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

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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:

GEORGIA STATE MINIMUM
REQUIREMENTS FOR HIGH EFFICIENCY PLUMBING FIXTURES
AND COOLING TOWERS

High efficiency plumbing fixtures and high efficiency cooling towers shall be installed in all new construction permitted on or after July 1, 2012.

CHAPTER 1
ADMINISTRATION

*Delete Chapter 1 `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, 2007)

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 July 1, 2012)

*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 July 1, 2012)
*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 July 1, 2012)

*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 July 1, 2012)

*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 July 1, 2012)

*Add new definition of 'Toilet' to read as follows:
TOILET. A water closet.
(Effective July 1, 2012)

*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 July 1, 2012)

*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 July 1, 2012)

*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 a 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 July 1, 2012)

*Revise definition of `Branch Vent' to read as follows:
BRANCH VENT. A vent connecting two or more individual vents with a vent stack, stack vent or terminating in the open air.
(Effective January 1, 2007)

CHAPTER 3
GENERAL REGULATIONS
SECTION 300
GENERAL APPLICABILITY STANDARDS

*Add new Section 300 `General Applicability Standards' as follows:

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, 2007)

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 July 1, 2012)

*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 July 1, 2012)

*Revise Section 301.3 'Connections to the sanitary drainage system' to add exception as follows:

301.3 Connections to the sanitary 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, 2009)
* 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)

SECTION 304
RODENTPROOFING

*Revise Section 304.4 `Openings for pipes' to read as follows:
304.4 Openings for pipes. In or on structures where openings have been made in walls, floors or ceilings for the passage of pipes, such openings shall be sealed through the use of metal collars or other approved methods.
(Effective January 1, 2007)

SECTION 305
PROTECTION OF PIPES AND PLUMBING SYSTEM COMPONENTS

*Revise Section 305.6.1 `Sewer depth' to read as follows:
305.6.1 Sewer **depth.** Building sewers shall be a minimum of 6 inches (152.4 mm) below grade. (Effective January 1, 2007)

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, 2007)
*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, 2007)

SECTION 308
PIPING SUPPORT

*Delete Section 308.6 `Sway bracing' without substitution. (Effective January 1, 2007)
*Delete Section 308.7 `Anchorage' without substitution. (Effective January 1, 2007)

SECTION 311
TOILET FACILITIES FOR WORKERS

*Delete Section 311 `Toilet Facilities For Workers' without substitution. (Effective January 1, 2007)

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 312.9 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. 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, 2007)
*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). 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, 2007)

SECTION 314
CONDENSATE DISPOSAL

*Delete Section 314 `Condensate Disposal' without substitution. (Effective January 1, 2007)

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, 2007)

SECTION 403
MINIMUM PLUMBING FACILITIES

*Revise Table 403.1 `Minimum Number of Required Plumbing Fixtures" to delete the requirements for `service sink' without substitution. (Effective January 1, 2007)
*Revise Table 403.1 `Minimum Number of Required Plumbing Fixtures" by adding the following requirement under the column labeled `Other' for line number `7' descriptions; `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, 2007)
*Revise exception of Section 403.4.1 `Location of toilet facilities in occupancies other than covered malls' to read as follows:
403.4.1 Location of toilet facilities in occupancies other than covered 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, 2007)

SECTION 406
AUTOMATIC CLOTHES WASHERS

*Revise Section 406.3 `Waste connection' to read as follows:
406.3 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, 2007)

SECTION 410
DRINKING FOUNTAINS

*Revise Section 410.1 `Approval' to read as follows:
410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M or ASME A112.19.9M and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9. Where water is served in restaurants and/or nightclubs, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, water coolers or bottled water dispensers shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.
(Effective January 1, 2007)

SECTION 419
URINALS

*Revise Section 419.1 'Approval' to read as follows:
419.1 Approval. Urinals shall conform to ANSI Z124.9, ASME A112.19.2M, CSA B45.1 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 A112.19.6, 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 July 1, 2012)
*Delete the 2009 GA Amendment to Section 419.2 'Substitution for water closets'.
(Effective July 1, 2012)

SECTION 420
WATER CLOSETS

*Revise Section 420.1 'Approval' to read as follows:
420.1 Approval. Toilets or water closets shall conform to the water consumption requirements of Section 604.4 and shall conform to ANSI Z124.4, ASME A112.19.2M, CSA B45.1, CSA B45.4 or CSA B45.5. Toilets or water closets shall conform to the hydraulic performance requirements of ASME A112.19.6. Toilet or water closet tanks shall conform to ANSI Z124.4, ASME A112.19.2, ASME A112.19.9M, CSA B45.1, CSA B45.4 or CSA B45.5. Electro-hydraulic toilets or water closets shall comply with ASME A112.19.13.
High efficiency single flush and dual-flush toilets or water closets shall conform to ASME A112.19.2/CSA B45.1 and ASME A112.19.14.
(Effective July 1, 2012)

SECTION 424
FAUCETS AND OTHER FIXTURE FITTINGS

*Revise Section 424.1'Approval' to add the following new paragraph at the end of the section:
Section 424.1 Approval.
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.
(Effective July 1, 2012)

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 boiler/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.
(Effective January 1, 2007)

SECTION 502
INSTALLATION

*Revise Section 502.3 `Water heaters installed in attics' to read as follows:
502.3 Water heaters installed in attics. Attics containing a water heater shall be provided with an opening and unobstructed passageway large enough to allow removal of the water heater. The passageway to the water heater shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide. The passageway shall have continuous solid

flooring not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the water heater. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm) where such dimensions are large enough to allow removal of the water heater. (Effective January 1, 2007)

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, 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, 2007)

*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, 2007)

SECTION 506
MINIMUM CAPACITIES FOR RESIDENTIAL WATER HEATERS

*Add new Section 506 `Minimum Capacities For Residential Water Heaters' as follows:

506.1 General. Water heaters installed in residential occupancies shall be sized in accordance with Table 506. The use of a more energy efficient water heater with a smaller storage capacity is allowed as per the requirements of the note located at the bottom of Table 506.
(Effective January 1, 2009)

*Add new Table 506 `Minimum Capacities For Residential Water Heaters".
(Effective January 1, 2007)

*Replace Table 506 ‘Minimum capacities for residential water heaters’ of the Georgia Amendments revised January 1, 2007 with the following:

TABLE 506
MINIMUM CAPACITIES FOR RESIDENTIAL WATER HEATERS[1]
(SEE NOTE FOR MANUFACTURER'S SPECIFICATIONS)

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	30	30	30	30	30	40	30	----	----	----
# of Bedrooms		**2**			**3**			**4**			**5**		
2 to 2 ½ Baths	Storage (gal)	30	40	30	40	50	30	40	50	50	50	66	30
# of Bedrooms		**3**			**4**			**5**			**6**		
3 to 3 ½ Baths	Storage (gal)	40	50	30	50	66	30	50	66	30	50	80	40

1 gal=3.7854 L
1 gph=1.05 mL/s

NOTE:
1. New Federal Standards have required that water heater efficiency be increased. Some new heaters have smaller storage capacity but supply the same amount of hot water as larger units. When a unit with smaller storage capacity is used, then the manufacturer must confirm that the smaller unit will meet the ability of the larger heater to supply similar amounts of hot water in an allotted period of time.
(Effective January 1, 2009)

CHAPTER 6
WATER SUPPLY AND DISTRIBUTION

SECTION 604
DESIGN OF BUILDING WATER DISTRIBUTION SYSTEM

*Revise Table 604.4 to read as follows:

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

PLUMBING FIXTURES AND FIXTURE FITTINGS

PLUMBING FIXTURE OR FIXTURE FITTING	MAXIMUM FLOW RATE OR QUANTITY[b]

Lavatory, private	1.5[f]gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head[a]	2.5 gpm at 60[f]psi
Sink faucet	2.0[f]gpm at 60 psi
Urinal	0.5[f]gallons per flushing cycle
Water closet	1.28[c, d, e, f]gallons per flushing cycle
For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.	

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 2012 GA Amendment to Section 301.1.2 'Waiver from requirements of high efficiency plumbing fixtures'

(Effective July 1, 2012)

SECTION 605
MATERIALS, JOINTS AND CONNECTIONS

*Revise Section 605.9 `Prohibited joints and connections' to add exception to Item #4 `Saddle-type fittings' as follows:

605.9 Prohibited joints and connections.

4. Saddle-type fittings.

Exception: Saddle-type fittings can be used to connect refrigerator ice makers to an existing residential unit water distribution system provided the manufacturer's installation instructions for the distribution piping do not prohibit the use of saddle fittings. Saddle fittings can be used to install thermal expansion tanks to an existing residential unit water distribution system if approved by the manufacturer of the tank.

(Effective January 1, 2007)

*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. 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 solder and fluxes. "Lead free" shall mean a chemical composition equal to or less than 0.2-percent lead.

(Effective January 1, 2007)

*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, 2007)

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, 2007)

SECTION 607
HOT WATER SUPPLY SYSTEM

*Delete Section 607.1 `Where required' and substitute the following:

607.1 Where **required.** In occupied structures, hot water shall be supplied to all plumbing fixtures and equipment utilized for bathing, washing, culinary purposes, cleansing, laundry or building maintenance. 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 occupancy shall not be required to be supplied with hot water. (Effective January 1, 2007)

*Revise Section 607.2.3 `Recirculating pump' to read as follows:

607.2.3 Recirculating pump. Where a thermostatic mixing valve is installed at the water heater and is used in a system with a hot water recirculating pump, the hot water or tempered water return line shall be routed to the cold water inlet pipe of the water heater and the cold water inlet pipe or the hot water return connection of the thermostatic mixing valve.

(Effective January 1, 2007)

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, 2007)

SECTION 610
DISINFECTION OF POTABLE WATER SYSTEM

*Revise first paragraph of 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. (Remainder of section left unchanged.)

(Effective January 1, 2007)

CHAPTER 7
SANITARY DRAINAGE

SECTION 701
GENERAL

*Revise Section 701.2 `Sewer required' to read as follows:

701.2 Sewer **required.** Every building in which plumbing fixtures are installed and all premises having drainage piping shall be connected to a public sewer, where available, or an approved private sewage disposal system.

(Effective January 1, 2007)

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, 2007)

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 B 137.3, 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, 2007)

*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, 2007)

*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, 2007)

*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 B 137.3, 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, 2007)

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, 2007)
*Delete Section 706.4 `Heel- or side-inlet quarter bends' without substitution. (Effective January 1, 2007)

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, 2007)
*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, 2007)
*Delete Section 708.3.4 `Base of stack' without substitution. (Effective January 1, 2007)
*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, 2007)
*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, 2007)

CHAPTER 9
VENTS

SECTION 904
VENT TERMINALS

*Revise first sentence of Section 904.1 `Roof extension' by replacing "[NUMBER] inches (mm)" with "6 inches (152 mm)". (Remainder of Section left unchanged) (Effective January 1, 2007)

SECTION 906
FIXTURE VENTS

*Delete exception to Section 906.1 `Distance of trap from vent' without substitution. (Effective January 1,

2007)

SECTION 910
WASTE STACK VENT

*Revise first sentence of Section 910.2 `Stack installation' to read as follows:
910.2 Stack installation. The waste stack shall be vertical. Every fixture drain... (Remainder of Section left unchanged)
(Effective January 1, 2007)

SECTION 911
CIRCUIT VENTING

*Revise last sentence of Section 911.2 `Vent connection' to read as follows:
911.2 Vent connection.
(Beginning of Section left unchanged)
...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, 2007)

SECTION 912
COMBINATION DRAIN AND VENT SYSTEM

*Revise Section 912.2.2 `Connection' to read as follows:
912.2.2 **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, 2007)
*Add new Section 912.4 `Appendix reference' as follows:
912.4 Appendix reference. Additional provisions for *safe waste systems* are contained in Appendix H `Section 912: Combination Drain and Vent System'. (Effective January 1, 2007)
*Add new Appendix H `Section 912: Combination Drain and Vent System'. See pages 18 through 20.
(Effective January 1, 2007)

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, 2007)
*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, 2007)
*Delete Section 1002.8 `Recess for trap connection' without substitution. (Effective January 1, 2007)

SECTION 1003
INTERCEPTORS AND SEPARATORS

*Add exception to Section 1003.4 ‘Oil separators required’ of the Georgia Amendment revised January 1, 2007 to read as follows:
1003.4 Oil separators required.
Exception:
In elevator pits where oil containment complies with the Georgia Department of Labor Elevator Rules and Regulations, 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, 2008)

CHAPTER 13
REFERENCED STANDARDS

*Revise to add the following new referenced standards for ASME: American Society of Mechanical Engineers

ASME Three Park Avenue New York, NY 10016-59900 Standard Reference Reference in code Number Title section number A112.19.2-2008/CSA B45.1-08 Ceramic Plumbing Fixtures..... 420.1 A112.19.14-2006 Six-Liter Water Closets Equipped With a Dual Flushing Device……..... 420.1 A112.19.19.2-2006 Vitreous China Nonwater Urinals…… 419.1 (Effective July 1, 2012)

*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 Reference in code Number Title section number WaterSense Tank-Type High Efficiency Toilet Specification ……..... 202, 420.1 WaterSense Specification for Flushing Urinals …… 202, 419.1 WaterSense High-Efficiency Lavatory Faucet Specification…….. 202 (Effective July 1, 2012)

(Effective January 1, 2007)

CHAPTER 13
REFERENCED STANDARDS

*Revise Referenced Standard 'NSF' to read as follows:

NSF International
789 Dixboro Road
Ann Arbor, MI 48105

NSF

Standard reference number	Title	Referenced in code section number
61—2003e	Drinking Water System Components—Health Effects	424.1, 605.3, 605.4, 605.5, 611.3, 705.9.3 (GA Amendment), 705.10.3 (GA Amendment)

(Effective January 1, 2007)

End of Amendments.

APPENDIX C
GRAY WATER RECYCLING SYSTEMS

*Delete Appendix C and adopt new Appendix C 'Gray Water Recycling Systems' as part of the mandatory State Minimum Standard Plumbing Code as follows:

SECTION C101
GENERAL

C101.1 Scope. The provisions of this appendix 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.

C101.2 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 appendix 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.

C101.3 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.

C101.4 Permits. Check with the local authority having jurisdiction for permit requirements.

C101.5 Installation. In addition to the provisions of Section C101, systems for flushing of water closets and urinals shall comply with Section C102. Except as provided for in Appendix C, all systems shall comply with the provisions of the *International Plumbing Code*.

C101.6 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.

C101.7 Tests. Drain, waste and vent piping for gray water systems shall be tested in accordance with Section 312.

C101.8 Inspections. Check with the local authority having jurisdiction for inspection requirements.

C101.9 Potable water connections. Only connections in accordance with Section C102.3 shall be made between a gray water recycling system and a potable water system.
C101.10 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.
C101.11 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.
C101.11.1 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.
C101.12 Filtration. Gray water shall pass through an approved filter system prior to distribution.
C101.13 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.
C101.14 Drain. A method for draining the collection reservoir shall be provided and shall be indirectly connected to the sanitary drainage.
C101.15 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.

SECTION C102
SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS

C102.1 Collection reservoir. The holding capacity of the reservoir shall supplement the daily flushing requirements of the fixtures supplied with gray water.
C102.2 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.
C102.3 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.
C102.4 Coloring. The gray water shall be dyed with a food grade vegetable dye before such water is supplied to the fixtures.
C102.5 Materials. Distribution piping shall conform to one of the standards listed in Table 605.4.
GA International Plumbing Code Amendments 2009
*Revise first sentence of Section C102.6 'Identification' of the 2009 Georgia Amendment to read as follows:

C102.6 Identification. Distribution plumbing fixtures and reservoirs shall be identified as containing nonpotable gray water. Piping shall be purple and identified in accordance with Section 608.8.
(Effective January 1, 2010)

*Add new Section C102.6.1 'Gray water valve identification' to the 2009 Georgia Amendment as follows:

C102.6.1 Gray water valve identification. Gray water valves shall be identified as nonpotable gray water and also identified as for the purpose of the valve.
(Effective January 1, 2010)

SECTION C103
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS

C103.1 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, 2009)

APPENDIX H
SECTION 912: COMBINATION DRAIN AND VENT SYSTEM

912.4 **Safe Waste** System. 912.4.1 **Definitions.**
SAFE WASTE SYSTEM. A horizontal waste system composed of a main waste line, branch waste lines, auxiliary vents and a master trap with a fresh air vent (See Figures 1 and IA).

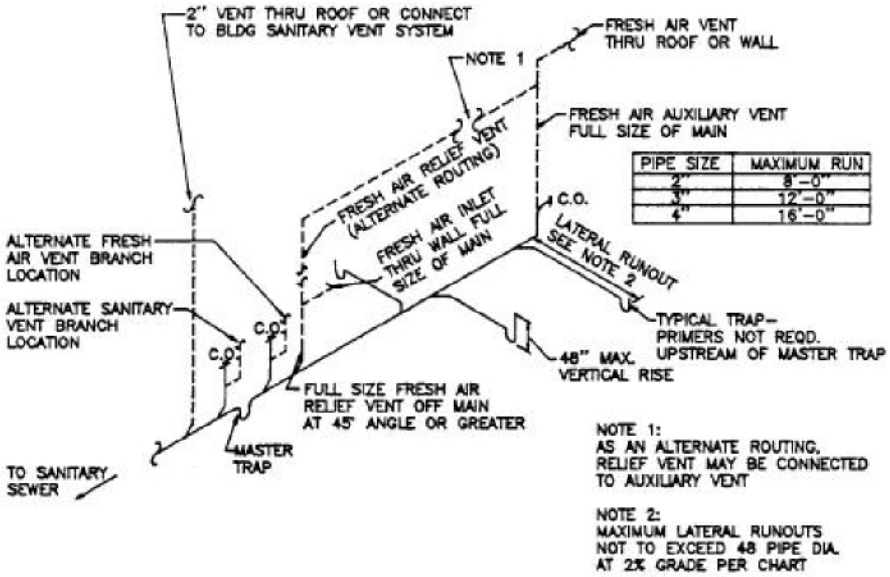

FIGURE 1 — SAFE WASTE SYSTEM

EXAMPLE

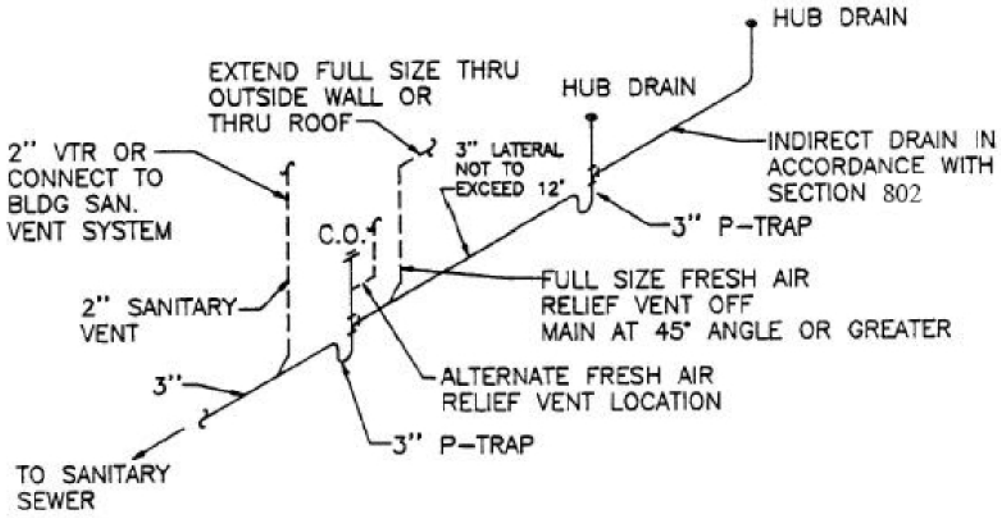

FIGURE 1A — ALTERNATE SAFE WASTE SYSTEM FOR INSTALLATION NOT EXCEEDING TWO FLOOR OPENINGS
EXAMPLE

912.4.2 Where required. As an alternative to other waste systems required by this code, the waste in establishments listed in Section 912.4.3 may be collected in a safe waste system. Plans and specifications for each safe waste system shall be submitted to the Plumbing Official and approval shall be obtained before installation is started.

912.4.3 Location. All establishments where food is manufactured, or processed, having floor drains, hub drains, such as restaurants, cafes, snack bars, grocery stores, meat, poultry and fish markets, drugstores, bakeries, dairies, taverns and cocktail lounges, shall collect such floor drains, hub drains, or open site drains into a safe waste system. Other fixtures not specifically prohibited by Section 912.4.4 may also be collected on the safe waste system.

912.4.4 Limits of use. Each safe waste system shall be limited to one floor. Water closets, urinals, bathtubs, showers, food grinders, disposal units or exterior drain units (such as condensing units drains) shall not be permitted on a safe waste system.

912.4.5 Safe **waste system.** The main waste line for the safe waste system is connected to the sanitary waste system through the master trap. Fixtures should be connected directly or indirectly as described in Chapter 7.

912.4.6 Master **trap.** The master trap shall not be less than 3 inches (76 mm) in size and shall be located inside the building unless otherwise approved. Provide two cleanouts at the master trap, one on the house side and one in the waste line downstream of the master trap weir. The top of the cleanouts shall be flush with the finish floor.

912.4.7 Master trap venting. The master trap shall he vented with two vents. A fresh air vent no less than the trap size shall extend from the house side of the trap to the outside of the building, by either (a) extending through the roof independent of any sanitary vent; (b) extending through the outside wall, 12 inches (305 mm) above the flood rim of any connected fixture and terminating with a perforated or bar grate cover or (c) connecting to a fresh air auxiliary vent. A 2-inch (51 mm) sanitary vent shall extend from the sewer side of the master trap through the roof or connect with a dry sanitary vent, in accordance with Chapter 9.

912.4.8 Auxiliary vent. The auxiliary vent shall be the same size as the master trap and extend from the main waste line through the roof independent of any sanitary vent or may terminate through an outside wall using an acceptable bar grate. When safe waste systems are located on two or more floors of a building, the fresh air and auxiliary vents may be connected together and extend to the outside of the building independent of any sanitary vent.

912.4.9 Waste lines and connections. See Chapter 7 for size and capacity. The main waste line shall be the same size as the master trap. The branch waste lines shall not exceed a maximum length of 48 pipe diameters, also refer to Table 710.1 for the maximum number of fixture units. Nowhere shall the slope of the safe waste system exceed a 1/4-inch (6.4 mm) per foot. Branch waste line exceeding 48 pipe diameters in length will require a 2-inch (51 mm) vent to extend through the roof, or be connected into the auxiliary vent. Trap primers are not required for traps on the house side of the master trap.

912.4.10 Walk-in coolers. Walk-in coolers requiring a floor drain inside the cooler shall have an untrapped floor drain type casting with a bar grate strainer, and a ball check back water valve. The waste line from the drain located inside the cooler shall extend to a floor drain located outside the cooler. The outside floor drain shall have a bar grate strainer, flashing ring, when required, with an auxiliary inlet for the waste line from the inside drains connected above the trap.

912.4.11 Poultry, Meat or Fish Markets, or Processing Plants.

912.4.11.1 Establishments which clean, process or market poultry, meat, or fish shall have their waste collected in a safe waste system. An interceptor trap shall be installed for these establishments in lieu of a master trap. Cleanouts and venting shall be as for a master trap.

912.4.11.2 Interceptor traps are described in Chapter 10. Drains from racks and tables must spill onto the floor and the floor shall be graded to the floor drains to catch all refuse from the killing or the cleaning operations. Floor drains shall have removable grate tops. An adequate water supply shall be provided for cleaning floors. All water supply inlets shall be protected with backflow preventers as described in Section 608. Interceptors shall be a maximum of 24 x 24 inches (610 mm x 610 mm).

APPENDIX I

*Revise title of 'Appendix I' of the 2009 Georgia Amendment from 'Rain Water Recycling Systems' to 'Rain Water Harvesting Systems'. Also revise all other references in Appendix I from 'Rain Water Recycling Systems' to 'Rain Water Harvesting Systems'.

(Effective January 1, 2010)

*Revise first sentence of Section I101.1 'Scope' of the 2009 Georgia Amendment to read as follows:

I101.1 Scope. The provisions of this appendix 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 appendix shall be construed to restrict the use of rain water for outdoor irrigation.

(Effective January 1, 2010)

RAIN WATER RECYCLING SYSTEMS

*Adopt new Appendix I 'Rain Water Recycling Systems' as part of the mandatory State Minimum Standard Plumbing Code as follows:

SECTION I101
GENERAL

I101.1 Scope. The provisions of this appendix shall govern the materials, design, construction and installation of rain water systems for flushing of water closets, flushing of urinals, and cooling tower make up water. Nothing in this appendix shall be construed to restrict the use of rain water for outdoor irrigation.

I101.2 Health and Safety. Nothing contained in this appendix 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.

I101.3 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.

I101.4 Permits. Check with the local authority having jurisdiction for permit requirements.

I101.5 Installation. In addition to the provisions of Section I101, systems for flushing of water closets, flushing of urinals, and cooling tower make up water shall comply with Section I102. Except as provided for in Appendix I, all systems shall comply with the provisions of the *International Plumbing Code*.

I101.6 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.

I101.7 Tests. Drain, waste and vent piping for rain water systems shall be tested in accordance with Section 312.

I101.8 Inspections. Check with the local authority having jurisdiction for inspection requirements.

*Revise Section I101.9 'Potable water connections' of the 2009 Georgia Amendment to read as follows:

I101.9 Potable water connections. Only connections in accordance with Section I102.3 shall be made between a rain water harvesting system and a potable water system.
(Effective January 1, 2010)

I101.9 Potable water connections. Only connections in accordance with Section I102.3 shall be made between a rain water recycling system and a potable water system.

I101.10 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.

I101.10.1 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.

I101.11 Filtration. Rain water shall pass through an approved filter system prior to distribution.

I101.12 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.

I101.13 Drain. A method for draining the collection reservoir shall be provided and shall not be connected to the sanitary drainage.

I101.14 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.

*****Delete Section I102.1 'Collection reservoir' of the 2009 Georgia Amendment in its entirety without substitution.
(Effective January 1, 2010)

SECTION I102
SYSTEMS FOR FLUSHING WATER CLOSETS AND URINALS

I102.1 Collection reservoir. The holding capacity of the reservoir shall supplement the daily flushing requirements of the fixtures supplied with rain water.

I102.2 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.

I102.3 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.

I102.4 Materials. Distribution piping shall conform to one of the standards listed in Table 605.4.

I102.5 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, 2009)

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.