



Georgia State Amendments to the International Plumbing Code (2006 Edition)



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**GEORGIA STATE MINIMUM STANDARD PLUMBING CODE
(INTERNATIONAL PLUMBING CODE WITH GEORGIA STATE AMENDMENTS)**

The INTERNATIONAL PLUMBING CODE, 2006 Edition, published by the International Code Council, when used in conjunction with these Georgia State Amendments and all other Georgia State Amendments to the INTERNATIONAL PLUMBING CODE, 2006 Edition, shall constitute the official *Georgia State Minimum Standard Plumbing Code*.

GEORGIA STATE AMENDMENTS

CODE REFERENCE:

- (a) Replace all references to the ICC *Electrical Code* with references to the *Georgia State Minimum Standard Electrical Code (National Electrical Code with Georgia State Amendments)*.
- (b) Replace all references to the *International Energy Conservation Code (IECC)* with references to the *Georgia State Minimum Standard Energy Code (IECC with Georgia State Supplements and Amendments)*. The *Georgia State Minimum Standard Energy Code* shall be used for efficiency and coefficient of performance ratings of plumbing equipment.

**GEORGIA STATE MINIMUM
REQUIREMENTS FOR BOILERS/WATER HEATERS AND PRESSURE VESSELS**

The State's minimum requirements for boilers/water heaters and pressure vessels over 200,000 BTU/h (58.61 kW), 210 degrees Fahrenheit or 120 gallons capacity shall be established by O.C.G.A. Title 34, Chapter 11 and the Rules and Regulations of the Georgia Department of Labor.

****Revise the International Plumbing Code, 2006 Edition, as follows:***

**SECTION 301
GENERAL**

*** Revise Section 301.4 'Connections to water supply' to add exception as follows:**

301.4 Connections to water supply.

Exception: Reclaimed water provided from a reclaimed wastewater treatment facility permitted by the Environmental Protection Division may be used to supply water closets, urinals, trap primers for floor drains and floor sinks, water features and other uses approved by the Authority Having Jurisdiction, in motels, hotels, apartment and condominium buildings, and commercial, industrial, and institutional buildings, where the individual guest or occupant does not have access to plumbing. Also other systems that may use a lesser quality of water than potable water such as water chillers, carwashes or an industrial process may be supplied with reclaimed water provided from a reclaimed wastewater treatment facility permitted by the Environmental Protection Division.

(Effective January 1, 2011)

APPENDIX J RECLAIMED WATER SYSTEMS FOR BUILDINGS

* Adopt new Appendix J ‘Reclaimed Water Systems for Buildings’ as part of the State Minimum Standard Plumbing Code as follows:

SECTION J101 GENERAL

J101.1 Scope. The provisions of this appendix shall apply to the installation, construction, alteration, and repair of reclaimed water systems intended to supply water closets, urinals, trap primers for floor drains and floor sinks, and other commercial and/or industrial processes where a lower quality of water than potable water may be used. Reclaimed water may be used in motels, hotels, apartment and condominium buildings, and commercial, industrial, and institutional buildings, water features and other uses approved by the Authority Having Jurisdiction, where the individual guest or occupant does not have access to the plumbing system for repairs or modifications.

Exception: The use of reclaimed water for irrigation is regulated separately by the Georgia Department of Natural Resources, Environmental Protection Division.

J101.2 Permitting. It shall be unlawful for any person to construct, install, alter, or cause to be constructed, installed, or altered any reclaimed water system within a building or on a premise without first obtaining a permit to do such work from the Authority Having Jurisdiction.

J101.2.1 Permit requirements. No permit for any reclaimed water system shall be issued until complete plumbing plans, with appropriate data satisfactory to the Authority Having Jurisdiction, have been submitted and approved. No changes or connections shall be made to either the reclaimed water system or the potable water system within any site containing a reclaimed water system without approval by the Authority Having Jurisdiction.

J101.3 Connection to potable water. The reclaimed water system shall have no connection to any potable water system, with or without mechanical backflow prevention devices. If reclaimed water is utilized on the premises, all potable water supplies shall be provided with appropriate backflow protection, as required by the Authority Having Jurisdiction.

J101.4 Testing. Before the building may be occupied, the installer shall perform the initial cross-connection test in the presence of the Authority Having Jurisdiction and the Authority Having Jurisdiction shall rule the test successful before final approval is granted. The initial cross-connection test is defined in Section J106.1.2.

J101.5 Definitions. The following terms shall have the meaning shown herein.

RECLAIMED WATER. Water from a reclaimed wastewater treatment facility permitted by the Georgia Environmental Protection Division to provide reclaimed water that meets the standards established in the Georgia Environmental Protection Division *Guidelines for Water Reclamation and Urban Water Reuse*. Specifically excluded from this definition are gray water, which is defined in Appendix C of this Code and rainwater, which is defined in Appendix I of this Code.

SECTION J102 DRAWINGS AND SPECIFICATIONS

J102 Drawings and specifications. The Authority Having Jurisdiction may require any or all of the following information to be included with or in the plot plan before a permit is issued for a reclaimed water system.

1. A plot plan drawn to scale and completely dimensioned, showing lot lines, structures, location of all present and proposed potable water supplies and meters, water wells, streams, auxiliary water supply and systems, reclaimed water supply and meters, drain lines, and locations of private sewage disposal systems and 100 percent replacement areas, or building sewer connected to the public sewer.
2. Details of construction, including riser diagrams or isometrics, and a full description of the complete installation, including installation methods, construction, and materials as required by the Authority Having Jurisdiction. To the extent permitted by structural conditions, reclaimed water risers within the toilet room, including appurtenances such as air/vacuum relief valves, pressure reducing valves, etc., shall be installed in the opposite end of the room containing the served fixtures from the potable water risers or opposite walls as applicable. To the extent permitted by structural conditions, reclaimed water headers and branches off risers shall not be run in the same wall or ceiling cavity of the toilet room where potable water piping is run.
3. Detailed initial and scheduled testing requirements as required by Section J106.
4. A reclaimed water system shall be designed by a person registered or licensed to perform plumbing design work.

SECTION J103 MATERIALS AND IDENTIFICATION

J103.1 Pipe materials. Reclaimed water pipe, valves and fittings shall conform to the requirements of Tables 605.4, 702.1 and 702.2.

J103.2 Identification. Distribution piping and reservoirs shall be identified as containing nonpotable reclaimed water. Piping shall be purple and identified in accordance with Section 608.8.

SECTION J104 INSTALLATION REQUIREMENTS

J104.1 Installation requirements. The installation of reclaimed water systems shall meet the following requirements:

1. Hose bibbs shall not be allowed on reclaimed water piping systems.
2. The reclaimed water system and the potable water system within the building shall be provided with the required appurtenances (valves, air/vacuum relief valves, etc.) to allow for deactivation or drainage as required for cross-connection testing in Section J106.1.2.
3. Reclaimed water pipes shall not be run or laid in the same trench as potable water pipes. A 3-foot (914 mm) horizontal separation shall be maintained between pressurized buried reclaimed and potable water piping. Buried potable water pipes crossing pressurized reclaimed water pipes shall be laid a minimum of 12 inches (305 mm) above the reclaimed water pipes. Reclaimed water pipes laid in the same trench or crossing building sewer or drainage piping shall be installed in compliance with Sections 603 and 703 of this Code. Reclaimed water pipes shall be protected similar to potable water pipes.

SECTION J105 SIGNS

J105.1 Room entrance signs. All installations using reclaimed water for water closets and/or urinals shall be identified with signs. Each sign shall contain 0.5-inch (12.7 mm) letters of a highly visible color on a contrasting background. The location of the sign(s) shall be such that the sign(s) shall be visible to all users. The number and location of the signs shall be approved by the Authority Having Jurisdiction and shall contain the following text: TO CONSERVE WATER, THIS BUILDING USES RECLAIMED WATER TO FLUSH TOILETS AND URINALS.

J105.2 Equipment room signs. Each equipment room containing reclaimed water equipment shall have a sign posted with the following wording in 1-inch (25.4 mm) letters on a purple background: CAUTION NONPOTABLE RECLAIMED WATER, DO NOT DRINK. DO NOT CONNECT TO DRINKING WATER SYSTEM. NOTICE: CONTACT BUILDING MANAGEMENT BEFORE PERFORMING ANY WORK ON THIS WATER SYSTEM and displaying the international symbol for "Do Not Drink". This sign shall be posted in a location that is visible to anyone working on or near reclaimed water equipment.

J105.3 Tank-type water closets. Where tank-type water closets are flushed with reclaimed water, the tank shall be labeled: NONPOTABLE RECLAIMED WATER - DO NOT DRINK and shall display the international symbol for "Do Not Drink".

J105.4 Valve access door signs. Each reclaimed water valve within a wall shall have its access door into the wall equipped with a warning sign with wording on a purple background. The size, shape and format of the sign shall be substantially the same as that specified in Section J105.2.

The signs shall be attached inside the access door frame and shall hang in the center of the access door frame. This sign requirement shall be applicable to any and all access doors, hatches, etc., leading to reclaimed water piping and appurtenances.

J105.5 Valve seals. Each valve or appurtenance shall be sealed in a manner approved by the Authority Having Jurisdiction. After the reclaimed system has been approved and placed into operation. These seals shall either be a crimped lead wire seal, or a plastic break-away seal which, if broken after system approval, shall be deemed conclusive evidence that the reclaimed water system has been accessed. The seals shall be purple with the words "RECLAIMED WATER", and shall be acceptable to the Authority Having Jurisdiction.

J106 TESTS AND INSPECTIONS

J106.1 Required tests and inspections. Reclaimed water piping shall be inspected and tested as outlined in this Code for testing of potable water piping. In addition an initial and subsequent scheduled cross-connection inspections and tests shall be performed on both the potable and reclaimed water systems. The potable and reclaimed water system shall be isolated from each other and independently inspected and tested to ensure there is no cross-connection. The testing and inspection procedures of Sections J106.1.1 through J106.1.5 shall be performed as required.

Exception: Alternate testing requirements shall be permitted by the Authority Having Jurisdiction.

J106.1.1 Visual system inspection. Prior to commencing the cross-connection testing, a system inspection shall be conducted by the Authority Having Jurisdiction.

1. Meter locations of the reclaimed water and potable water lines shall be checked to verify that no modifications were made, or cross-connections are visible.
2. All pumps and equipment, equipment room signs, and exposed piping in the equipment room shall be checked.
3. All valves shall be checked to insure that valve lock seals are still in place and intact. All valve control door signs shall be checked to verify that no signs have been removed.

J106.1.2 Cross-connection test. Prior to commencing the cross-connection test a visual system inspection must be completed as required by Section J106.1.1. The following procedure shall be followed by the applicant in the presence of the Authority Having Jurisdiction to determine if a cross-connection occurred.

1. The potable water system shall be activated and pressurized. The reclaimed water system shall be shut down and completely drained.

2. The potable water system shall remain pressurized for a minimum period of time specified by the Authority Having Jurisdiction while the reclaimed water system is empty. The minimum period the reclaimed water system is to remain depressurized shall be determined on a case by case basis, taking into account the size and complexity of the potable and reclaimed water distribution systems, but in no case shall that period be less than 1 hour.
3. All fixtures, potable and reclaimed, shall be tested and inspected for flow. Flow from any reclaimed water system outlet shall indicate a cross-connection. No flow from a potable water outlet would indicate that it could be connected to the reclaimed water system.
4. The drain on the reclaimed water system shall be checked for flow during the test and at the end of the period.
5. The potable water system shall then be completely drained.
6. The reclaimed water system shall then be activated and pressurized.
7. The reclaimed water system shall remain pressurized for a minimum period of time specified by the Authority Having Jurisdiction while the potable water system is empty. The minimum period the potable water system is to remain depressurized shall be determined on a case by case basis, but in no case shall that period be less than one (1) hour.
8. All fixtures, potable and reclaimed shall be tested and inspected for flow. Flow from any potable water system outlet shall indicate a cross-connection. No flow from a reclaimed water outlet would indicate that it could be connected to the potable water system.
9. The drain on the potable water system shall be checked for flow during the test and at the end of the period.
10. If there is no flow detected in any of the fixtures that would have indicated a cross-connection, the potable water system shall be re-pressurized.

J106.1.3 Annual cross-connection testing. Annual cross-connection testing of the reclaimed water system shall be required by the Authority Having Jurisdiction, unless site conditions do not require it. The annual cross-connection testing shall be conducted in accordance with Section J106.1.2.

Exception: In lieu of performing the cross-connection test annually the reclaimed water may be continuously dyed with food grade vegetable dye prior to being supplied to the fixtures. The dye shall be added in an amount equal to the amount of dye consumed through daily water usage of the building(s) in order that the reclaimed water is always dyed. Under no circumstances shall the cross-connection test occur less often than once in a four year period.

J106.1.4 Color testing. Color testing to check for cross-connections between the reclaimed water system and potable water system is required. The reclaimed water supplied to the building(s) shall be dyed with a food grade vegetable dye in an amount adequate to dye the reclaimed water for a 24 hour period. The color tests shall occur on a fixed schedule which shall be determined by the Authority Having Jurisdiction and shall be maintained in writing.

J106.1.5 Cross-connection discovered. In the event that a cross-connection is discovered, the following procedure, in the presence of the Authority Having Jurisdiction, shall be activated immediately:

1. Reclaimed water piping to the building shall be shut down at the meter, and the reclaimed water riser shall be drained.
2. Potable water piping to the building shall be shut down at the meter.
3. The cross-connection shall be uncovered and disconnected.
4. The building shall be retested as required by Sections J106.1.1 and J106.1.2.
5. The potable water system shall be chlorinated with 50 PPM chlorine for 24 hours.
6. The potable water system shall be flushed after 24 hours, and a standard bacteriological test shall be performed. If test results are acceptable, the potable water system may be recharged.

SECTION J107 SIZING

J107.1 Sizing. Reclaimed water piping shall be sized as outlined in this Code for sizing potable water piping.
(Effective January 1, 2011)

End of Amendments.