



Georgia State Amendments to the International Plumbing Code (2012 Edition)



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Revised January 1, 2014

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

The INTERNATIONAL PLUMBING CODE, 2012 Edition, published by the International Code Council, when used in conjunction with these and any other Georgia State Amendments to the INTERNATIONAL PLUMBING CODE, 2012 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 any 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 25, Chapter 15 and the Rules and Regulations of the Office of Insurance and Safety Fire Commissioner.

****Revise the International Plumbing Code, 2012 Edition, as follows:***

**CHAPTER 1
SCOPE AND ADMINISTRATION**

***Delete Chapter 1 'Scope And Administration' without substitution. Chapter 1 to remain in the Code as a reference and guide for local governments in development of their own Administrative Procedures.**

(Effective January 1, 2014)

**CHAPTER 2
DEFINITIONS**

**SECTION 202
GENERAL DEFINITIONS**

***Add new definition of 'High Efficiency Plumbing Fixtures and Fittings' to read as follows:**

HIGH EFFICIENCY PLUMBING FIXTURES AND FITTINGS.

Dual flush water closet. A dual flush water closet or toilet that the average flush volume of two reduced flushes and one full flush does not exceed 1.28 gallons and is listed to the WaterSense Tank-Type High Efficiency Toilet Specification.

Kitchen faucet or kitchen faucet replacement aerator. A kitchen faucet or kitchen faucet replacement aerator that allows a flow of no more than 2.0 gallons of water per minute.

Lavatory faucet or lavatory faucet replacement aerator. A lavatory faucet or lavatory faucet replacement aerator that allows a flow of no more than 1.5 gallons per minute at a pressure of 60 pounds per square inch and is listed to the WaterSense High Efficiency Lavatory Faucet Specification.

Nonwater urinal. A urinal that is designed to receive and convey only liquid waste through a trap seal into the gravity drainage system without the use of water for such function.

Single flush water closet. A single flush water closet or toilet, including gravity, pressure assisted, and electro-hydraulic tank types, that the average flush volume does not exceed 1.28 gallons and is listed to the WaterSense Tank-Type High Efficiency Toilet Specification.

Shower head. A shower head that allows a flow of no more than the average of 2.5 gallons of water per minute at 60 pounds per square inch of pressure.

Urinal. A urinal and associated flush valve that uses no more than 0.5 gallons of water per flush and is listed to the WaterSense Specification for Flushing Urinals.

(Effective January 1, 2014)

*Add new definition of ‘Lavatory Faucet’ to read as follows:

LAVATORY FAUCET. A faucet that discharges into a lavatory basin in a domestic or commercial installation.

(Effective January 1, 2014)

*Delete the definition of ‘Lead-free Pipe and Fittings’ in its entirety without substitution.

(Effective January 1, 2014)

*Revise the definition of ‘Plumbing Fixture’ to read as follows:

PLUMBING FIXTURE. A receptacle or device that receives water, waste or both and discharges water, waste or both into a drainage system, and that is either permanently or temporarily connected to the water distribution system of the premises and demands a supply of water there-from; discharges wastewater, liquid-borne waste materials or sewage either directly or indirectly to the drainage system of the premises; or requires both a water supply connection and a discharge to the drainage system of the premises. The term includes a kitchen sink, utility sink, lavatory, bidet, bathtub, shower, urinal, toilet, water closet, or drinking water fountain.

(Effective January 1, 2014)

*Rename and revise the definition of ‘Fixture Fitting’ to read as follows:

PLUMBING FIXTURE FITTING. A device that controls and directs the flow of water or conveys sanitary waste. The term includes a sink faucet, lavatory faucet, showerhead, or bath filler.

Supply fitting. A fitting that controls the volume and/or directional flow of water and is either attached to or accessible from a fixture, or is used with an open or atmospheric discharge.

Waste fitting. A combination of components that conveys the sanitary waste from the outlet of a fixture to the connection to the sanitary drainage system.

(Effective January 1, 2014)

*Add new definition of ‘Pressurized Flushing Device’ to read as follows:

PRESSURIZED FLUSHING DEVICE. A device that contains a valve that:

1. Is attached to a pressurized water supply pipe that is of sufficient size to deliver water at the necessary rate of flow to ensure flushing when the valve is open; and
2. Opens on actuation to allow water to flow into the fixture at a rate and in a quantity necessary for the operation of the fixture and gradually closes to avoid water hammer.

(Effective January 1, 2014)

*Revise the definition of ‘Public sewer’ to read as follows:

SEWER

Public sewer. That part of the drainage system of pipes installed or maintained by a city, township, county, public utility company or other public entity, on public property, in the street or in an approved dedicated easement of public or community use.

(Effective January 1, 2014)

*Add new definition of ‘Toilet’ to read as follows:

TOILET. A water closet.

(Effective January 1, 2014)

*Add new definition of ‘Water Closet’ to read as follows:

WATER CLOSET. A fixture with a water-containing receptor that receives liquid and solid body waste and on actuation conveys the waste through an exposed integral trap into a drainage system and which is also referred to as a toilet.

(Effective January 1, 2014)

*Add new definition of ‘WaterSense’ to read as follows:

WATERSENSE. A voluntary program of the United States Environmental Protection Agency designed to identify and promote water efficient products and practices.

(Effective January 1, 2014)

*Add new definition of ‘WaterSense Listed Plumbing Fixture or Plumbing Fixture Fitting’ to read as follows:

WATERSENSE LISTED PLUMBING FIXTURE OR PLUMBING FIXTURE FITTING.

A plumbing fixture or plumbing fixture fitting that has been tested by an accredited third-party certifying body or laboratory in accordance with the WaterSense Program of the United States Environmental Protection Agency, and has been listed (certified) by such body or laboratory as meeting the performance and efficiency requirements of the program, and has been authorized by the program to use its label.

(Effective January 1, 2014)

**CHAPTER 3
GENERAL REGULATIONS**

*Add new Section 300 ‘General Applicability Standards’ as follows:

**SECTION 300
GENERAL APPLICABILITY STANDARDS**

300.1 Scope. The provisions of this Code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of plumbing systems within the state of Georgia. This Code shall also regulate nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel-gas-fired water heaters and water heater venting systems shall be regulated by the *International Fuel Gas Code*.

300.2 Appendices. Appendices are not enforceable unless they are specifically referenced in the body of the Code or adopted by the Department of Community Affairs or the Authority Having Jurisdiction.

300.3 Intent. The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of plumbing equipment and systems.

300.4 Severability. If any section, subsection, sentence, clause or phrase of this Code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this Code.

300.5 General. The provisions of this Code shall apply to all matters affecting or relating to structures, as set forth in Section 300. Where, in any specific case, different sections of this Code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

300.6 Maintenance. All plumbing systems, materials and appurtenances, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the

original design in a safe and sanitary condition. All devices or safeguards required by this Code shall be maintained in compliance with the code edition under which they were installed. The owner or the owner's designated agent shall be responsible for maintenance of plumbing systems. To determine compliance with this provision, the code official shall have the authority to require any plumbing system to be reinspected.

300.7 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition and approved.

(Effective January 1, 2014)

SECTION 301 GENERAL

*Add new Section 301.1.1 'Requirements for high efficiency plumbing fixtures' as follows:

301.1.1 Requirements for high efficiency plumbing fixtures. The installation of high efficiency plumbing fixtures shall be required in all new construction.

(Effective January 1, 2014)

*Add new Section 301.1.2 'Waiver for requirements of high efficiency plumbing fixtures' as follows:

301.1.2 Waiver of requirements for high efficiency plumbing fixtures. Counties and municipalities are permitted to adopt an ordinance that grants a waiver for an exemption to the requirements for the installation of high efficiency plumbing fixtures relative to new construction and to the repair or renovation of an existing building under the following conditions:

1. When the repair or renovation of the existing building does not include the replacement of the plumbing or sewage system servicing toilets, faucets, or shower heads within such existing building;
2. When such plumbing or sewerage system within such existing building, because of its capacity, design, or installation, would not function properly if the toilets, faucets, or shower heads required by this part were installed;
3. When such system is a well or gravity flow from a spring and is owned privately by an individual for use in such individual's personal residence; or
4. When units to be installed are:
 - a. Specifically designed for use by person with disabilities;
 - b. Specifically designed to withstand unusual abuse or installation in a penal institution; or
 - c. Toilets for juveniles.

(Effective January 1, 2014)

*Revise exception to Section 301.3 'Connections to drainage system' to read as follows:

301.3 Connections to drainage system.

Exception: Bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to discharge to the sanitary drainage system where such fixtures discharge to an approved gray water system for flushing of water closets and urinals or for subsurface irrigation. Gray water may also be used for other purposes when designed by an engineer licensed in the State of Georgia and the system is approved by the Authority Having Jurisdiction.

(Effective January 1, 2014)

* 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, 2014)

SECTION 303 MATERIALS

*Revise Section 303.1 ‘Identification’ to read as follows:

303.1 Identification. Each length of pipe, trap, fixture, material and device utilized in a plumbing system shall bear the identification of the manufacturer. If not provided on the packaging or crating or by other approved documentation, each pipe fitting, utilized in a plumbing system, shall bear the identification of the manufacturer.

(Effective January 1, 2014)

*Revise Section 303.3 ‘Plastic pipe, fittings and components’ to read as follows:

303.3 Plastic pipe, fittings and components. All plastic pipe, fittings and components shall conform to NSF 14.

(Effective January 1, 2014)

*Delete Section 303.4 ‘Third-party certification’ and substitute to as follows:

303.4 Application. All plumbing products shall comply with the referenced standards and shall be identified in accordance with Section 303.1.

(Effective January 1, 2014)

**SECTION 305
PROTECTION OF PIPES AND
PLUMBING SYSTEM COMPONENTS**

*Revise Section 305.4.1 ‘Sewer depth’ to read as follows:

305.4.1 Sewer depth. Building sewers shall be a minimum of 6 inches (152.4 mm) below grade.
(Effective January 1, 2014)

**SECTION 306
TRENCHING, EXCAVATION AND BACKFILL**

*Revise Section 306.3 ‘Backfilling’ to read as follows:

306.3 Backfilling. Loose earth free from rocks, broken concrete, frozen chunks and other rubble, shall be placed in the trench in 6-inch (152.4 mm) layers and tamped in place until the crown of the pipe is covered by a minimum of 6 inches (152.4 mm) of tamped earth. The backfill under and beside the pipe shall be compacted for pipe support. Backfill shall be brought up evenly on both sides of the pipe so that the pipe remains aligned. In instances where the manufacturer’s installation instructions for materials are more restrictive than those prescribed by the Code, the material shall be installed in accordance with the more restrictive requirement.
(Effective January 1, 2014)

*Add new Section 306.5 ‘Open trenches’ as follows:

306.5 Open trenches. All excavations required to be made for the installation of a building sewer, building drainage system, or any part thereof within the walls of a building shall be open trench work and shall be kept open until the piping has been inspected, tested and approved.
(Effective January 1, 2014)

**SECTION 308
PIPING SUPPORT**

*Delete Section 308.6 ‘Sway bracing’ without substitution.
(Effective January 1, 2014)

*Delete Section 308.7 ‘Anchorage’ without substitution.
(Effective January 1, 2014)

**SECTION 311
TOILET FACILITIES FOR WORKERS**

*Delete Section 311 ‘Toilet Facilities For Workers’ without substitution.
(Effective January 1, 2014)

**SECTION 312
TESTS AND INSPECTIONS**

*Revise Section 312.1 ‘Required tests’ to read as follows:

312.1 Required tests. The permit holder shall make the applicable tests prescribed in Sections 312.2 through 312.10 to determine compliance with the provisions of this Code. The permit holder shall give reasonable advance notice to the code official when the plumbing work is ready for tests. The equipment, material, power and labor necessary for the inspection and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests. All plumbing system piping shall be tested with either water or by air as allowed by the piping manufacturer’s instructions. After the plumbing fixtures have been set and their traps filled with water, the entire drainage system shall be submitted to final tests. The code official shall require the removal of any cleanouts if necessary to ascertain whether the pressure has reached all parts of the system.
(Effective January 1, 2014)

*Revise Section 312.5 ‘Water supply system test’ to read as follows:

312.5 Water supply system test. Upon completion of a section of or the entire water supply system, the system, or portion completed shall be tested and proved tight under a water pressure not less than the working pressure of the system; or, by an air test of not less than 50 psi (344 kPa) as allowed by piping manufacturer’s instructions. This pressure shall be held for at least 15 minutes. The water or air utilized for tests shall be from a non-contaminated source. The required tests shall be performed in accordance with this Section and Section 107.
(Effective January 1, 2014)

**SECTION 314
CONDENSATE DISPOSAL**

*Delete Section 314 ‘Condensate Disposal’ without substitution.
(Effective January 1, 2014)

**CHAPTER 4
FIXTURES, FAUCETS AND FIXTURE FITTINGS**

**SECTION 401
GENERAL**

*Add new Section 401.4 ‘Prohibited locations’ as follows:

401.4 Prohibited Locations. No floor drains or other plumbing fixtures except electric water heaters shall be installed in a room containing air handling machinery when such room is used as a plenum.

Exception: Deep-seal trap floor drains consisting of a minimum 4-inch (102 mm) seal and supplied with a trap primer connected to a water distribution pipe shall be permitted.
(Effective January 1, 2014)

SECTION 403 MINIMUM PLUMBING FACILITIES

*Revise Table 403.1 ‘Minimum Number of Required Plumbing Fixtures^a’ to delete the requirements for ‘service sink’ without substitution.
(Effective January 1, 2014)

*Revise Table 403.1 ‘Minimum Number of Required Plumbing Fixtures^a’ by adding the following requirement under the column labeled ‘Other’ for line number ‘7’ descriptions:

Table 403.1

Minimum Number of Required Plumbing Fixtures^a

‘One- and two-family dwellings’ and ‘Apartment house’: Detached single-family, duplex and multi-family dwelling structures three stories or less in height shall have not less than two exterior hose bibs, sill cocks or outside hydrants with one being located on the side or rear of the structure.

(Effective January 1, 2014)

*Revise Table 403.1 ‘Minimum Number of Required Plumbing Fixtures^a’ Footnote ‘f’ to read as follows:

Table 403.1

Minimum Number of Required Plumbing Fixtures^a

f. Drinking fountains are not required for an occupant load of 25 or fewer.

(Effective January 1, 2014)

*Revise exception of Section 403.3.3 ‘Location of toilet facilities in occupancies other than malls’ to read as follows:

403.3.3 Location of toilet facilities in occupancies other than malls.

Exception: The location and maximum travel distances to required employee toilet facilities in factory, storage and industrial occupancies are permitted to exceed that required by this section, provided that the location and maximum travel distance are approved.

(Effective January 1, 2014)

SECTION 406 AUTOMATIC CLOTHES WASHERS

*Revise Section 406.2 ‘Waste connection’ to read as follows:

406.2 Waste connection. The waste from an automatic clothes washer shall discharge through an air break into a standpipe in accordance with Section 802.4 or into a laundry sink. The trap and fixture drain for an automatic clothes washer standpipe shall be a minimum of 2 inches (51

mm) in diameter. The automatic clothes washer fixture drain shall connect to a building drain, branch drain or drainage stack a minimum of 3 inches (76 mm) in diameter. Automatic clothes washers that discharge by gravity shall be permitted to drain to a waste receptor or an approved trench drain.

(Effective January 1, 2014)

SECTION 416 LAVATORIES

*Revise Section 416.5 ‘Tempered water for public hand-washing facilities’ as follows:

416.5 Tempered water for public hand-washing facilities. *Tempered water* may be delivered from lavatories and group wash fixtures located in public toilet facilities provided for customers, patrons and visitors. If provided, *tempered water* shall be delivered through an *approved* water-temperature limiting device that conforms to ASSE 1070 or CSA B125.3.

(Effective January 1, 2014)

SECTION 419 URINALS

*Revise Section 419.1 ‘Approval’ to read as follows:

419.1 Approval. Urinals shall conform to ANSI Z124.9, ASME A112.19.2/CSA B45.1, ASME A112.19.19 or CSA B45.5. Urinals shall conform to the water consumption requirements of Section 604.4. Water-supplied urinals shall conform to the hydraulic performance requirements of ASME A112.19.2/CSA B45.1 or CSA B45.5.

High efficiency urinals with pressurized flushing devices and flush tank (gravity type) flushing devices shall be listed to the WaterSense- Specification for Flushing Urinals, and shall conform to ASME A112.19.2/CSA B45.1.

Non-water urinals shall conform to ASME A112.19.3/CSA B45.4 or A112.19.19, CSA B45.4. Where non-water urinals are employed, they shall be cleaned and maintained in accordance with the manufacturer’s instructions after installation. Where nonwater urinals are installed they shall have a properly sized water distribution line roughed-in to the urinal location at a minimum height of 56 inches (1,422 mm) to allow for the installation of an approved backflow prevention device in the event of a retrofit. Such water distribution lines shall be installed with shut-off valves located as close as possible to the distributing main to prevent the creation of dead ends. Where nonwater urinals are installed, a minimum of one water supplied fixture rated at a minimum of one water supply fixture unit shall be installed upstream on the same drain line to facilitate drain line flow and rinsing.

(Effective January 1, 2014)

SECTION 420 WATER CLOSETS

*Revise Section 420.1 ‘Approval’ to read as follows:

420.1 Approval. Water closets shall conform to the water consumption requirements of Section 604.4 and shall conform to ANSI Z124.4, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5. Water closets shall conform to the hydraulic performance requirements of ASME A112.19.2/CSA B45.1. Water closet tanks shall conform to ANSI Z124.4, ASME A112.19.2/CSA B45.1, ASME A112.19.3/CSA B45.4 or CSA B45.5. Electrohydraulic water closets shall comply with ASME A112.19.2/CSA B45.1.

High efficiency single flush and dual-flush toilets or water closets shall be listed to the WaterSense- Tank-Type High-Efficiency Toilet Specification, and shall conform to ASME A112.19.2/CSA B45.1 and ASME A112.19.14.

(Effective January 1, 2014)

SECTION 424 FAUCETS AND OTHER FIXTURE FITTINGS

*Revise Section 424.1 'Approval' to read as follows:

424.1 Approval. Faucets and fixture fittings shall conform to ASME A112.18.1/CSA B125.1. Faucets and fixture fittings that supply drinking water for human ingestion shall conform to the requirements of NSF 61, Section 9. Flexible water connectors exposed to continuous pressure shall conform to the requirements of Section 605.6.

High efficiency lavatory faucets or lavatory faucet replacement aerators in private use, such as, in residences and apartments, and private (nonpublic) restrooms in hotels and hospitals shall be listed to the WaterSense High Efficiency Lavatory Faucet Specification.

424.1.1 Faucets and supply fittings. Faucets and supply fittings shall conform to the water consumption requirements of Section 604.4.

424.1.2 Waste fittings. Waste fittings shall conform to ASME A112.18.2/CSA B125.2, ASTM F 409 or to one of the standards listed in Tables 702.1 and 702.4 for above-ground drainage and vent pipe and fittings.

(Effective January 1, 2014)

CHAPTER 5 WATER HEATERS

SECTION 501 GENERAL

*Add new Section 501.9 'Water heaters over 200,000 BTU/h' to read as follows:

501.9 Water heaters over 200,000 BTU/h. 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 25, Chapter 15 and the Rules and Regulations of the Office of Insurance and Safety Fire Commissioner.
(Effective January 1, 2014)

SECTION 504 SAFETY DEVICES

*Delete Section 504.6 ‘Requirements for discharge piping’ and substitute the following:

504.6 Requirements for discharge piping. The relief valve shall discharge full size, separately to a safe place of disposal such as a concrete floor, outside the building, an indirect waste receptor, pan, or other approved location. The discharge shall terminate in a manner that does not cause injury to occupants in the immediate area or structural damage to the building. When the relief valve discharge piping goes upward, a thermal expansion control device shall be installed on the cold water distribution or service pipe in accordance with Section 607.3.2. If the discharge pipe is trapped, provisions shall be made to drain the low point of the trapped portion of the discharge pipe.

(Effective January 1, 2014)

*Delete Section 504.7 ‘Required pan’ and substitute the following:

504.7 Required pan. Pans shall be installed under storage-type water heaters or water storage tanks installed in attics or above ceilings. The pan shall be galvanized steel having a minimum thickness of 24 gauge, or other pans approved for such use. Pans are not required under tankless water heaters.

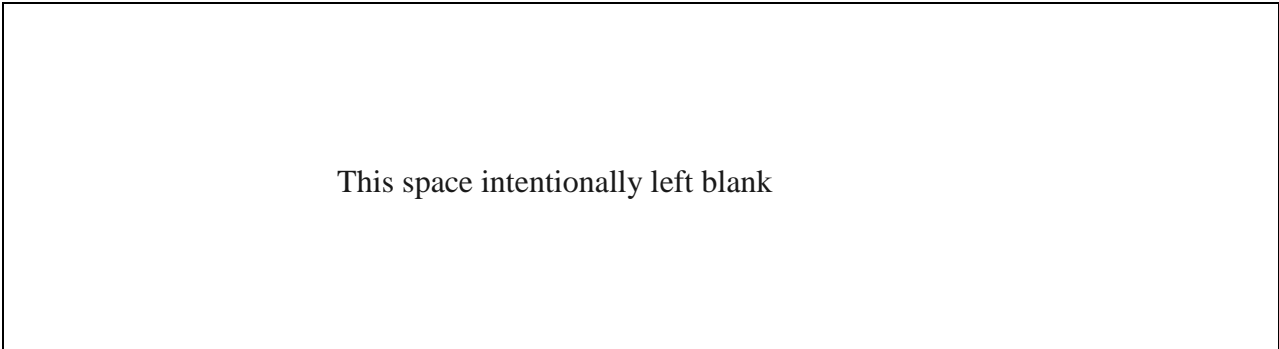
(Effective January 1, 2014)

*Add new Section 506 ‘Minimum Capacities For Residential Water Heaters’ as follows:

SECTION 506 MINIMUM CAPACITIES FOR RESIDENTIAL WATER HEATERS

506.1 General. Water heaters installed in residential occupancies shall be sized in accordance with Table 506 or the manufacturer’s recommendations. The water heater must at a minimum meet the storage requirements or the first hour rating (FHR) requirements of Table 506.

(Effective January 1, 2014)



*Add Table 506 ‘Minimum Capacities for Residential Water Heaters’ as follows:

TABLE 506
MINIMUM CAPACITIES FOR RESIDENTIAL WATER HEATERS^{1,2,3}

Fuel		Gas	Elec.	Oil	Gas	Elec.	Oil	Gas	Elec.	Oil	Gas	Elec.	Oil
# of Bedrooms		1			2			3			----		
1 to 1 ½ Baths	Storage (gal)	20	20	20	30	30	30	30	40	30	----	----	----
	FHR (gal)	42	42	42	54	54	54	54	54	54	----	----	----
# of Bedrooms		2			3			4			5		
2 to 2 ½ Baths	Storage (gal)	30	40	30	40	50	30	40	50	30	50	65	30
	FHR (gal)	54	54	54	60	60	60	60	60	60	67	67	67
# of Bedrooms		3			4			5			6		
3 to 3 ½ Baths	Storage (gal)	40	50	30	50	65	30	50	65	30	50	80	40
	FHR(gal)	60	60	60	67	67	67	67	67	67	80	80	80

FHR=First Hour Rating, 1 gal=3.7854 L, 1 gph=1.05 mL/s

1. Tankless Water Heaters shall be sized and installed per manufacturer’s recommendations.
2. Water heaters for single family dwellings having more than six bedrooms and/or 3 ½ baths shall be sized per manufacturer’s recommendations.
3. Table 506 reflects the minimum requirements for one or multiple water heating units.
(Effective January 1, 2014)

**CHAPTER 6
WATER SUPPLY AND DISTRIBUTION**

**SECTION 604
DESIGN OF BUILDING WATER DISTRIBUTION SYSTEM**

*Revise Table 604.4 ‘Maximum Flow Rates And Consumption For Plumbing Fixtures and Fixture Fittings’ to read as follows:

**TABLE 604.4
MAXIMUM FLOW RATES AND CONSUMPTION FOR
PLUMBING FIXTURES AND FIXTURE FITTINGS**

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY^b
Lavatory, private	1.5 gpm at 60 psi ^f
Lavatory, public (metering)	0.25 gallons per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head ^a	2.5 gpm at 60 psi ^f
Sink faucet	2.0 gpm at 60 psi ^f
Urinal	0.5 gallons per flushing cycle ^f
Water closet	1.28 gallons per flushing cycle ^{c, d, e, f}

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.

- a. A hand-held shower spray is a shower head.
 - b. Consumption tolerances shall be determined from referenced standards.
 - c. For flushometer valves and flushometer tanks, the average flush volume shall not exceed 1.28 gallons.
 - d. For single flush water closets, including gravity, pressure assisted and electro-hydraulic tank types, the average flush volume shall not exceed 1.28 gallons.
 - e. For dual flush water closets, the average flush volume of two reduced flushes and one full flush shall not exceed 1.28 gallons.
 - f. See 2014 GA Amendment to Section 301.1.2 ‘Waiver from requirements of high efficiency plumbing fixtures’.
- (Effective January 1, 2014)

**SECTION 605
MATERIALS, JOINTS AND CONNECTIONS**

*Add new Section 605.2.1 ‘Lead content of water supply pipe and fittings utilized to supply water for human consumption’ as follows:

605.2.1 Lead content of water supply pipe and fittings utilized to supply water for human consumption. Pipes, pipe fittings, plumbing fittings, and fixtures, utilized in the water supply system and providing water for human consumption shall have not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.
(Effective January 4, 2014)

*Revise Section 605.14.3 ‘Soldered joints’ to read as follows:

605.14.3 Soldered joints. Solder joints shall be made in accordance with the methods of ASTM B 828 except a flux conforming to NSF 61 shall be used. Cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solder and fluxes. “Lead free” shall mean a chemical composition equal to or less than 0.2-percent lead.
(Effective January 1, 2014)

*Revise Section 605.15.4 ‘Soldered joints’ to read as follows:

605.15.4 Soldered joints. Solder joints shall be made in accordance with the methods of ASTM B 828 except a flux conforming to NSF 61 shall be used. All cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solders and fluxes. “Lead free” shall mean a chemical composition equal to or less than 0.2-percent lead.
(Effective January 1, 2014)

**SECTION 606
INSTALLATION OF THE BUILDING WATER
DISTRIBUTION SYSTEM**

*Revise Section 606.2 ‘Location of shutoff valves’ to add Location #4 as follows:

606.2 Location of shutoff valves.

4. Shutoff valves to water supplies for refrigerators with automatic icemakers shall be accessible on the same floor as said refrigerators.
(Effective January 1, 2014)

SECTION 607 HOT WATER SUPPLY SYSTEM

*Revise Section 607.1 ‘Where required’ to read as follows:

607.1 Where required. In residential occupancies, hot water shall be supplied to plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. In nonresidential occupancies, hot water shall be supplied for culinary purposes, cleansing, laundry or building maintenance purposes. In nonresidential occupancies, hot water or tempered water shall be supplied for bathing and washing purposes except for hand-washing facilities. Accessible hand washing facilities regardless of the facility shall not be required to be supplied with hot water or tempered water.
(Effective January 1, 2014)

SECTION 608 PROTECTION OF POTABLE WATER SUPPLY

*Revise Section 608.16.5 ‘Connections to lawn irrigation systems’ to read as follows:

608.16.5 Connections to lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check backflow prevention assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where interconnected chemical dispensers are used in conjunction with lawn irrigation systems, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.
(Effective January 1, 2014)

SECTION 610 DISINFECTION OF POTABLE WATER SYSTEM

*Revise Section 610.1 ‘General’ to read as follows:

610.1 General. New or repaired potable water systems shall be flushed and purged of deleterious matter. Systems that cannot be adequately flushed and purged may require disinfection in accordance with a prescribed method. In the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this Section shall apply. This requirement shall apply to “on-site” or “in-plant” fabrication of a system or to a modular portion of a system.

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.
2. The system or part thereof shall be filled with a water/chlorine solution containing not less than 50 parts per million (50 mg/L) of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled

with a water/chlorine solution containing not less than 200 parts per million (200 mg/L) of chlorine and allowed to stand for 3 hours.

3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.
 4. The procedure shall be repeated where shown by a bacteriological examination that the contamination remains present in the system.
- (Effective January 1, 2014)

CHAPTER 7 SANITARY DRAINAGE

SECTION 701 GENERAL

*Revise Section 701.2 ‘Sewer required’ to read as follows:

701.2 Sewer required. Buildings in which plumbing fixtures are installed and premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system.
(Effective January 1, 2014)

SECTION 703 BUILDING SEWER

*Revise Section 703.2 ‘Drainage pipe in filled ground’ to read as follows:

703.2 Drainage pipe in filled ground. Where a building sewer or building drain is installed on unstable fill or unstable ground, the drainage pipe shall conform to one of the standards for ABS plastic pipe, cast-iron pipe, copper or copper-alloy tubing, or PVC plastic listed in Table 702.3.
(Effective January 1, 2014)

SECTION 705 JOINTS

*Revise Section 705.8.2 ‘Solvent cementing’ to read as follows:

705.8.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. If a primer is required by the solvent manufacturer, a purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.
(Effective January 1, 2014)

*Revise Section 705.9.3 ‘Soldered joints’ to read as follows:

705.9.3 Soldered joints. Solder joints shall be made in accordance with the methods of ASTM B 828 except a flux conforming to NSF 61 shall be used. All cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solders and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead.
(Effective January 1, 2014)

*Revise Section 705.10.3 'Soldered joints' to read as follows:

705.10.3 Soldered joints. Solder joints shall be made in accordance with the methods of ASTM B 828 except a flux conforming to NSF 61 shall be used. All cut tube ends shall be reamed to the full inside diameter of the tube end. All joint surfaces shall be cleaned. The joint shall be soldered with a solder conforming to ASTM B 32. The joining of water supply piping shall be made with lead-free solders and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead.
(Effective January 1, 2014)

*Revise Section 705.14.2 'Solvent cementing' to read as follows:

705.14.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. If a primer is required by the solvent manufacturer, a purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B137.3, CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be permitted above or below ground.
(Effective January 1, 2014)

SECTION 706 CONNECTIONS BETWEEN DRAINAGE PIPING AND FITTINGS

*Revise Section 706.3 'Installation of fittings' to delete exception and read as follows:

706.3 Installation of fittings. Fittings shall be installed to guide sewage and waste in the direction of flow. Change in direction shall be made by fittings installed in accordance with Table 706.3. Change in direction by combination fittings, side inlets or increasers shall be installed in accordance with Table 706.3 based on the pattern of flow created by the fitting. Double sanitary tee patterns shall not receive the discharge of back-to-back fixtures or appliances with pressure or pumping action discharge. Water closets shall not be combined with fixtures other than water closets on a double drainage fitting.
(Effective January 1, 2014)

*Delete Section 706.4 'Heel- or side-inlet quarter bends' without substitution.
(Effective January 1, 2014)

SECTION 708 CLEANOUTS

*Delete Section 708.3.1 'Horizontal drains within buildings' and substitute the following:

708.3.1 Horizontal drains within buildings. Each horizontal drainage pipe shall be provided with a cleanout at the upstream end of the pipe and shall be provided with cleanouts located not more than 100 feet (30 480 mm) apart.

Exceptions: The following plumbing arrangements are acceptable in lieu of the upstream cleanout:

1. "P" traps connected to the drainage piping with slip joints or ground joint connections.
2. "P" traps into which floor drains, shower drains, or tub drains with removable strainers discharge.
3. "P" traps into which the straight-through type waste and overflow discharge with the overflow connecting to the top of the tee.
4. "P" traps into which residential washing machines discharge.
5. Test tees or cleanouts in a vertical pipe above the flood-level rim of the fixtures that the horizontal pipe serves and not more than 4 feet (1219 mm) above the finish floor.
6. Cleanout near the junction of the building drain and the building sewer which may be rodded both ways.
7. Water closets for the water closet fixture branch only.

(Effective January 1, 2014)

*Revise Section 708.3.2 'Building sewers' to read as follows:

708.3.2 Building sewers. Building sewers shall be provided with cleanouts located not more than 100 feet (30 480 mm) apart measured from the upstream entrance of the cleanout. An additional cleanout shall be provided within 10 feet (3048 mm) of the public right of way. For building sewers 8 inches (203 mm) and larger, manholes shall be provided and located at each change in direction and at intervals of not more than 400 feet (122 m). Manholes and manhole covers shall be of an approved type.

(Effective January 1, 2014)

*Delete Section 708.3.4 'Base of stack' without substitution.

*Revise Section 708.3.5 'Building drain and building sewer junction' to read as follows:

708.3.5 Building drain and building sewer junction. There shall be a cleanout installed at or near the junction of the building drain and the building sewer. The cleanout shall be outside the building wall unless otherwise approved and shall be brought up to finished ground level. An approved two-way cleanout is allowed to be used at this location to serve as a required cleanout for both the building drain and building sewer.

(Effective January 1, 2014)

*Revise first sentence of Section 708.7 'Minimum size' to read as follows:

708.7 Minimum size. Cleanouts shall be the same nominal size as the pipe they are connected to, up to 4 inches (102 mm). For pipes larger... (Remainder of Section left unchanged)
(Effective January 1, 2014)

CHAPTER 9 VENTS

SECTION 903 VENT TERMINALS

*Revise Section 903.1 'Roof extension' to read as follows:

903.1 Roof extension. Open vent pipes that extend through a roof shall be terminated not less than 6 inches (155 mm) above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall terminate not less than 7 feet (2134 mm) above the roof.
(Effective January 1, 2014)

SECTION 909 FIXTURE VENTS

*Delete exception to Section 909.1 'Distance of trap from vent' without substitution.
(Effective January 1, 2014)

SECTION 913 WASTE STACK VENT

*Revise Section 913.2 'Stack installation' to read as follows:

913.2 Stack installation. The waste stack shall be vertical. *Fixture* drains shall connect separately to the waste stack. The stack shall not receive the discharge of water closets or urinals.
(Effective January 1, 2014)

SECTION 914 CIRCUIT VENT

*Revise Section 914.2 'Vent connection' to read as follows:

914.2 Vent connection. The circuit vent connection shall be located between the two most upstream fixture drains. The vent shall connect to the horizontal branch and shall be installed in accordance with Section 905. The circuit vent may receive waste discharge from fixtures located within the same branch interval, provided that the wet portion remains the same size as the horizontal branch.
(Effective January 1, 2014)

**SECTION 915
COMBINATION WASTE AND VENT SYSTEM**

* Revise Section 915.2.2 'Connection' to read as follows:

915.2.2 Connection. The combination drain and vent system shall be provided with a dry vent connected at any point within the system or the system shall connect to a horizontal drain that is vented in accordance with one of the venting methods specified in this Chapter. Combination drain and vent systems connecting to building drains or waste stacks shall be provided with a dry vent. The vent connection to the combination drain and vent pipe shall extend vertically a minimum of 6 inches (152 mm) above the flood level rim of the highest fixture being vented before offsetting horizontally.
(Effective January 1, 2014)

**CHAPTER 10
TRAPS, INTERCEPTORS AND SEPARATORS**

**SECTION 1002
TRAP REQUIREMENTS**

*Revise first paragraph of Section 1002.1 'Fixture traps' to read as follows:

1002.1 Fixture traps. Each plumbing fixture shall be separately trapped by a water-seal trap, except as otherwise permitted by this Code. The trap shall be placed as close as possible to the fixture outlet. The vertical distance from the fixture outlet to the trap weir shall not exceed 24 inches (610 mm). The distance of a clothes washer standpipe above a trap shall conform to Section 802.4. A fixture shall not be double trapped.
(Effective January 1, 2014)

*Revise Section 1002.4 'Trap seals' to read as follows:

1002.4 Trap seals. Each fixture trap shall have a liquid seal of not less than 2 inches (51 mm) and not more than 4 inches (102 mm), or deeper for special designs relating to accessible fixtures. Where a trap seal is subject to loss by evaporation, the trap seal shall be protected by a trap seal primer or other approved method. A trap seal primer valve shall conform to ASSE 1018 or ASSE 1044.
(Effective January 1, 2014)

**SECTION 1003
INTERCEPTORS AND SEPARATORS**

*Delete exception to Section 1003.4 'Oil separators required' and substitute as follows:

1003.4 Oil separators required.

Exception: In elevator pits where oil containment complies with the Rules and Regulations of the Office of Insurance and Safety Fire Commissioner, no additional oil separator shall be required. At repair garages, car-washing facilities, and factories where oily and flammable liquid wastes are produced, separators shall be installed into which all oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

(Effective January 1, 2014)

CHAPTER 13 GRAY WATER RECYCLING SYSTEMS

*Delete Chapter 13 ‘Gray Water Recycling Systems’ in its entirety and substitute as follows:

CHAPTER 13 GRAY WATER RECYCLING SYSTEMS

SECTION 1301 GENERAL

1301.1 Scope. The provisions of this Chapter shall govern the materials, design, construction and installation of gray water systems for flushing of water closets and urinals. Gray water may also be used for other purposes when designed by an engineer licensed in the state of Georgia and the system is approved by the Authority Having Jurisdiction.

1301.2 Health and Safety. Humans shall not contact gray water, except as required to maintain the gray water treatment and distribution system. Nothing contained in this Chapter shall be construed to prevent the local government from mandating compliance with stricter requirements than those contained herein, where such requirements are essential in maintaining safe and sanitary conditions or from prohibiting gray water systems.

1301.3 Definition. The following terms shall have the meaning shown herein.

CONDENSATE. Condensed water collected from the surfaces of an air conditioning unit’s evaporator coils or a dehumidifier unit’s evaporator coils.

GRAY WATER. Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays.

1301.4 Permits. Check with the local Authority Having Jurisdiction for permit requirements.

1301.5 Installation. In addition to the provisions of Section 1301, systems for flushing of water closets and urinals shall comply with Section 1302. Except as provided for in this Chapter, all systems shall comply with the provisions of the *International Plumbing Code*.

1301.6 Materials. Above-ground drain, waste and vent piping for gray water systems shall conform to one of the standards listed in Table 702.1. Gray water underground building drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

1301.7 Tests. Drain, waste and vent piping for gray water systems shall be tested in accordance with Section 312.

1301.8 Inspections. Check with the local Authority Having Jurisdiction for inspection requirements.

1301.9 Potable water connections. Only connections in accordance with Section 1302.3 shall be made between a gray water recycling system and a potable water system.

1301.10 Waste water connections. Gray water recycling systems shall receive only the waste discharge of bathtubs, showers, lavatories, clothes washers or laundry trays. Although not considered gray water, condensate may be discharged to a gray water system.

1301.11 Collection reservoir. Gray water shall be collected in an approved reservoir constructed of durable, nonabsorbent and corrosion-resistant materials. The reservoir shall be a closed vessel. Access openings shall be provided to allow inspection and cleaning of the reservoir interior.

1301.11.1 Collection reservoir bypass. A full open valve shall be installed prior to the collection reservoir to allow gray water to discharge directly to the sanitary drainage system during maintenance of the gray water system.

1301.12 Filtration. Gray water shall pass through an approved filter system prior to distribution.

1301.13 Overflow. The collection reservoir shall be equipped with an overflow pipe having the same or larger diameter as the influent pipe for the gray water. The overflow pipe shall be indirectly connected to the sanitary drainage system.

1301.14 Drain. A method for draining the collection reservoir shall be provided and shall be indirectly connected to the sanitary drainage.

1301.15 Vent required. The reservoir shall be provided with venting to allow for the induction and release of air to allow for the proper operation of the reservoir.

1301.16 Identification. Plumbing fixtures and reservoirs shall be identified as containing nonpotable gray water. Piping shall be purple and identified in accordance with Section 608.8.

1301.17 Gray water valve identification. Gray water valves shall be identified as nonpotable gray water and also identified as for the purpose of the valve.

**SECTION 1302
SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS**

1302.1 Collection reservoir. The holding capacity of the reservoir shall supplement the daily flushing requirements of the fixtures supplied with gray water.

1302.2 Disinfection. Gray water shall be disinfected by an approved method that employs one or more disinfectants, such as chlorine, iodine, ozone, UV, or other approved disinfectants.

1302.3 Makeup water. Potable water shall be supplied as a source of makeup water for the gray water system. The potable water supply shall be protected against backflow by the installation of an air gap device or in accordance with Section 608. There shall be a full-open valve and a water level control valve located on the makeup water supply line to the collection reservoir.

1302.4 Coloring. The gray water shall be dyed with a food grade vegetable dye before such water is supplied to the fixtures.

1302.5 Materials. Distribution piping shall conform to one of the standards listed in Table 605.4.

**SECTION 1303
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS**

1303.1 Scope. Gray water may be used for subsurface irrigation of landscape and shall be permitted by the local county health department in accordance with Georgia Department of Human Resources regulations as a separate onsite sewage management system. Permits and inspections are required by the local county health department.
(Effective January 1, 2014)

**CHAPTER 14
REFERENCED STANDARDS**

*Revise to add the following new referenced standards for ASME:

Standard Reference Number	Title	Reference in code section number
A112.19.2-2008/CSA B45.1-08	Ceramic Plumbing Fixtures.....	420.1(GA)
A112.19.14-2006	Six-Liter Water Closets Equipped With a Dual Flushing Device.....	420.1(GA)
A112.19.19-2006	Vitreous China Nonwater Urinals.....	419.1(GA)

(Effective January 1, 2014)

*Revise referenced standard ‘NSF’ to read as follows:

NSF	NSF International 789 Dixboro Road Ann Arbor, MI 48105	
	Standard Reference Number	Reference in code section number
61—2008	Drinking Water System Components—Health Effect.....	424.1, 605.3, 605.4, 605.5, 611.3, 705.9.3 (GA), 705.10.3 (GA)

(Effective January 1, 2014)

*Revise to add the following new referenced standards for WATERSENSE:

WATERSENSE	WaterSense U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460	
	Standard Reference Number	Reference in code section number
WaterSense	Tank-Type High-Efficiency Toilet Specification	202 (GA), 420.1 (GA)
WaterSense	Specification for Flushing Urinals	202 (GA), 419.1 (GA)
WaterSense	High-Efficiency Lavatory Faucet Specification.....	202 (GA)

(Effective January 1, 2014)

*Add new Chapter 15 ‘Rain Water Harvesting Systems’ to read as follows:

**CHAPTER 15
RAIN WATER HARVESTING SYSTEMS**

**SECTION 1501
GENERAL**

1501.1 Scope. The provisions of this Chapter shall govern the materials, design, construction and installation of rain water systems for automatic clothes washers, flushing of water closets, flushing of urinals, and cooling tower makeup water. Nothing in this Chapter shall be construed to restrict the use of rain water for outdoor irrigation.

1501.2 Health and safety. Nothing contained in this Chapter shall be construed to prevent the local government from mandating compliance with stricter requirements than those contained herein, where such requirements are essential in maintaining safe and sanitary conditions or from prohibiting rain water systems.

1501.3 Definition. The following terms shall have the meaning shown herein.

CONDENSATE. Condensed water collected from the surfaces of an air conditioning unit's evaporator coils or a dehumidifier unit's evaporator coils.

RAIN WATER. Water collected from runoff of roofs or other structures after a rain event. Rain water may also include condensate.

1501.4 Permits. Check with the local Authority Having Jurisdiction for permit requirements.

1501.5 Installation. In addition to the provisions of Section 1501, systems for flushing of water closets, flushing of urinals, and cooling tower make up water shall comply with Section 1502. Except as provided for in this Chapter, all systems shall comply with the provisions of the *International Plumbing Code*.

1501.6 Materials. Above-ground drain, waste and vent piping for rain water systems shall conform to one of the standards listed in Table 702.1. Rain water underground building drainage and vent pipe shall conform to one of the standards listed in Table 702.2.

1501.7 Tests. Drain, waste and vent piping for rain water systems shall be tested in accordance with Section 312.

1501.8 Inspections. Check with the local Authority Having Jurisdiction for inspection requirements.

1501.9 Potable water connections. Only connections in accordance with Section 1502.2 shall be made between a rain water harvesting system and a potable water system.

1501.10 Collection reservoir. Rain water shall be collected in an approved reservoir constructed of durable, nonabsorbent and corrosion-resistant materials. The reservoir shall be a closed vessel. Access openings shall be provided to allow inspection and cleaning of the reservoir interior.

1501.10.1 Collection reservoir bypass. A full open valve shall be installed prior to the collection reservoir to allow rain water to discharge directly to the normal storm water drainage system during maintenance of the rain water system.

1501.11 Filtration. Rain water shall pass through an approved filter system prior to distribution.

1501.12 Overflow. The overflow pipe discharge shall indirectly flow to the normal storm water drainage system and shall be sized equal to or larger than the influent pipe.

1501.13 Drain. A method for draining the collection reservoir shall be provided and shall not be connected to the sanitary drainage.

1501.14 Venting required. The reservoir shall be provided with venting to allow for the induction and release of air to allow for the proper operation of the reservoir.

SECTION 1502
SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS

1502.1 Disinfection. Rain water shall be disinfected by an approved method that employs one or more disinfectants, such as chlorine, iodine, ozone, UV, or other approved disinfectants.

1502.2 Makeup water. Potable water shall be supplied as a source of makeup water for the rain water system. The potable water supply shall be protected against backflow by the installation of an air gap device or in accordance with Section 608. There shall be a full-open valve and a water level control valve located on the makeup water supply line to the collection reservoir.

1502.3 Materials. Distribution piping shall conform to one of the standards listed in Table 605.4.

1502.4 Identification. Distribution plumbing fixtures and reservoirs shall be identified as containing non-potable water. Piping shall be purple and identified in accordance with Section 608.8.

(Effective January 1, 2014)

* Add new Chapter 16 'Reclaimed Water Systems for Buildings' to read as follows:

CHAPTER 16
RECLAIMED WATER SYSTEMS FOR BUILDINGS

SECTION 1601
GENERAL

1601.1 Scope. The provisions of this Chapter 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.

1601.2 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 premises without first obtaining a permit to do such work from the Authority Having Jurisdiction.

1601.2.1 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.

1601.3 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.

1601.4 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 1606.1.2.

1601.5 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 Chapter 13 of this Code and rain water, which is defined in Chapter 15 of this Code.

SECTION 1602 DRAWINGS AND SPECIFICATIONS

1602.1 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 1606.

4. A reclaimed water system shall be designed by a person registered or licensed to perform plumbing design work.

SECTION 1603 MATERIALS AND IDENTIFICATION

1603.1 Pipe materials. Reclaimed water pipe, valves and fittings shall conform to the requirements of Tables 605.4, 702.1 and 702.2.

1603.2 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 1604 INSTALLATION REQUIREMENTS

1604.1 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 1606.1.2.
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 1605 SIGNS

1605.1 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.

1605.2 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.

1605.3 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".

1605.4 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 1605.2. 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.

1605.5 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.

SECTION 1606 TESTS AND INSPECTIONS

1606.1 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 1606.1.1 through 1606.1.5 shall be performed as required.

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

1606.1.1 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.

1606.1.2 Cross-connection test. Prior to commencing the cross-connection test a visual system inspection must be completed as required by Section 1606.1.1. 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.

1606.1.3 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 1606.1.2.

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.

1606.1.4 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.

1606.1.5 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 1606.1.1 and 1606.1.2.
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 1607 SIZING

1607.1 Sizing. Reclaimed water piping shall be sized as outlined in this Code for sizing potable water piping.
(Effective January 1, 2014)

End of Amendments.