	Frequency	Striping
O U T D O O R	Larger than 1" diameter	DIP	Purple Polyethylene Encasement with statement stamped on bag or stickers applied to bag	Caution: Reclaimed Water Do Not Drink	2" - 3"	Every 3' - 4' on both (opposite) sides of the pipe	N/A
		PVC	Use purple PVC. If purple PVC is not used, follow encasement standards above for DIP	Caution: Reclaimed Water Do Not Drink	2" - 3"	Every 3' - 4' on both (opposite) sides of the pipe	N/A
P I P E I N G	Smaller than 1" diameter	Copper	The pipe shall be painted, wrapped or taped purple.	Labeling not required.			A taped purple stripe that is at least 25% the width of the diameter may be applied if pipe is not painted or purple.
		PVC		Labeling not required.			
I N D O O R P I P E I N G	Larger than 1" diameter	DIP	The pipe shall be painted, wrapped or taped purple.	Caution: Reclaimed Water Do Not Drink	2" - 3"	Every 3' - 4' on both (opposite) sides of the pipe	Purple Vertical Stripes surrounding the statement if using insulation
		PVC		Caution: Reclaimed Water Do Not Drink	2" - 3"	Every 3' - 4' on both (opposite) sides of the pipe	
	Smaller than 1" diameter	Metal		Easily read from a distance of 2'	Every 1' on both sides of the pipe		
		Plastic		Easily read from a distance of 2'	Every 1' on both sides of the pipe		
A P P U R T E N A N C E	Valve covers, meter crocks, hose bibs, RPZ enclosure, flushing hydrants	<p>Shall be purple, by paint, tape or other permanent means.</p> <p>The cover of valves and crocks shall be painted purple and all piping within the crock shall be purple. The valve body or other moving part does not need to be painted.</p> <p>All appurtenances that would allow the reclaimed water to exit the pipe and are accessible to the public need to have a tag attached that reads: Reclaimed Water. The tag shall be purple with contrasting black or white text.</p> <p>Where public access is not possible a sign may be hung on the entrance to the restricted area. See the requirements for signage below.</p> <p>Valve covers shall be a square shape and be painted purple.</p> <p>All above ground hose bibs or hand operated connections must differ materially from potable connections and be clearly tagged as reclaimed.</p>					
S I G N S			<p>Sign must be purple.</p> <p>The sign must read: Caution: Reclaimed Water Do Not Drink</p> <p>If the sign is for an irrigation system the wording must be changed to: "This Area Irrigated with Reclaimed Water. Do Not Drink."</p> <p>The sign must have the international symbol for non-potable water.</p> <p>The sign must be able to be read by a person of normal vision at a distance of 50'.</p> <p>Signs will be posted at the access points of the area to be irrigated.</p>				

Example Photographs for Reclaimed Water Installations



PVC Pipe Installation



Reclaimed Pipe



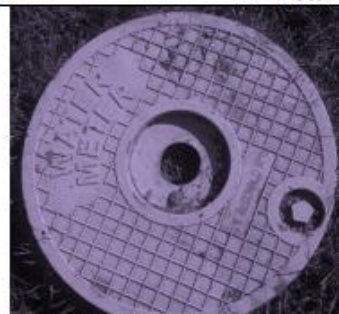
Reclaimed Water and Irrigation Signs



DIP Installation



Meter Pit With Low Rise Setter



Reclaimed Meter Crock Cover



Use octagon shape outside of roadways.



Reclaimed Water Valve Cover vs. Potable Water Valve Cover. Use square shape in roadways.

 <p>Irrigation Cover</p>	<p>Must be</p>  <p>Irrigation Cover</p>
 <p>Reclaimed Water RPZ Enclosure</p>	 <p>Irrigation Piping</p>
 <p>Interior Labeling With Insulation</p>	 <p>Label for Insulated Pipe</p>  <p>Painted DIP</p>
 <p>Must be purple, labeled and locked</p>	

Required Submittals and Guidance for Reclaimed Water Irrigation Projects

Required Submittals: Contractors must submit an irrigation system design and materials list to Loudoun Water for review and approval. Installation of an irrigation system utilizing reclaimed water shall not commence until Loudoun Water approval is granted.

1. Irrigation System Design

The system design must describe locations for:

- Area Irrigated
- Meter
- Backflow Preventer
- Irrigation Controller
- Valves
- Rotor Heads
- Piping

2. Materials and System Components

Contractors must submit cut-sheets or manufacturer's product description for the following materials:

- Irrigation Controller
- Soil Moisture Sensor or Rain Sensor
- Piping
- Rotor Heads
- Control Valves
- Valve Boxes
- Meter Crock and Cover
- Notification Signs

State and Local Requirements: Irrigation that uses reclaimed water must be supplemental. This is defined in 9VAC25-740-10 as irrigation, which in combination with rainfall, meets but does not exceed the water necessary to maximize production or optimize growth of the irrigated vegetation. To ensure supplemental irrigation, Loudoun Water requires a soil moisture sensor or rain gauge to be used in combination with an irrigation controller. Use the following guidance documents to ensure that your reclaimed water irrigation design and materials selection meet state and local requirements:

- Requirements Applicable to Irrigation Reuse of Reclaimed Water (DEQ, Current Version)
- Reclaimed Water Information Packet (Loudoun Water, Current Version)

General Requirements

- There must be no overspray of surface waters, including wetlands, with reclaimed water. There must be no application of reclaimed water to the ground when it is saturated, frozen or covered with ice or snow, or during periods of rainfall.
- There must be no application of reclaimed water during winds of sufficient strength to cause overspray or aerosol drift into or beyond setback areas around the irrigation specified in the regulation.
- The method of irrigation must minimize human contact with reclaimed water.
- Reclaimed water must be prevented from coming into contact with drinking fountains, water coolers, or eating surfaces.
- There must be no nuisance conditions resulting from irrigation reuse of reclaimed water.

Identification of Reclaimed Water Distribution Components

- Labeling, color coding, taping, tagging or other identification for reclaimed water distribution components is required. These components include piping, valves and valve boxes, hand-operated connections (hose bibs, spigots, etc.), outlets (fire hydrants, backflow assemblies, etc.), and other appurtenances.
- All outlets must be tagged and materially different from potable components.
- All reclaimed water piping (above and below ground) must display the warning statement “CAUTION: RECLAIMED WATER - DO NOT DRINK” and be identified by one or more methods described in 9VAC25-740-110.B.8. Written identification is also required for all mechanical appurtenances of a reclaimed water distribution system, stating, at a minimum, “RECLAIMED WATER.”